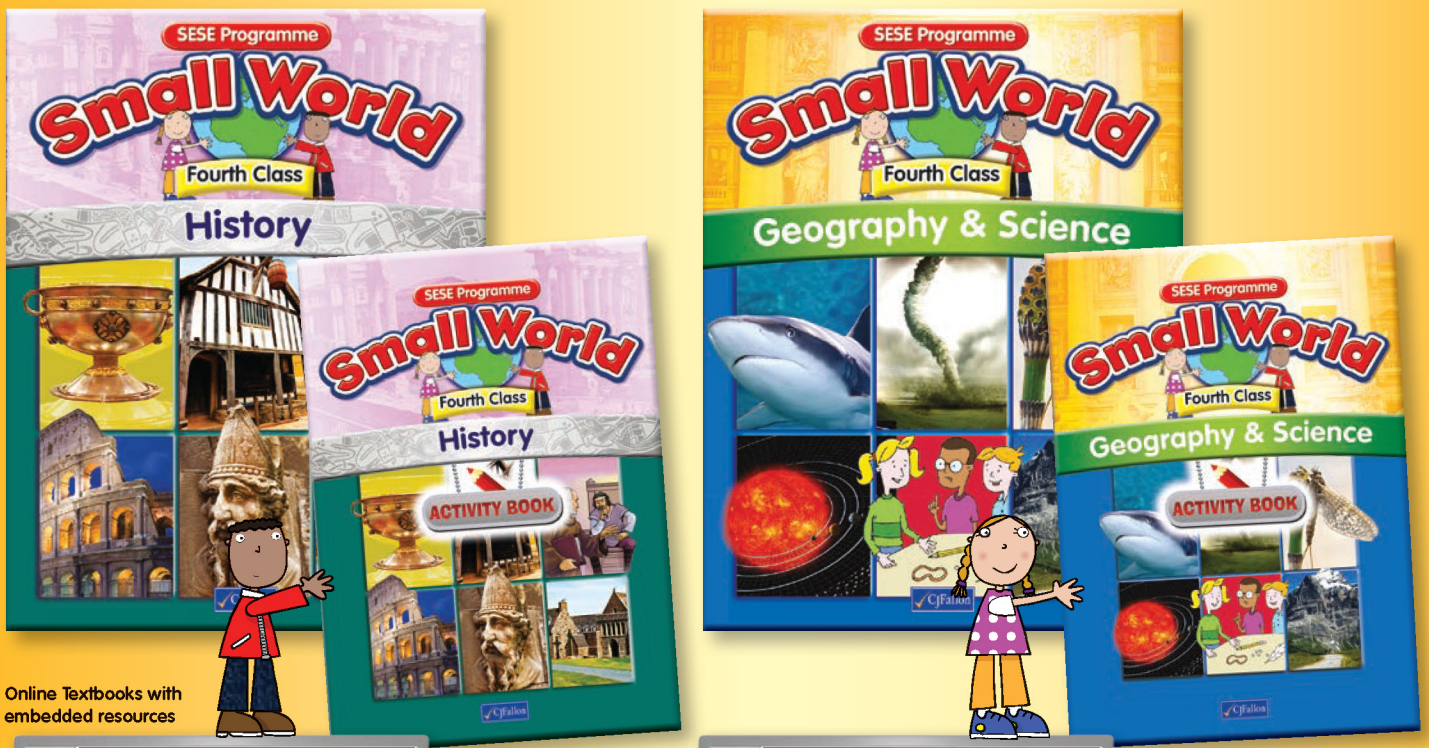
SESE Programme

Small World

Fourth Class

SESE – History, Geography & Science

Teacher's Manual



Online Textbooks with embedded resources

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SESE Programme

Small World

Fourth Class

Teacher's Manual

History
Geography & Science

CJFallon

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At the time of publication, all the web addresses referenced in this manual were active and contained information which was relevant to the SESE curriculum. However, CJ Fallon and the authors do not accept responsibility for the information contained in these websites.

Web references and external content may change beyond our control. These links and references are intended as a resource and as a guide for teachers. Pupils should be supervised at all times when investigating websites.

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Contents

Introduction

Welcome to the *Small World History, Geography & Science Teacher's Manual* for Fourth Class. We hope that you will enjoy using it as much as we enjoyed creating it.

The manual should be read in conjunction with the NCCA Curriculum and NCCA Curriculum guidelines for SESE. There is such a broad canvas in the SESE syllabi, that you have the freedom to choose from very many topics. Some of these you are likely to explore in great detail, particularly when a topic grabs the attention of your pupils. When choosing the order in which we set out the topics, we began with the 'easier' ones and progressed to those with more challenging language and concepts. You may, of course, decide to study them in a different order.

One feature that sets this series apart from earlier texts is the embedding of relevant www material in the e-book versions of the textbooks. Your school principal will need to contact the NCTE (National Centre for Technology in Education), if this hasn't already been done, to change your school's content filtering level to allow YouTube videos. To make full use of the embedded resources in the e-books, Level 4 filtering will be required. **The NCTE Content Filtering Level Form is printed on page 11.**

Showing web-based videos and other content to pupils is not without risk. At the time of publishing, the weblinks were checked and found to be fine, but the internet is in a constant state of change. We urge you to check all web content in advance to be on the safe side. If you discover anything of which you feel we ought to be aware, please contact the publisher and we will correct or remove the link. That said, don't be put off. Of all the subject matter in primary school, SESE is probably the package that most lends itself to interactive and audio-visual material. Use it to the full to enrich your lessons and to give pupils a memorable experience of a theme. We have made it as easy as possible – no more trawling through numerous sites to find something relevant and child-friendly. Simply click the link in the e-book version of a textbook on your IWB and voilà!

If you have doubts about using the more relaxed level of NCTE filtering that allows YouTube, we urge you to talk to teachers in the many schools that have taken this step. To our knowledge, there have been no negative or worrying events. As always, consult your school's *Internet Acceptable Use Policy,* view material in advance, and, needless to say, never conduct a live search in the presence of children.

This manual occasionally provides background information on a topic for the teacher. It is not always intended to be taught; rather it should serve to give the teacher a deeper insight into the topic. We hope you will find some interesting nuggets contained therein, which you can toss nonchalantly out to your class and make them believe you're a real expert!

History, Geography and Science are nice subjects to teach. There is so much scope for discovery, research and experimentation. If you can radiate a sense of wonder, if you can indicate surprise at an outcome, if you can appear puzzled or amazed or doubtful as the situation requires, then you will arouse the child's natural curiosity, you will pique his/her interest, and your job is done.

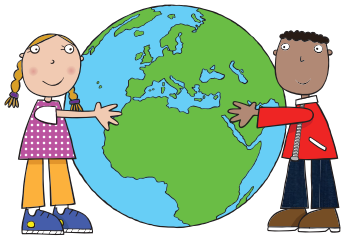
Note (1): As additional time has now been allocated to **Literacy and Numeracy**, the unit content could form the basis of an English lesson. Reading and exploring the textbooks will help children's literacy through vocabulary and language development, along with developing skills such as skimming and scanning.

Note (2): The *Teacher's Manual* is available in an electronic format from the CJ Fallon website. This will facilitate cutting and pasting yearly schemes/fortnightly plans, etc. into the Primary Curriculum Planning Tool. For the Primary Curriculum Planning Tool, see: www.curriculumonline.ie → *Home* → *Primary School Curriculum.*

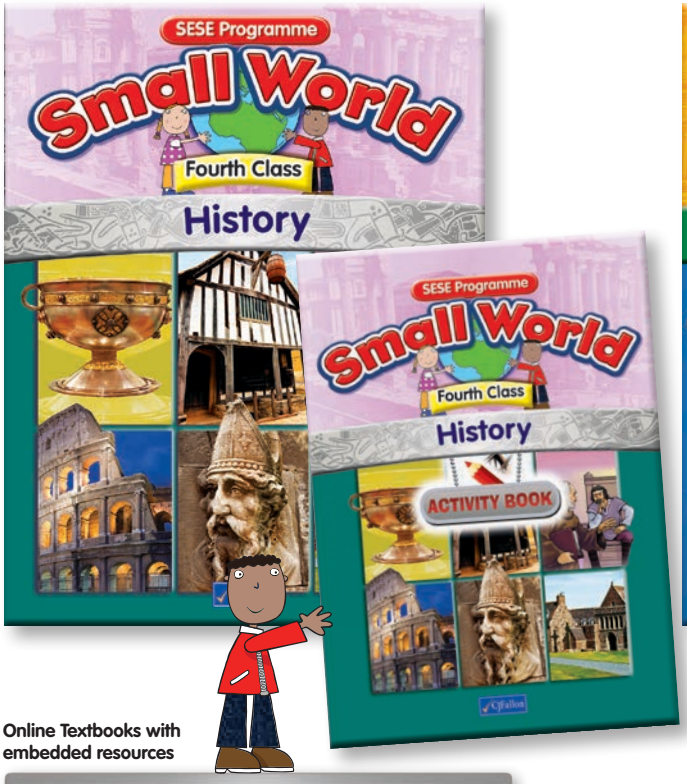
Note (3): Many of the assessment strategies in the *Teacher's Manual* correspond to those recommended by the NCCA. Examples and templates are provided for teachers to make them user friendly.

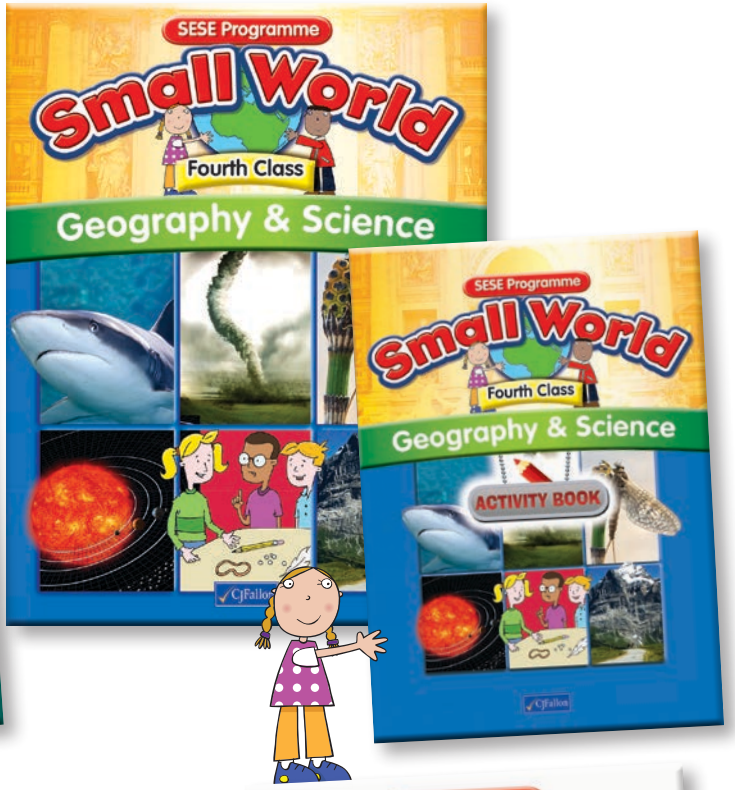
The Small World Team

SESE Programme

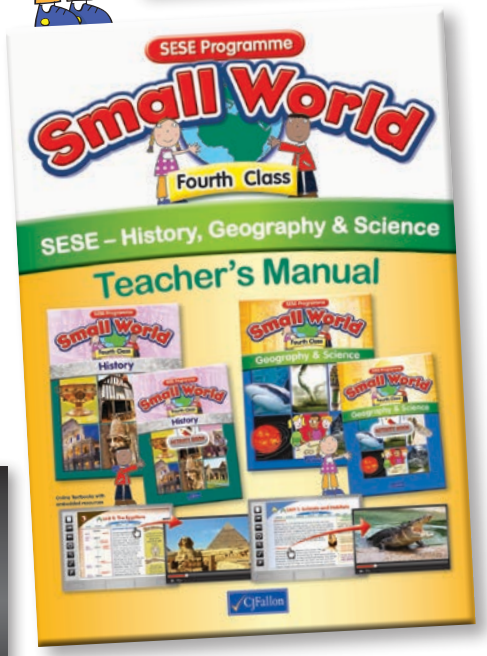


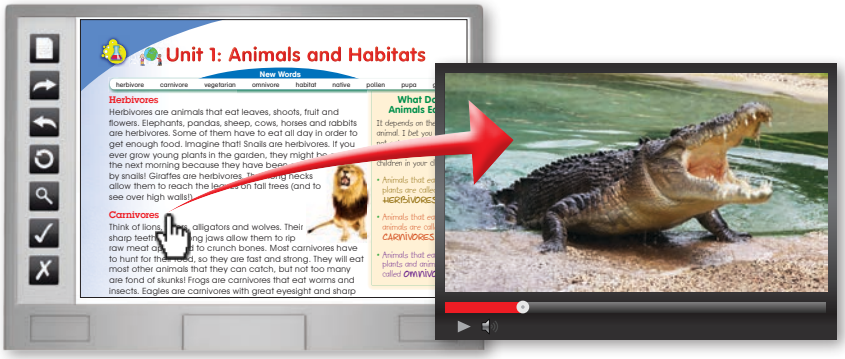
Series Components for Fourth Class





Online Textbooks with embedded resources





Small World SESE – Overview of the Programme

Note About Health and Safety

The issue of your personal safety and the safety of those in your charge must never be taken lightly. The producers of this series urge you to carefully plan and supervise all scientific and geographical research, experiments, activities and field trips. A moment of inattention can have unpleasant consequences. Always try to anticipate what might go wrong and take all appropriate steps to avoid putting yourself, your pupils or others in a situation of potential danger. The tasks and activities described and recommended in this series have been carried out many times by others and are deemed safe. However, engaging with unfamiliar equipment, procedures and situations requires extra vigilance and attentiveness. Be careful with experiments and research, especially those involving chemicals, forces, light (eyes) and animals. Check for allergies to animals, chemicals, nuts, etc. Never use mains electricity in experiments. Occasionally, protective clothing such as plastic gloves may be required and of course, washing hands after using soil, compost or similar is recommended. Websites should be checked in advance to ensure that there is no violent or explicit content.

Above all, use common sense and ensure that everything is planned and prepared in advance. If in doubt, seek extra help and advice. Check your school policies on SESE and school trips. Permission from parents and guardians may be required for field trips. Check your school policies on acceptable use of the internet. A copy of the Content Filtering Form (CFL) from the National Centre for Technology in Education (NCTE) follows on page 11.

	Pupil Textbook	Pupil Activity Book	Pupil Textbook	Pupil Activity Book		
	History	History	Geography & Science	Geography & Science	Teacher's Manual	Digital Material
Third Class	96 pages	40 pages	120 pages	48 pages	✓	Colour-coded links embedded in the e-book
Fourth Class	96 pages	40 pages	120 pages	48 pages	✓	Colour-coded links embedded in the e-book
Fifth Class	112 pages	40 pages	128 pages	48 pages	✓	Colour-coded links embedded in the e-book
Sixth Class	112 pages	40 pages	128 pages	48 pages	✓	Colour-coded links embedded in the e-book

Key Features of *Small World SESE*

- Fully integrated SESE programme
- Digital resources embedded in the teacher's e-book – at your fingertips, so no need to search for resources elsewhere.
- Interactive e-books mean 'cross pollination' of Geography/Science and History
- Enticing and refreshing pupil books that will engage the pupils and encourage further learning
- History, Geography and Science interlinked through 'Hot History', 'Hot Science' and 'Hot Geography' sections
- Practical Teacher's Manual with fortnightly plans, yearly schemes, integrated themes, pragmatic extension notes for each unit, answers, differentiation options, photocopiable templates, etc.

- Pupil Activity Book (activities on timelines, new vocabulary, templates for recording of investigations and surveys)
- Spiral approach used sparingly, e.g. the Great Famine might be taught in Third Class and also in Fifth Class, but you won't see the Romans being covered every year

Small World History Textbook – Key Features

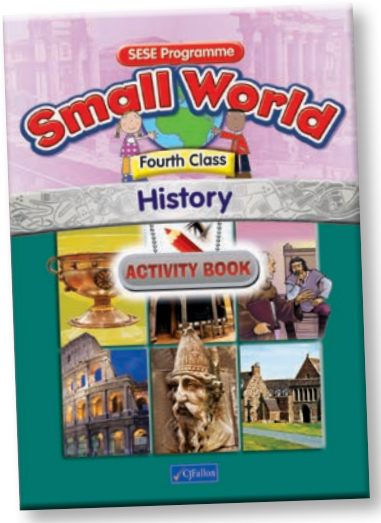
- Two-year approach (Third and Fourth Class), e.g. Stone Age people are studied in Third Class and Early Christian Ireland is studied in Fourth Class; menu options are supplied for both classes
- Possibility of covering the topics in chronological format if required
- Reading the Textbook – expansion of **Literacy skills** including skimming and scanning
- Technology being directly associated and linked to the textbook through embedding of resources and website references
- The Textbook is part of a 'triumvirate' – there is a Geography & Science Textbook. The three subjects interlink through the 'Hot' sections in each book ('Hot History', 'Hot Geography', 'Hot Science').
- Timelines: These are relevant to the topic. An item on the timeline can be a period of time, e.g. (era of) the Romans, the Egyptians. The purpose of the timeline is for pupils to see what was happening concurrently in Ireland and another part of the world, e.g. while the Celts were in Ireland, the Romans were building an empire in Europe. This means that pupils won't end up wondering, e.g. if the Stone Age was going on in Ireland while the Roman Empire was rising in Italy.
- Glossary at the back of the Textbook, providing definitions of selected new words introduced at the beginning of each unit: These words can be used in a pre-reading activity.
- Strands and strand units are listed at the bottom of each unit.
- Short, engaging units with plenty of interesting facts and information laid out in a child-friendly, enticing way
- Intermittent questions appear approximately halfway through many units. They serve to recap and revise information. They can also be used as group activities, if some groups need the teacher's attention. The types of activity include: writing a summary (key dates are given), debating a topic and writing points for the motion, writing a fact-file about X, drawing a diagram to illustrate a point, concept mapping/brainstorming, 'What if?' scenarios and outcomes.

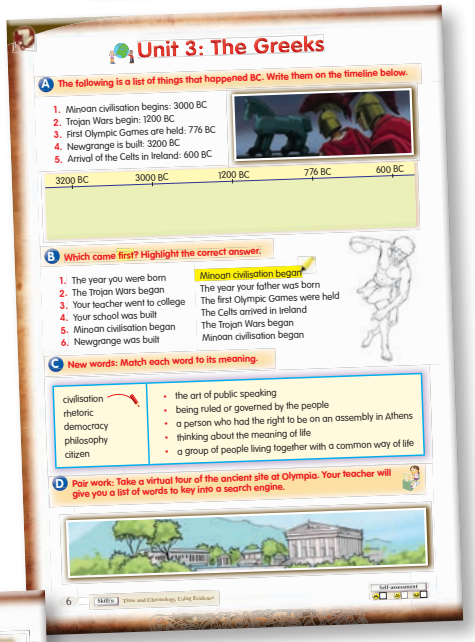
End-of-unit Activities

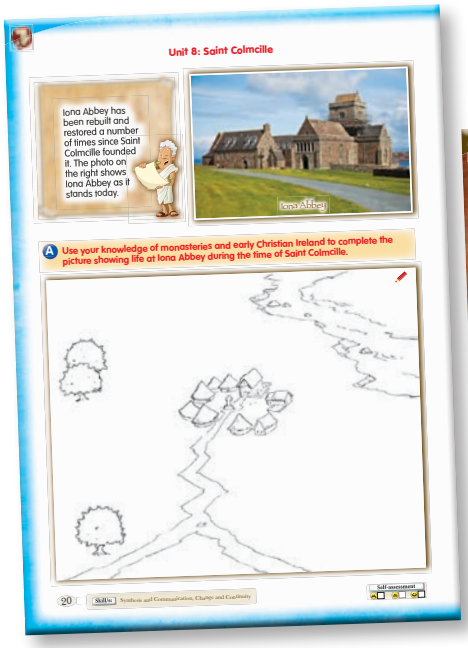
- **A. Can you Remember?** (revision) This section comprises about 7–10 'easy' questions. The children will write the answers in their History copies.
- **B. Choose the Correct Answer to Complete Each Sentence.** These activities can be based on the timeline and will assess if pupils understood and grasped the time period. They also test if pupils have understood the nuances in the information.
- **C. Think About It.** This section varies: 'If X had happened what would have been the outcome?' (cause and effect); 'Give reasons for X'; 'Explain in your own words'; 'Name two or three changes that came about because of X'; 'Choose the odd one out and say why'; 'Put in the correct sequence'; 'Give the definitions' or 'Explain this word'; BC and AD activities.
- **D. Get Creative.** This section covers role-play, music, discussion, artwork and drama, e.g. empathy (lives of other people). Activities include debates, art, reports, letters and interviews.
- **E. Digging Deeper** (working as an historian) This section includes suitable websites, historical novels to read, non-fiction books to research for information, project/pair work, local studies information, and films to watch.

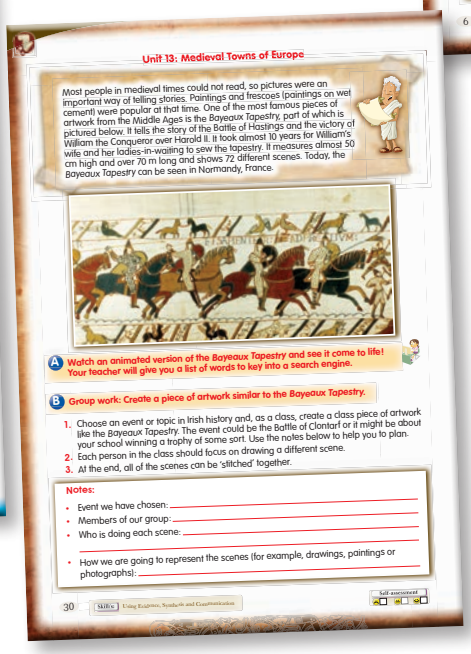
Small World History Activity Book – Key Features

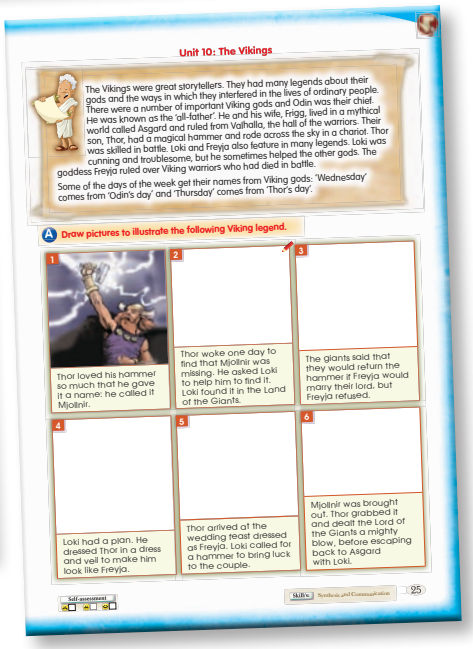
- Timeline activities
- Activities on new vocabulary – ensuring that children understand the new words
- Activities on 'What came before?' and 'What came after?' – sequencing activities providing an opportunity to assess if pupils have grasped that, e.g. the Romans came after the Stone Age
- Self-assessment for pupils
- One page or more for each unit of the Textbook
- Templates for local study and family trees
- History skills being used are listed at the bottom of each page, for example:
  - *Time and Chronology:* Using timelines; using words associated with time, etc.
  - *Change and Continuity:* Comparing photographs (evidence) from 'then' and 'now'
  - *Cause and Effect:* 'If this event never happened' or 'If this event/person had been different'
  - *Using Evidence:* Photos; documents
  - *Synthesis and Communication:* Conversation between two historical characters; drama; artwork, etc.
  - *Empathy:* Imagine the feelings and motives of people from the past











Small World Geography & Science Textbook – Key Features

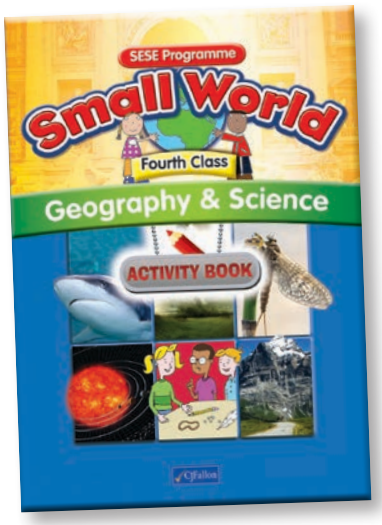
- Strands with extensive content are covered over a two-year period. Strands with less content are covered either in Third or Fourth Class.
- Reading the Textbook – expansion of **Literacy skills** including skimming and scanning
- Technology directly associated with and linked to the book (through embedding of resources and website references)
- The Science & Geography book is part of a 'triumvirate' – there is a History Textbook. The three subjects interlink through the 'Hot' sections in each book ('Hot History', 'Hot Geography', 'Hot Science'). The 'Hot' sections contain quirky, fascinating, interesting facts, but also forge links within SESE, e.g. linking the topic of forces in Science to how the pyramids were built in Ancient Egypt.
- Strands and strand units are listed at the bottom of each unit. The two subjects are colour-coded. Integration of Science and Geography is clearly shown.
- Short, engaging units with plenty of interesting facts and information laid out in a child-friendly, enticing way
- Eight double-page spreads (left- and right-hand pages) in the Textbook, e.g. in Fourth Class:

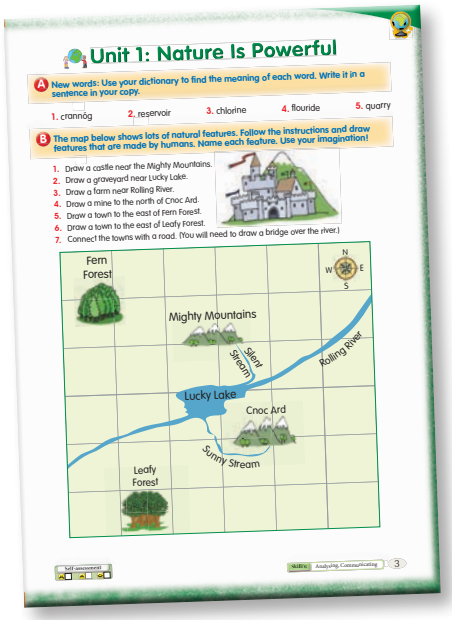
  1. Aerial Photograph & Map of Ballina, County Mayo; 2. Mammals of Ireland; 3. Irish Trees; 4. Political & Physical Maps of Ireland; 5. Map of Italy & Map of Japan; 6. Political Map of the World; 7. Physical Map of the World; 8. The Solar System

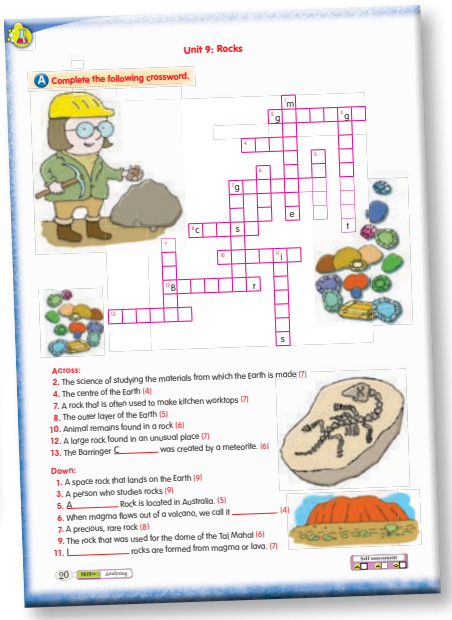
- Glossary at the back of the Textbook, providing definitions of selected new words introduced at the beginning of each unit. These words can be used in a pre-reading activity.
- Design and Make activities
- Investigations (templates/record sheets in the Pupil Activity Book)
- Intermittent questions appear approximately half-way through many units. They serve to recap and revise information. They can also be used as group activities. The types of activity include: drawing a map/mapping a route, writing a fact-file about X, drawing a diagram to illustrate a point, concept mapping/brainstorming, 'What if?' scenarios and outcomes.
- Range of activities on the last page of each unit, for example:
  - Telling the 'story', e.g. the story of a seed (Science), an account of your year as a tree, i.e. what happens to you during each of the seasons (Geography)
  - Drawing a picture sequence for a short 'story'
  - Writing questions for answers provided
  - Writing a summary using key words or sentences
  - Finding the mistakes
  - Cloze test
  - Simple comprehension-type questions
  - Drawing a map, diagram or graph for the information
  - Composing a fact-file
  - Reading a graph or diagram
  - 'Think about it' – higher order questions/debate
  - Integration opportunities, e.g. Visual Arts, PE, Drama, Irish, Literacy
  - Digging Deeper activities supply websites (the e-book contains even more)
  - Clue-based questions or riddles
  - Drawing flags

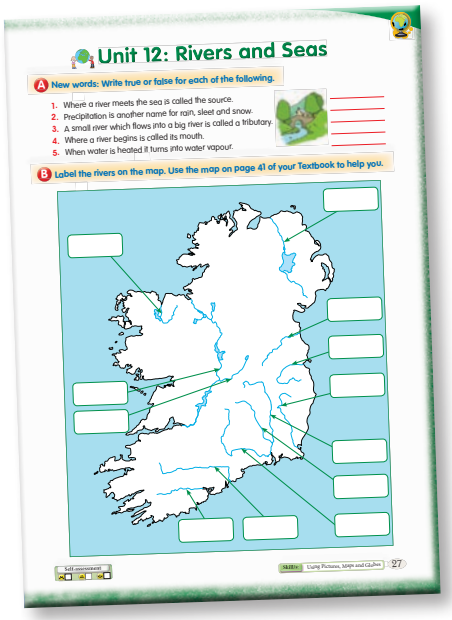
Small World Geography & Science Activity Book – Key Features

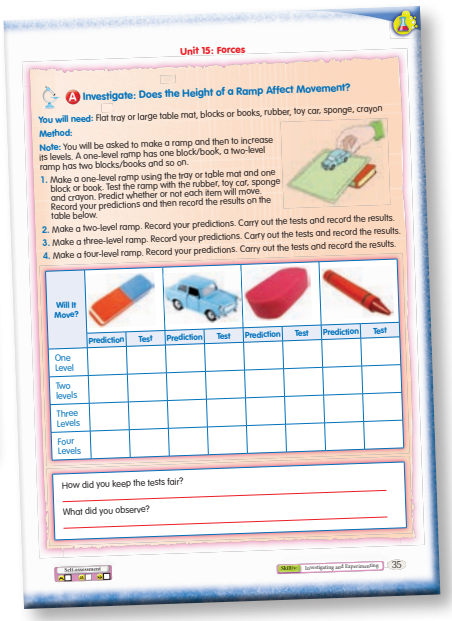
- Blank maps
- Investigation record sheets
- Design and Make planning sheets
- Mapping skills
- Activities on new vocabulary – ensuring that children understand the new words
- Self-assessment for pupils
- One page or more for each unit of the Textbook
- Templates for local study
- Geography/Science skills being used are listed at the bottom of each page, for example:
  - Observing
  - Predicting
  - Analysing
  - Investigating and Experimenting
  - Planning and Making
  - Recording and Communicating
  - Using Pictures, Maps and Globes
  - Sense of Place and Space
  - Sorting and Classifying

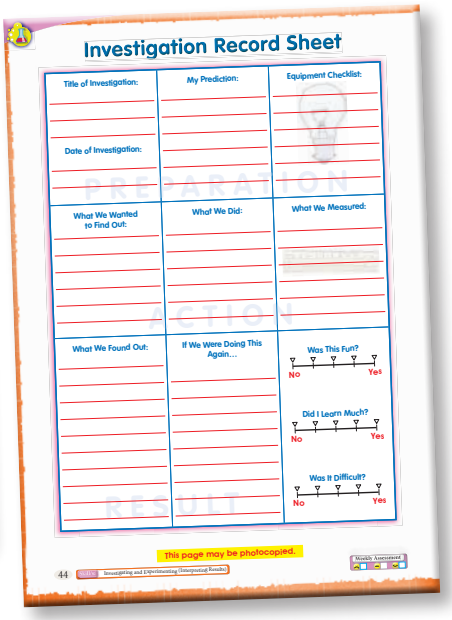












NCTE Form

Content Filtering Level Form (CFL form)

To request a particular content filtering level for your school please fill in the below form remembering to include your School Roll Number.

School Roll Number :-

School Name :	
Content Filtering Levels	***Tick One Box***
Level 1: This level is the same as Level 2 but **blocks** websites belonging to the **Internet Communications** category.	☐ Yes Level 1
Level 2: This level is the same as Level 3 but **blocks** websites belonging to the **Games** and **Personal Storage** category**.**	☐ Yes Level 2
Level 3 This level is currently used by the vast majority of schools. It gives access to millions of websites including games but **blocks** '**YouTube**' and websites that are categorized as **Personal** such as blogs and **Social Networking** such as Flickr and Facebook.	☐ Yes Level 3
Level 4 This level allows access to the same websites as Level 3, but also allows access to '**YouTube**'.	☐ Yes Level 4
Level 5 This level allows access to the same websites as Level 4, but also allows access to websites that are categorized as **Personal** such as blogs.	☐ Yes Level 5
Level 6 This level allows access to the same websites as Level 5, but also allows access to websites that are categorized as **Social Networking** such as Facebook.	☐ Yes Level 6

Table 1: *Level 1 is the most restricted level while level 6 allows the widest level of access.* ***All Filtering Levels are designed to block content of an illegal or pornographic content.***

As Principal I confirm the following on behalf of the school:

1. The school wishes to request a change to content filtering as per Table 1 (above).
2. The school has an appropriate AUP in use regarding content filtering level
3. School Authorities will inform staff and students that Internet and email use will be monitored and that inappropriate use of the service may result in sanction by the school.
4. The school accepts that it has obligations in relation to the provision of the service, in terms of non-abuse of the service, and confirms that it has an Acceptable Use Policy (AUP) in operation in the school and that it complies with the NCTE guidelines on School Internet AUP, at www.ncte.ie/InternetSafety and specifically with reference to supervision of online access.
5. The School understands and accepts the risks associated with using schools broadband at all levels of filtering and accepts that there are increased levels of risk associated with levels 4 to level 6.
6. The School understands and accepts that where a school is engaging in inappropriate online behaviour the Broadband Schools team reserve the right to take whatever actions are required to protect the network and other schools. This may require disconnecting the 'offending school' until the situation is resolved satisfactorily.
7. If a user accesses material which is considered inappropriate for schools, this should be reported to an appropriate staff member or school Principal, as per schools AUP, who are then recommended to report the matter to the NCTE Service Desk.

Signed by: (Principal) _____ **Roll No:** _____

Principal's Name ***(in capitals)***: _____ **Date:** _____

Please return this signed form to:

AUP/CF forms, NCTE Service Desk, P.O. Box 10101, Dublin 17

Or **fax** to **01- 8473370**

Aims of the History, Geography and Science Curricula

Vision and Aims

(a) Vision

Relate the plan to the school's characteristic spirit (ethos), e.g. *We seek to assist the children in achieving…*

(b) Aims

State what the school ideally hopes to achieve by introducing the plan.

Aims of the History Curriculum

We endorse the aims of the Primary School Curriculum for History and aim to ensure that History is taught in tandem with the aims of the Curriculum (History Curriculum page 12):

- To develop an interest in, and curiosity about, the past
- To make the child aware of the lives of women, men and children in the past and how people and events have had an impact upon each other
- To develop an understanding of the concepts of change and continuity
- To provide for the acquisition of concepts and skills associated with sequence, time and chronology, appropriate to the development stages of the child
- To allow the child to encounter and use a range of historical evidence systematically and critically
- To provide opportunities for the child to communicate historical findings and interpretations in a variety of ways
- To foster sensitivity to the impact of conservation and change within local and wider environments
- To help the child recognise and examine the influences of the past on the attitudes and behaviour of people today
- To foster a willingness to explore personal attitudes and values and to promote an openness to the possibility of changing one's own point of view
- To encourage the child to recognise how past and present actions, events and materials may become historically significant
- To enable the child to acquire a balanced appreciation of cultural and historical inheritances from local, national and global contexts

Are there additional aims that relate to the context of your individual school?

Aims of the Geography Curriculum

We endorse the aims of the Primary School Geography Curriculum and aim to ensure that Geography is taught in tandem with the aims of the Curriculum (Geography Curriculum page 14):

- To develop knowledge and understanding of local, regional and wider environments and their interrelationships
- To encourage an understanding and appreciation of the variety of natural and human conditions on the Earth
- To develop empathy with people from diverse environments and an understanding of human interdependence

- To develop the ability to use a range of communicative methods, especially those concerned with the development of graphicacy (mapping and other non-verbal, non-numerical forms of data presentation)
- To encourage the development of a sense of place and spatial awareness
- To encourage the development of caring attitudes and responsible behaviour towards the environment, and involvement in the identification, discussion, resolution and avoidance of environmental problems
- To develop an understanding of appropriate geographical concepts

Are there additional aims that relate to the context of your individual school?

Aims of the Science Curriculum

We endorse the aims of the Science Curriculum and aim to ensure that Science is taught in tandem with the aims of the Primary School Curriculum for Science (Science Curriculum page 11):

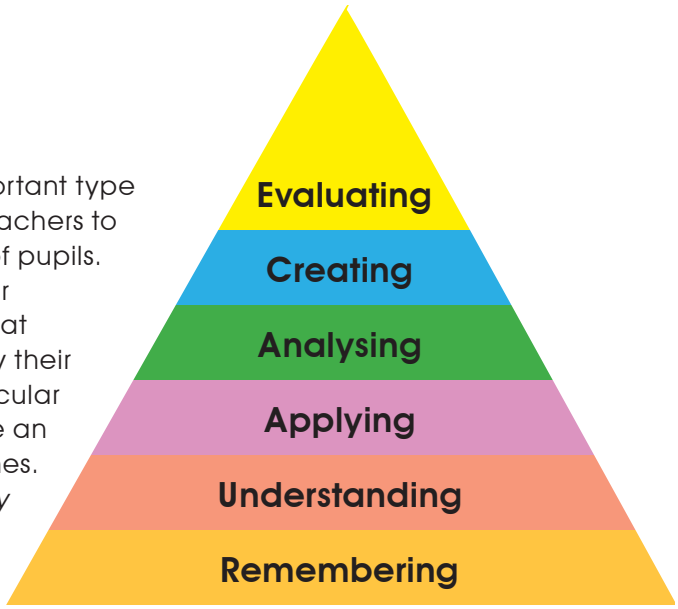
- To develop knowledge and understanding of scientific and technological concepts through the exploration of human, natural and physical aspects of the environment
- To develop a scientific approach to problem-solving which emphasises understanding and constructive thinking
- To encourage the child to explore, develop and apply scientific ideas and concepts through designing and making activities
- To foster the child's natural curiosity, so encouraging independent enquiry and creative action
- To help the child to appreciate the contribution of science and technology to the social, economic, cultural and other dimensions of society
- To cultivate an appreciation and respect for the diversity of living and non-living things, their interdependence and interactions
- To encourage the child to behave responsibly to protect, improve and cherish the environment and to become involved in the identification, discussion, resolution and avoidance of environmental problems and so promote sustainable development
- To enable the child to communicate ideas, present work and report findings using a variety of media

Are there additional aims that relate to the context of your individual school?

Assessment Guidelines

Bloom's Taxonomy

Teacher observation is a very valid and important type of assessment. However, it is important for teachers to vary question types and their expectations of pupils. Bloom's Taxonomy provides a good guide for teachers by making them more aware of what they are asking. Ideally, teachers should vary their technique rather than focusing on one particular type of questioning. Otherwise there may be an overreliance on recall and knowledge at times. Questioning is both a *teaching methodology* and a *form of assessment.*



Examples for Each Stage of Bloom's Taxonomy

(Taken from NCCA Assessment Guidelines, 2007)

Knowledge

Question cues		Sample questions
Tell	List	What happened after...? How many...? Who was it that...? Can you name the...? Describe what happened at... Who spoke to...? Can you tell why...? Find the meaning of... What is...? Which is true or false...?
Define	Name	
When	Where	
Identify	Show	
State	Locate	
Relate	Who	

Understanding

Question cues		Sample questions
Retell	Summarise	Can you write in your own words...? Can you write a brief outline...? What do you think could have happened next...? Who do you think...? What was the main idea...? Who was the key character...? Can you distinguish between...? What differences exist between...? Can you provide an example of what you mean...? Can you provide a definition for...?
Describe	Explain	
Discuss	Interpret	
Outline	Predict	
Restate	Compare	
Estimate	Contrast	

Application

Question cues		Sample questions
Solve	Show	Do you know another instance where...? Could this have happened in...? Can you group by characteristics such as...? What factors would you change if...? Can you apply the method used to some experience of your own...? What questions would you ask of...? From the information given, can you develop a set of instructions about...? Would this information be useful if you had a...?
Use	Illustrate	
Construct	Complete	
Examine	Classify	
Apply	Demonstrate	
Calculate	Modify	

Analysis

Question cues		Sample questions
Analyse	Distinguish	Which events could have happened...? If... happened, what might the ending have been? How was this similar to...? What was the underlying theme of...? What do you see as other possible outcomes...? Why did... changes occur? Can you compare your... with that presented in...? How is... similar to...? What was the problem with...? What evidence can you list for...?
Compare	Contrast	
Investigate	Categorise	
Identify	Separate	
Order	Explain	
Connect	Infer	

Synthesis

Question cues		Sample questions
Create	Invent	Can you design a... to...? Why not compose a song about...? Can you see a possible solution to...? If you had access to all resources, how would you deal with...? Why don't you devise your own way to deal with...? What would happen if...? How many ways can you...? Can you create new and unusual uses for...? Can you develop a proposal which would...?
Compose	Predict	
Plan	Construct	
Design	Imagine	
Propose	Devise	
Formulate	Combine	

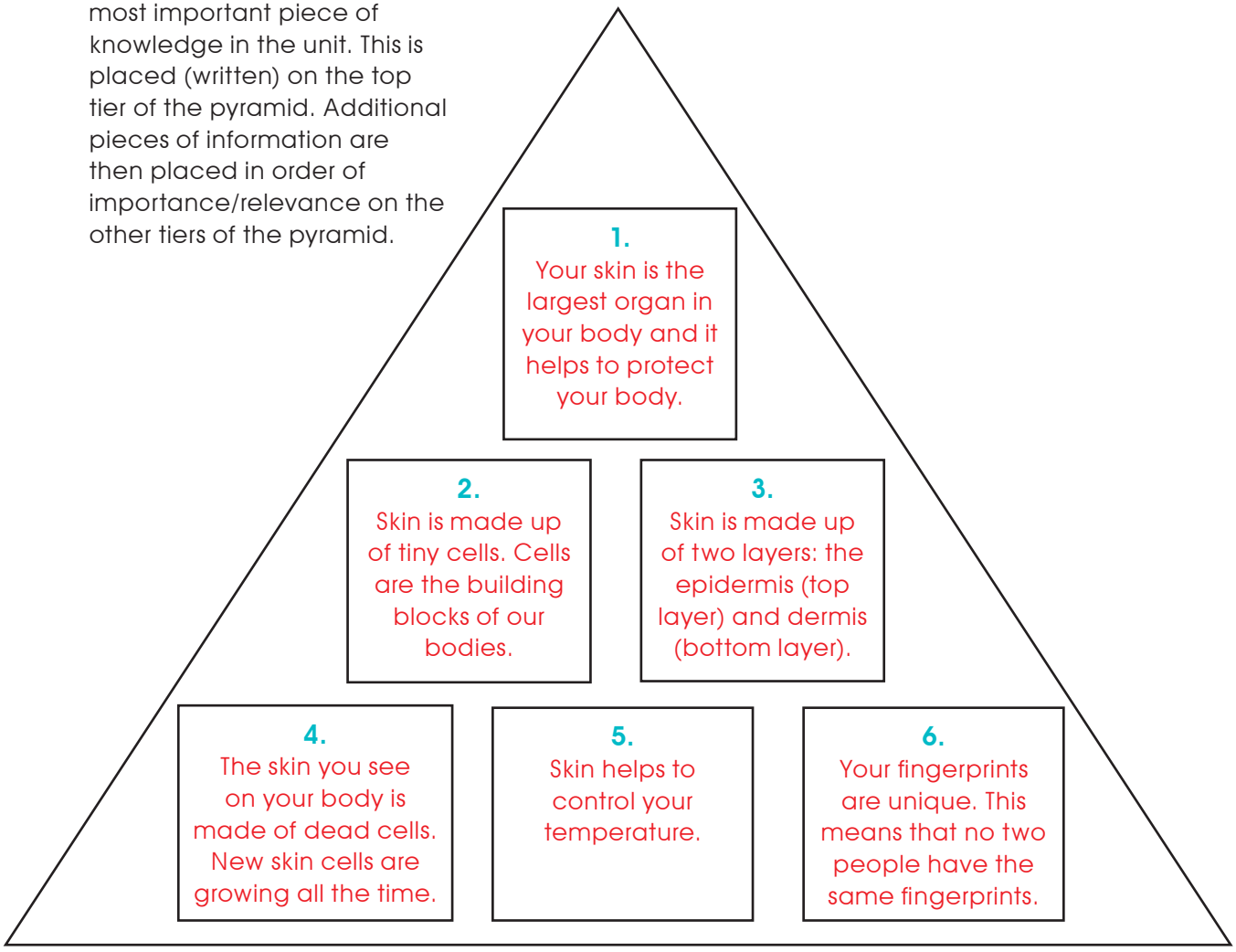
Evaluation

Question cues		Sample questions
Judge	Select	Is there a better solution to…? Judge the value of… Can you defend your position about…? Do you think… is a good or a bad thing? How would you have handled…? What changes to… would you recommend? What would you predict/infer from…? How effective are…? What do you think about…? How would you create/design a new…?
Choose	Decide	
Justify	Debate	
Verify	Argue	
Recommend	Assess	
Rate	Prioritise	

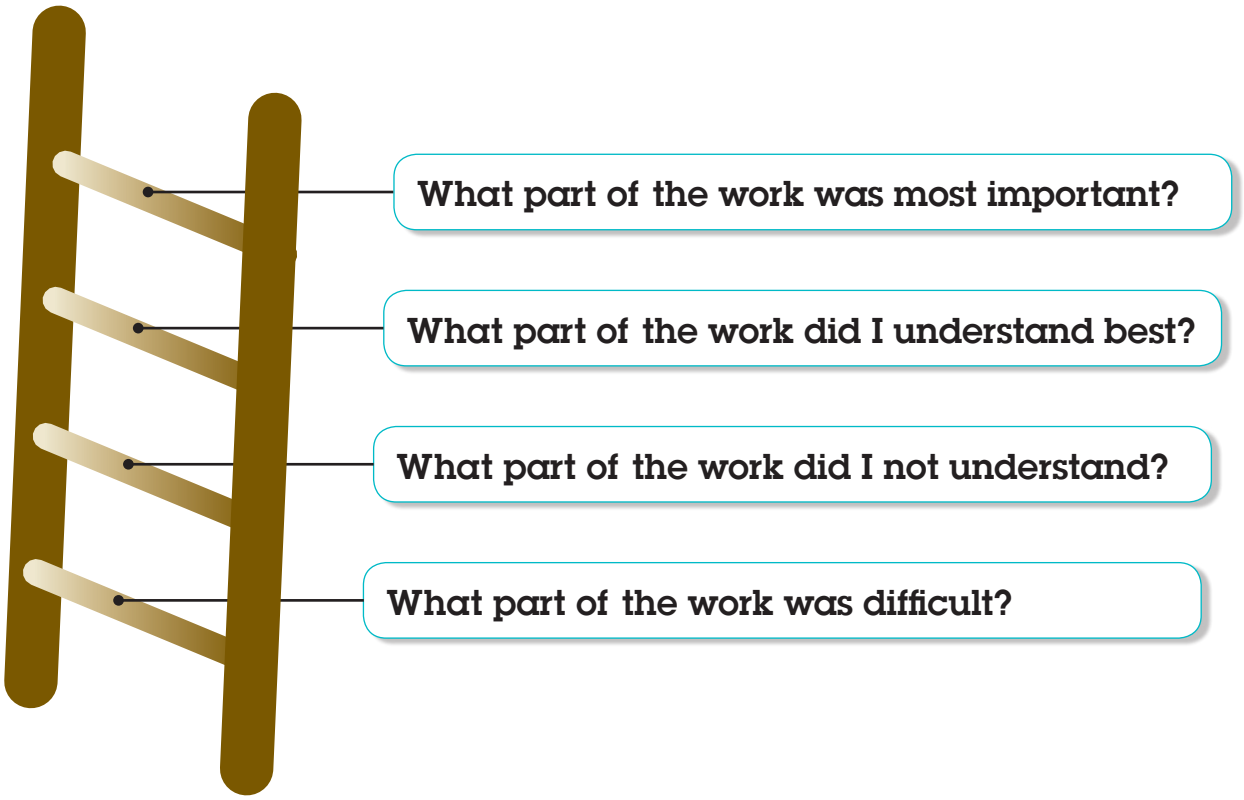
The following are examples of assessment strategies.

Pyramid Ranking

After they have studied a topic, e.g. the skin, pupils will decide on the most important piece of knowledge in the unit. This is placed (written) on the top tier of the pyramid. Additional pieces of information are then placed in order of importance/relevance on the other tiers of the pyramid.



Ladder Ranking



KWL Chart

What I know	What I want to find out	What I have learned

Rubric

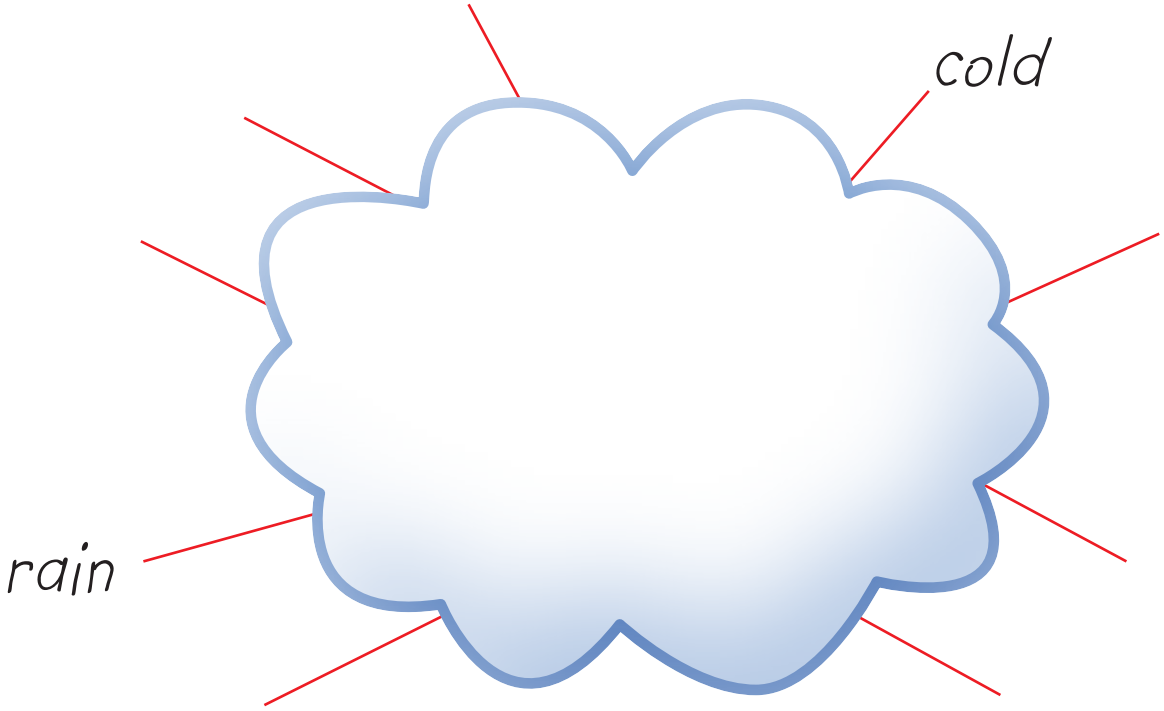
What I think about my			
	1	2	3
Plan			
Design			
Materials			
Appearance			

Example:

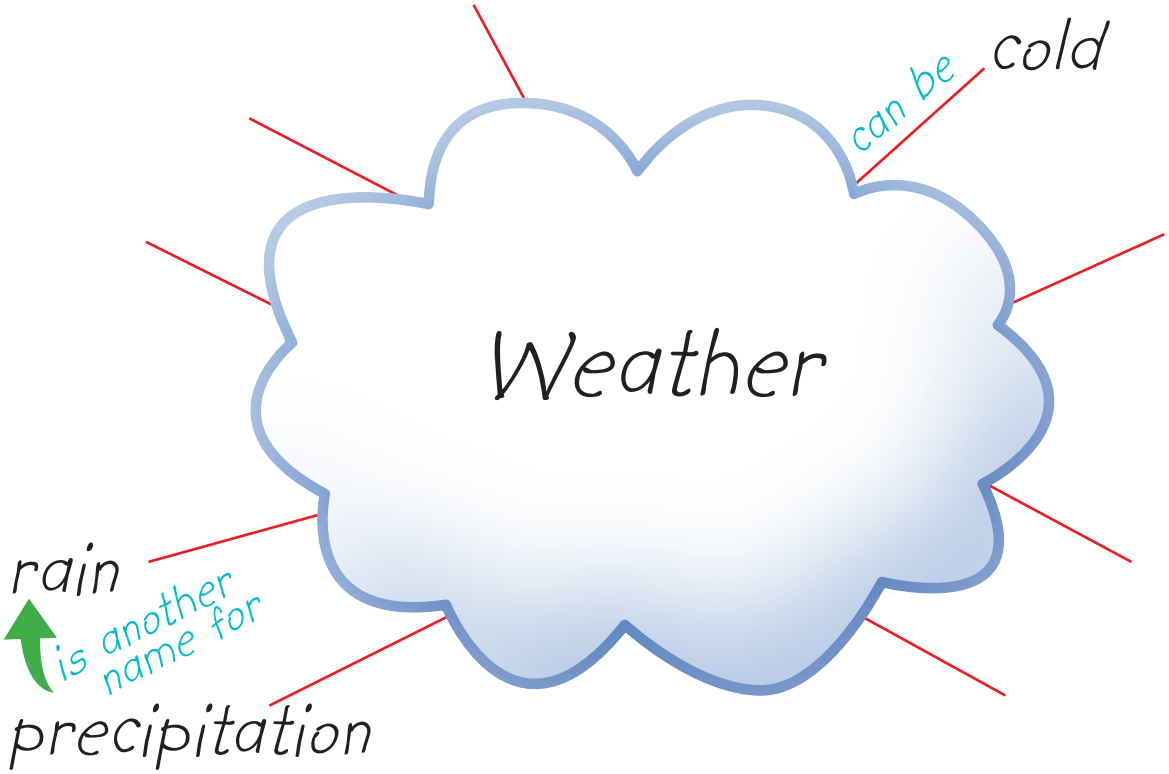
What I think about my	stethoscope		
	1	2	3
Plan	I made out a plan for my stethoscope. ✓	I made out a plan for my stethoscope with a few details.	I made out a plan for my stethoscope with a lot of details.
Design	I didn't show the important parts of my design.	I showed some of the important parts of my design. ✓	I showed a lot of the important parts of my design.
Materials	The materials that I used were not suitable.	Some of the materials that I used were suitable.	A lot of the materials that I used were suitable. ✓
Appearance	My stethoscope looks okay.	My stethoscope looks good. ✓	My stethoscope looks great.

Concept Map

Example of initial concept map:



Example of completed concept map at end of unit of work:



PMI Chart

As a self-assessment strategy, a PMI chart is similar to 'two stars and a wish', i.e. one thing that I liked (+), one thing that I could improve (–) and one thing that interested me (I).

You can also use a PMI chart to evaluate an issue or topic, as follows: 'P' stands for 'plus' or 'good facts'. 'M' stands for 'minus' or 'bad facts'. 'I' stands for 'Interesting facts' or 'implications'. Example: Choose a topic such as 'Should we place our seed tray on the classroom window sill?'

- Plus – lots of light, children can see progress…
- Minus – can get very cold at night – frostbite; windowsill is over the radiator – compost might dry out…
- Implications – Might it topple out if the window is opened? Remember to 'farm out' during Easter holidays, or the plants will die…

SESE Planning

Why Do SESE?

- Education of the whole child – enrichment
- Taking his/her place as a full member of society
- Practical, hands-on
- Skill development – modern work practices
- Success for less-able pupils
- Potential for better-able pupils
- Enjoyment, stimulation, interest
- Adds variety to the classroom
- Individual subjects in secondary school

Difficulties

- Time
- Curriculum overload
- Change overload
- Not a priority
- Not tested formally
- Lack of knowledge
- Lack of resources
- Too much preparation needed
- Class organisation a chore

What Must Be Done?

Science

– Something from each strand each year
– Split strand units over two years
– Select from objectives as a menu, not all have to be done

History

– All strands, strand units, objectives every year
– Third–Sixth Class: Choose from menu of topics
– Two in-depth studies each year – one local, one national/international

Geography

– Do all strands and strand units each year.
– Objectives – menu, not all have to be done
– **Strand:** Human Environments – Make choices from the following:
Strand Units: People Living and Working in the Local Area, and People Living and Working in a Contrasting Part of Ireland
Select a number of sub-units to do each year, to cover all in a two-year period.
– Select one European and one non-European country each year.

Time Allocation

- SESE short day – 2¼ hours per week
- SESE long day – 3 hours per week

Can block off periods of time when doing project, integrated work, in-depth study, etc.

Can use some discretionary time (2 hours) if the lesson targets literacy or numeracy

Skills

Working as a scientist	Working as an historian	Working as a geographer
▪ Investigation skills ▪ Design and Make	▪ Time and chronology ▪ Change and continuity (not for Infants) ▪ Cause and effect (not for infants) ▪ Synthesis and communication ▪ Using evidence ▪ Empathy (not for infants)	▪ Sense of place and space ▪ Maps, globes and graphical skills ▪ Investigation skills

How Are We Going to Do This?

- Using a variety of approaches and methodologies
- Letting pupils explore and discover for themselves
- Active learning
- Problem-solving tasks – open questions, pupils asking questions
- Facilitating talk and discussion
- Working from children's own ideas
- Variety of classroom structures: whole room, whole class, groups, pairs, individuals
- Using and exploring the local environment
- Integration
- Differentiation

Approaches and Methodologies

Science	History	Geography
▪ Open questions and initiating investigations ▪ Children's ideas as starting point ▪ Talk and discussion ▪ Brainstorm and concept mapping ▪ Concept cartoons ▪ Free play and discovery learning ▪ Annotated drawing ▪ Group or pair work ▪ Design and Make	▪ Story ▪ Use of historical novel ▪ Personal and family history (using evidence) ▪ Oral evidence ▪ Using artefacts ▪ Pictures and photographs ▪ Using the environment ▪ Documentary evidence ▪ Drama and role-play ▪ Using ICT ▪ Project work ▪ Use of maps ▪ Use of timelines	▪ Fieldwork ▪ Observation ▪ Annotated drawings, sketches ▪ Using photographs ▪ Surveys ▪ Interviews ▪ Stories ▪ Use of news/topical affairs ▪ Experiments and investigations ▪ Using simulations and models ▪ Keeping a wildlife garden ▪ Project work ▪ Video/DVD ▪ Maps and mapping ▪ ICT ▪ Artefacts

Vary the Recording Technique

Choose from:

- Annotated drawing
- Concept map
- Photographs
- Data tables
- Graphs
- Investigation planning sheet
- Concept cartoons
- Scrapbook
- Class poster
- Written reports
- Work portfolios
- Design and Make
- ICT
- Comprehension exercises
- Story/poetry
- Art/drama/music

What to Keep in Your Teacher's Notes

- Yearly plan/template – what strands and strand units I will cover
- Short-term planning – what objectives/skills I will cover and methods I will use
- Notes on resources, assessment, integration, differentiation, language

Assessment

- What did the children know before I started?
- What have they learned in terms of:
  - Knowledge?
  - Understanding?
  - Skills?
  - Attitudes?
- How will I assess? Choose from:
  - Teacher observation
  - Teacher-designed test and task
  - Brainstorm/concept map, pyramid ranking, ladder ranking, KWL chart, rubric, PMI chart
  - Work samples, drawings, portfolios
  - Pupil/parental feedback
  - Quizzes

Differentiation

- Find out what pupils know before you start
- Vary content, pace
- Ask a variety of questions
- Offer a variety of teaching styles
- Offer a variety of recording techniques
- Be conscious of the 'literacy barrier'
- Vary class organisation
- Consider groups carefully
- SNA/resource-teacher support
- Peer support/tutoring

Getting Started – Baselines for Each Subject

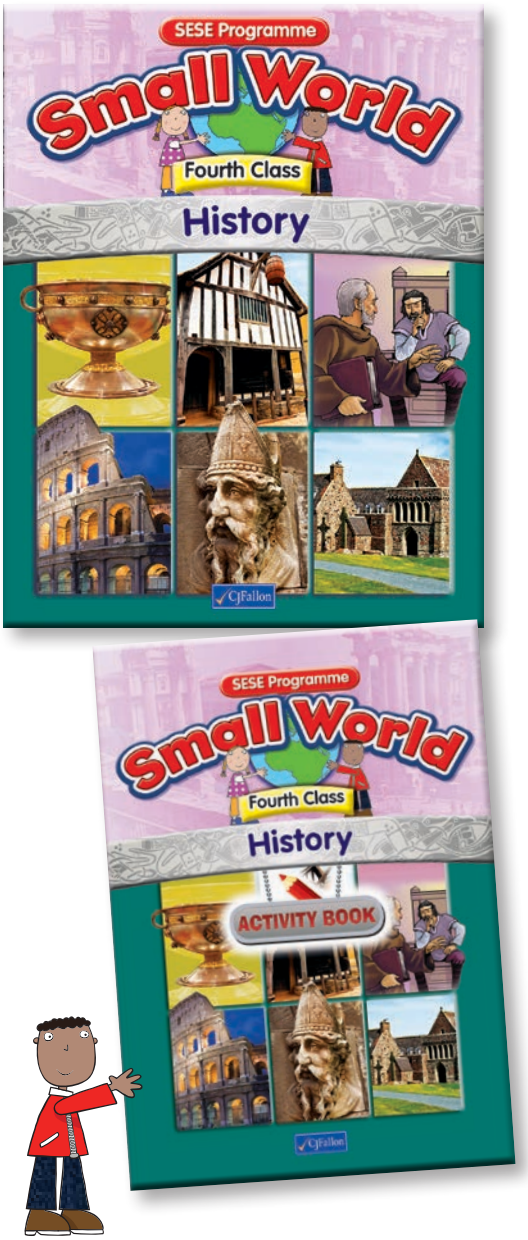
Science	History	Geography
▪ Hands-on investigations, use of equipment – at least one per topic ▪ Habitat studies – one or two per year ▪ Design and Make – one per term ▪ Children's ideas – before and after each topic ▪ Consider a whole-school approach to energy and forces strand units. ▪ Try a few exemplars.	▪ Timeline(s) in each class ▪ One history trail in each class ▪ Artefact day/school museum ▪ Try 'archaeology in the classroom' lessons. A resource pack called *It's About Time* was sent to schools by Limerick Education Centre (tel: 061 585060, email: info@lec.ie). You can download all 12 modules of the resource pack, which is also available on request from your local Education Centre. ▪ Try a few exemplars	▪ Maps and globes in every class – selection in a box/folder ▪ From First up, mark cardinal points in each classroom or on the yard ▪ Weather recording in every class ▪ Divide out the local man-made environment work ▪ Local trail ▪ Do a survey ▪ Try a few exemplars

Integrated SESE Projects

- Select two for each class
- Look at exemplars in Teacher Guidelines
- Plan using concept map and objectives

Teacher's Notes

History



History – Suggested Yearly Scheme at a Glance

Month	Unit	Strand, Strand Unit	Content Objectives The child should be enabled to:	Skills – The student will work as an historian in using the following skills:
September (1st fortnight)	**Unit 1:** The Children of Lir	Story, Myths and Legends	▪ Listen to, discuss, retell and record the story of the Children of Lir. ▪ Compare the lives of the Children of Lir to his/her own life and to the lives of other people in the past. ▪ Discuss the chronology and sequence of events in the story of the Children of Lir. ▪ Discuss the actions, feelings, attitudes and motivations of the characters in the story.	▪ Sequence the events in the story. ▪ Discuss the effect that Lir choosing to marry Aoife had on his life and the lives of others in the story. ▪ Look at the story from the point of view of the various characters. ▪ Use evidence and imagination to recreate elements from the story of the Children of Lir.
September (2nd fortnight)	**Unit 2:** Tuatha Dé Danann	Story, Myths and Legends	▪ Listen to, discuss, retell and record the story of the Tuatha Dé Danann ▪ Compare life in Ireland at the time of the Tuatha Dé Danann with his/her own life and to the lives of other people in the past. ▪ Discuss the chronology and sequence of events in the story of the Tuatha Dé Danann ▪ Discuss the actions, feelings attitudes and motivations of the characters in the story. ▪ Use oral and written forms, artwork, drama, mime, movement and ICT to express the story of the Tuatha Dé Danann.	▪ Sequence the events of the story. ▪ Discuss the effect that King Eochaid's stubbornness had on the Firbolg and the Tuatha Dé Danann. ▪ Look at the story from the point of view of the various characters. ▪ Use evidence and imagination to recreate elements from the story. ▪ Explore the similarities between life for the Tuatha Dé Danann before and after the appointment of Bres as king. ▪ Ask questions about a piece of evidence.
October	**Unit 5:** The Romans	Early People and Ancient Societies, The Romans	▪ Become familiar with aspects of the lives of the Romans such as their origins, military, constructions, daily life, trade, homes, work, leisure and pastimes, and cultural and artistic achievements. ▪ Examine and become familiar with evidence we have that tells us about the Romans. ▪ Record the place of the Romans on a timeline and relate this to prior knowledge. ▪ Compare and contrast the lives of the Romans to other early people and ancient societies.	▪ Record information about the Romans using simple timelines, and develop an understanding of time and chronology by comparing the relative age of objects and events. ▪ Explore similarities and differences between the lives of the Romans and our lives today. ▪ Discuss the discovery of concrete by the Romans and the effect that had on their lives. ▪ Examine the power and influence of the Roman army on the expansion of the empire. ▪ Examine a wide range of historical evidence about the Romans such as photographs, objects, maps, stories, etc. ▪ Use evidence and imagination to reconstruct the story of the Romans. ▪ Imagine and discuss the feelings and motives of the Romans.

November (1st fortnight)	**Unit 6:** My Locality	Local Studies, My Locality Through the Ages	▪ Actively explore some features of the locality such as old buildings, etc. ▪ Collect and use a range of simple historical evidence such as old photographs, newspaper articles, oral history, etc. ▪ Investigate various aspects of the locality such as its origins, place-names, elements that have changed, etc. ▪ Become familiar with important events in the history of the locality. ▪ Collect related local ballads, stories and traditions. ▪ Present findings using a variety of media and appropriate timelines.	▪ Chart the major historical events that have taken place in the locality. ▪ Examine old photographs or newspaper articles to find out how a place might have looked in the past. ▪ Examine how events in the history of a locality influenced how the area developed. ▪ Use a wide variety of sources to build up a better picture of the development of the location. ▪ Communicate this understanding of the past in a number of different ways. ▪ Imagine and discuss the feelings of individuals in the past.
November (2nd fortnight)	**Unit 6:** My Locality	Early People and Ancient Societies, Early Christian Ireland	▪ Become familiar with aspects of the lives of people living in Early Christian Ireland such as their daily lives, trade, homes, work, cultural and artistic achievements, and their mission to spread the word of God. ▪ Examine and become familiar with evidence we have that tells us about Early Christian Ireland. ▪ Record the place of the Saint Patrick and the monks that followed him on a timeline and relate this to prior knowledge. ▪ Compare and contrast the lives of the monks in Early Christian Ireland to other early people and ancient societies. ▪ Contrast the life of an ordinary person living in Early Christian Ireland with those who had lived in Ireland during Celtic times.	▪ Record information about Early Christian Ireland using simple timelines. ▪ Examine a wide variety of evidence such as maps and other reference material to find out more about monastic times in Ireland. ▪ Discuss the influence that the monks had on Ireland and on areas further afield. ▪ Gain an understanding of the life of a monk or hermit. ▪ Examine changes that occurred to the lives of people in Celtic Ireland with the coming of Christianity, and how life changed once again with the coming of the Vikings. ▪ Use evidence and imagination to reconstruct the story of life in Early Christian Ireland in various forms.
December	**Unit 8:** Saint Colmcille	Story, Stories from the Lives of People in the Past	▪ Listen to, discuss, retell and record the story of Colmcille. ▪ Compare the life of Colmcille to his/her own life and to the lives of other people in the past. ▪ Discuss the chronology of events in the story of Colmcille. ▪ Discuss the actions and feelings of Colmcille, Finian and other characters in the story. ▪ Explore the idea of a life of solitude bringing a monk closer to God.	▪ Place the life of Colmcille on a timeline and sequence the events of the story. ▪ Discuss the effect that copying the book had on Colmcille's life and the lives of others in the story. ▪ Look at the story from the point of view of various characters. ▪ Use evidence and imagination to recreate elements from the story of Colmcille. ▪ Discuss how life has changed since the time of Colmcille and what elements remain the same.

January	**Unit 9:** Homes and Houses	Continuity and Change Over Time, Homes and Houses	▪ Identify items of change and continuity in the line of development in terms of homes and houses. ▪ Identify some of the factors that have caused or prevented change such as the introduction of electricity, planning, etc. ▪ Use appropriate timelines in relation to homes and houses. ▪ Identify types of house from different time periods. ▪ Examine homes and houses in the locality and look for key indicators that might suggest the period during which a house was built.	▪ Use appropriate timelines to show the development of homes and houses. ▪ Discuss and analyse changes in the way houses have been built over time. ▪ Examine the introduction of electricity and its influence on the development of houses. ▪ Use photographs and other evidence to examine different styles of architecture from various time periods. ▪ Use a variety of media and methods to highlight changes that have occurred in housing over time. ▪ Develop a sense of what it was like to live in houses at different time periods.
February (1st fortnight)	**Unit 11:** The Saga of Leif Ericson	Story, Stories from the Lives of People in the Past	▪ Listen to, discuss, retell and record the story of Leif Erikson. ▪ Compare the life of Leif Erikson to his/her own life and to the lives of other people in the past. ▪ Discuss the chronology of events in the story of Leif Erikson. ▪ Discuss the actions and feelings of Leif Erikson, Erik the Red and other characters in the story. ▪ Explore the idea of a life of solitude on a faraway island and how this compares to the life of solitude of monks in Early Christian Ireland.	▪ Place the life of Leif Erikson on a timeline and sequence the events of the story. ▪ Discuss the implications of Erik the Red losing his temper and what it meant for his family. ▪ Discuss how things have changed since the time of Leif Erikson and what has stayed the same. ▪ Investigate a wide variety of sources to expand upon the story of Leif Erikson, e.g. the discovery at L'Anse aux Meadows in Newfoundland. ▪ Look at the story from the point of view of various characters. ▪ Use evidence and imagination to recreate elements from the story of Leif Erikson.
February (2nd fortnight)	**Unit 12:** Princess Hase of Japan	Story, Myths and Legends	▪ Listen to, discuss, retell and record the story of Princess Hase. ▪ Compare the life of Princess Hase to his/her own life and to the lives of other people in the past. ▪ Discuss the chronology and sequence of events in the story of Princess Hase. ▪ Discuss the actions, feelings attitudes and motivations of the characters in the story.	▪ Sequence the events of the story. ▪ Discuss the effect that Princess Hase's father choosing to remarry had on his life and the lives of others in the story. ▪ Look at the story from the point of view of various characters. ▪ Use evidence and imagination to recreate elements from the story of Princess Hase. ▪ Compare and contrast the story of Princess Hase to that of the Children of Lir.

March	**Unit 13:** Medieval Towns of Europe	Life, Society Work and Culture in the Past, Life in Medieval Towns and Countryside in Ireland and Europe	▪ Become familiar with aspects of the lives of people in medieval towns in Europe such as homes, clothing, the growth of towns, trade, craftsmanship, guilds, people at work, and leisure and pastimes. ▪ Examine and become familiar with evidence from the Middle Ages, especially evidence that can be found in the own local area. ▪ Record the people and events of the Middle Ages on appropriate timelines. ▪ Relate what was happening in medieval Europe to what was taking place in Ireland at the same time.	▪ Place the events and people of the Middle Ages on appropriate timelines. ▪ Relate the Middle Ages to prior knowledge. ▪ Discuss the development of castles and towns and the effect this had on the population of Europe. ▪ Use a wide variety of evidence such as photographs, paintings, websites, etc. to develop a clear understanding of the period and to investigate the local area during this time. ▪ Examine the lives of a number of people during this period such as a labourer, craftsman, merchant, etc. ▪ Examine the changes that took place during this period in terms of technology, homes, crafts, etc.
April (1st fortnight)	**Unit 15:** Musical Maestros	Story, Stories from the Lives of People in the Past	▪ Listen to, discuss, retell and record the stories of Turlough O'Carolan and Seán Ó Riada. ▪ Discuss the chronology of events in the lives of both men. ▪ Examine and make deductions from simple evidence. ▪ Discuss the attitudes and motivations of O'Carolan and Ó Riada. ▪ Use appropriate timelines related to both their lives. ▪ Express or record the stories of O'Carolan and Ó Riada through oral and written forms, artwork, music and other media. ▪ Compare and contrast the lives of both men.	▪ Record the events listed in the unit on appropriate timelines. ▪ Use prior knowledge to place the lives of O'Carolan and Ó Riada in the context of Irish history at the time. ▪ Compare and contrast the lives of O'Carolan and Ó Riada and their roles in the preservation of Irish music. ▪ Gain an understanding of what life was like for each of these musicians. ▪ Express or record the stories of O'Carolan and Ó Riada through oral and written forms, artwork, music and other media. ▪ Examine the impact of smallpox on O'Carolan's life.
April (1st fortnight) and **May** (2nd fortnight)	**Unit 16:** Life in Ireland in the Nineteenth Century	Life, Society Work and Culture in the Past, Life in the Nineteenth Century	▪ Become familiar with aspects of the lives of people living in Ireland during the nineteenth century. ▪ Examine and become familiar with a variety of evidence from the nineteenth century. ▪ Record the events mentioned in the unit on a timeline. ▪ Identify items of change and continuity from earlier and later time periods. ▪ Discuss the actions and feelings of different characters mentioned in the unit. ▪ Compare and contrast the lives of the three families mentioned in the unit.	▪ Place the events of the story on appropriate timelines and sequence the events of the story. ▪ Discuss the effect of the Great Famine on the ordinary people of Ireland. ▪ Examine evidence from a number of sources about life in Ireland at this time such as maps, photographs, drawings, etc. ▪ Empathise with the characters mentioned in the unit. ▪ Examine how life in the nineteenth century in Ireland differed from life now, what has changed and what remains the same.

May (2nd fortnight) and **June** (1st fortnight)	**Unit 18:** Caring for the Sick	Continuity and Change. Caring for the Sick	▪ Study aspects of technological and scientific developments in medicine over a long period of time. ▪ Identify items of change and continuity in the line of development in caring for the sick. ▪ Identify some of the factors that have caused or prevented change in the way healthcare is administered. ▪ Refer to and use appropriate timelines.	▪ Use appropriate timelines to highlight changes in caring for the sick over a long period of time. ▪ Use a number of sources to create a broader picture of the history of medicine. ▪ Express and record the stories of Hippocrates, Catherine McAuley and Alexander Fleming using a variety of media. ▪ Gain a broader understanding of the influence of these three historical figures on medicine by looking at their stories and the stories of those they helped. ▪ Discuss how advances in technology and discoveries have caused changes in medicine and how healthcare is administered.
June	**Unit 19:** Amelia Earhart	Story, Stories from the Lives of People in the Past	▪ Listen to, discuss, retell and record the story of Amelia Earhart and her contribution to the history of aviation. ▪ Discuss the chronology of events in the life of Amelia Earhart and sequence the events in the story. ▪ Examine and make deductions from simple evidence related to Amelia Earhart. ▪ Discuss the attitudes and motivations of Amelia Earhart, Hilton Railey, George Putnam, etc. ▪ Assess the contribution made by Amelia Earhart to the advancement of women in society.	▪ Record the events listed in the unit on appropriate timelines, and sequence and order the story chronologically. ▪ Place Amelia's Earhart's story in the line of development for transport. ▪ Use evidence from a number of different sources. ▪ Examine the story of Amelia Earhart from a number of different viewpoints. ▪ Look at the influence that Amelia Earhart had on the history of aviation and how she inspired many women.

The units listed below may be substituted for those units above that come under the same strand according to the guidelines of the Curriculum. Teachers may also like to add these units into their programme as additional literacy opportunities (integrated with History).			
Unit 3: The Greeks	Early People and Ancient Societies, <u>The Greeks</u>	▪ Become familiar with aspects of the lives of the Greeks such as their origins, daily life, homes, work, faith and beliefs, leisure and pastimes, cultural and artistic achievements, and the treatment of women and slaves in their society. ▪ Examine and become familiar with evidence we have that tells us about the Greeks. ▪ Record the place of the Greeks on a timeline and relate this to events in Ireland at the time. ▪ Compare and contrast the lives of the Greeks to other early people and ancient societies.	▪ Record information about the Greeks using simple timelines, and use common words and phrases associated with time. ▪ Compare the lives of Greek children in ancient times with the lives children today, and discuss what has changed and what remains the same. ▪ Examine the impact of democracy on the world. ▪ Use a wide range of historical evidence to broaden his/her knowledge of the Greeks. ▪ Tell the story of the Greeks in a wide variety of formats, e.g. projects, illustrations, stories, PowerPoint presentations, etc. ▪ Discuss how it would have felt to live at this time and how women and slaves must have felt when they were not allowed to vote in Athens.
Unit 4: The Celts	Early People and Ancient Societies, <u>The Celts</u>	▪ Become familiar with aspects of the lives of the Celts such as their origins, daily life, homes, work, faith and beliefs, leisure and pastimes, and cultural and artistic achievements. ▪ Examine and become familiar with evidence that tells us about the Celts. ▪ Record the place of the Celts on a timeline and relate this to prior knowledge. ▪ Compare and contrast the lives of the Celts to other early people and ancient societies.	▪ Record information about the Celts using simple timelines. ▪ Develop an understanding of time and chronology by comparing the relative age of objects and events. ▪ Explore similarities and differences between the lives of the Celts and our lives today. ▪ Discuss the discovery of iron by the Celts and the effect this had on their lives. ▪ Examine a wide range of historical evidence about the Celts such as photographs, objects, maps, stories, written sources, etc. ▪ Use evidence and imagination to reconstruct the story of the Celts. ▪ Imagine and discuss the feelings and motives of the Celts.
Unit 10: The Vikings	Early People and Ancient Societies, <u>The Vikings</u>	▪ Become familiar with aspects of the lives the Vikings, such as their origins, daily lives, trade, homes, crafts, work, and cultural and artistic achievements. ▪ Examine and become familiar with evidence that tells us about the Vikings. ▪ Record the place of the Vikings and their relationship with Ireland on a timeline and relate this to prior knowledge. ▪ Compare and contrast the lives of the Vikings to other early people and ancient societies. ▪ Contrast the life of an ordinary person living in Early Christian Ireland before the arrival of the Vikings with those who lived in Ireland during Viking times.	▪ Record information about the Vikings using simple timelines. ▪ Compare the relative age of objects or evidence to get a clearer picture of the past. ▪ Examine a variety of artefacts and other evidence to gain an insight into the lives of Vikings, e.g. Viking crafts. ▪ Discuss the influence the arrival of the Vikings had on the people of Ireland. ▪ Discuss what changed in Ireland because of the Vikings and what stayed the same. ▪ Gain an insight into the life of an ordinary Viking or a Viking warrior, ▪ Use a variety of media to express knowledge and opinions learned throughout the unit, e.g. take part in a class Thing.

Unit 14: Life in Ireland in the Eighteenth Century	Life, Society Work and Culture in the Past, Life in the Eighteenth Century	▪ Become familiar with aspects of the lives of people living in Ireland in the eighteenth century by looking at the early life of Daniel O'Connell. ▪ Examine and become familiar with a variety of evidence from the eighteenth century. ▪ Record the events of Daniel's O'Connell's story on a timeline. ▪ Identify items of change and continuity from earlier and later time periods. ▪ Discuss the actions and feelings of different characters in the story.	▪ Place the events of the story on appropriate timelines and sequence the events of the story. ▪ Discus the effect that the introduction of the Penal Laws had on the people of Ireland. ▪ Look at a wide variety of sources to create a picture of life during the eighteenth century in Ireland. ▪ Retell the story of Daniel O'Connell in his/her own words using a variety of media. ▪ Examine the life of an ordinary person during the eighteenth century. ▪ Identify items of change and continuity from earlier and later time periods such as education, homes, etc. ▪ Gain a better idea of the life of ordinary Irish people during the eighteenth century and compare this to the lives of some of our wealthier citizens.
Unit 17: My school	Local Studies, My School	▪ Investigate the development of present school buildings and examine the history of earlier school buildings. ▪ Become familiar with the story of the founder(s) of your school. ▪ Reconstruct a school day in the past using a variety of evidence. ▪ Compare and contrast school furniture and equipment today with those of schools in the past. ▪ Refer to and use appropriate timelines associated with schools.	▪ Use appropriate timelines associated with the development of schools in Ireland. ▪ Examine old school photographs, textbooks and other documents to reconstruct a school day from the past. ▪ Develop interview skills to extract oral evidence. ▪ Use a variety of media to highlight the differences between school life today and in the past. ▪ Write a diary entry for a pupil in a school in Ireland in the 1940s/1950s. ▪ Discuss the effect that the Rural Electrification Scheme had on schools in Ireland. ▪ Discuss how schools have changed with each decade that passed and what has stayed the same.

History – Fortnightly Plan at a Glance

Month	Unit	Textbook page	Activity Book page	Manual page
SEPTEMBER (1st fortnight)	1: The Children of Lir	4	3	34
SEPTEMBER (2nd fortnight)	2: Tuatha Dé Danann	8	4	36
OCTOBER (1st and 2nd fortnight)	5: The Romans	24	12	45
NOVEMBER (1st fortnight)	6: My Locality	30	15	48
NOVEMBER (2nd fortnight)	7: The Spread of Christianity	34	17	50
DECEMBER (1st and 2nd fortnight)	8: Saint Colmcille	40	19	53
JANUARY (1st and 2nd fortnight)	9: Homes and Houses	44	21	56
FEBRUARY (1st fortnight)	11: The Saga of Leif Erikson	54	26	61
FEBRUARY (2nd fortnight)	12: Princess Hase of Japan	58	28	64
MARCH (1st and 2nd fortnight)	13: Medieval Towns of Europe	62	29	67
APRIL (1st fortnight)	15: Great Irish Musical Maestros	74	33	73
APRIL (2nd fortnight) MAY (1st fortnight)	16: Life in Ireland in the Nineteenth Century	78	35	76
MAY (2nd fortnight) JUNE (1st fortnight)	18: Caring for the Sick	88	39	81
JUNE (2nd fortnight)	19: Amelia Earhart	92	40	84

The units listed below may be substituted for those units above that come under the same strand according to the guidelines of the Curriculum. Teachers may also like to add these units into their programme as additional literacy opportunities (integrated with History).

Unit	Textbook page	Activity Book page	Manual page
3: The Greeks	12	6	39
4: The Celts	18	9	42
10: The Vikings	48	23	58
14: Life in Ireland in the Eighteenth Century	68	31	70
17: My School	84	37	79

Unit 1: The Children of Lir

September (1st Fortnight)

Strand: Story **Strand Unit:** Myths and Legends

Objectives

The child should be enabled to:

- Listen to, discuss, retell and record the story of the Children of Lir.
- Compare the lives of the Children of Lir with his/her own life and with the lives of other people in the past.
- Discuss the sequence of events in the story of the Children of Lir.
- Discuss the actions and feelings of King Lir, Aoife, the children and other characters in the story.

Ref: Textbook p. 4

New Words

generation druid hermit

Lesson Kernel

The threads of this unit are as follows:

- In olden times, myths and legends were told by one generation to the next. The stories were often changed as they were passed along.
- There once lived a King named Lir who had four children. Their names were Fionnuala, Aodh, Fiachra and Con. Lir's wife died suddenly and he married a young woman named Aoife. Aoife was jealous of the love that Lir had for his children. She conspired with a druid to come up with a wicked plan. She lured the children to the lake and cast a spell, turning them into swans. They were forced to live as swans for 900 years. The children were eventually freed from the spell by the sound of a church bell. They were told about Jesus, were baptised and died.

Skills

- **Time and chronology:** Sequencing of events in the story
- **Cause and effect:** Discussing the effects that Lir's decision to marry Aoife had on his life and on the lives of other characters in the story
- **Empathy:** Looking at the information in the unit from the point of view of various characters
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the Children of Lir

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on what pupils know about myths and legends.
- Discuss what is meant by the terms 'myth' and 'legend' and how these differ from 'story' or 'fact'.
- Find out if anyone has ever heard of the Children of Lir.

Assessment of Learning (Finding out what the pupils have learned)

- Completion and correction of the written exercises that accompany the unit. (The same applies for all units.)
- Use a large map of Ireland to identify some of the places mentioned in the story.

Ask pupils to:

- Empathise with the Children of Lir.
- Retell the story of the Children of Lir in their own words.
- Offer reasons as to why there are a number of different versions of this myth.

Differentiation – More Challenging

1. Complete the written exercises in the textbook and Activity Book. (The same applies for all units.)
2. Rewrite the story in your own words.
3. Retell the story from the point of view of Aoife.
4. Present another Irish myth or legend to the class. You may choose your own method of presentation, e.g. scrapbook, PowerPoint presentation, mini-book.

Differentiation – Less Challenging

1. Complete the exercises in the textbook orally or with a partner. (The same applies for all units.)
2. Pair work: Discuss what life must have been like for Lir after his children were turned into swans.

Related Websites

www.youtube.com/watch?v=sLJ6e7UzDek
Video story of the Children of Lir that can be used as a classroom resource

www.storyteller.ie
Legends/myths told by Niall de Búrca are available for purchase on CD or download

Linkage: **Strand:** Early People and Ancient Societies, **Strand Unit:** Early Christian Ireland – Examine the role of the monk at the end of the story of the Children of Lir.

Integration: **Geography:** Using pictures, maps and globes – charting the journey of the Children of Lir from the Sea of Moyle to the Isle of Glora **Science Strand:** Living Things, **Strand Unit:** Plants and Animals – exploring the habitats of swans
Literacy: Reading from the story and retelling the events in their own words
Visual Arts: Examining the work of Oisín Kelly **Drama**: Dramatising scenes from the story

Answers – Textbook

Page 7: A. 1. Fionnuala, Aodh, Fiachra and Con **2.** the stories she used to tell them, the games she used to play with them and the songs she used to sing to them **3.** The children were turned into swans. **4.** 900 years **5.** He told them about Saint Patrick and God's love for everyone. **B. 1.** wise and fair **2.** church bell **3.** druid **4.** hermit

Answers – Activity Book

Page 3: A. 2 Aoife was jealous of the amount of time that Lir spent with his children. 3 Aoife cast a terrible spell on the children. 4 Lir learned of Aoife's treachery from the swans. 5 Lir told Aoife to leave his kingdom. 6 The swans spent 300 years on the Sea of Moyle. 7 The swans spent 300 years on the Isle of Glora. 8 The spell was broken by the sound of a church bell. 9 Caomhóg buried the four old people in a grave near his church. **B.** generation – the average time (usually 30 years) in which children grow up and have children of their own; druid – a priest who was believed to have magical powers; hermit – a monk who lived on his own

Unit 2: Tuatha Dé Danann

September (2nd Fortnight)

Strand: Story **Strand Unit:** Myths and Legends

Objectives

Ref: Textbook p. 8

The child should be enabled to:

- Listen to, discuss, retell and record the story of the Tuatha Dé Danann.
- Compare life in Ireland at the time of the Tuatha Dé Danann with his/her own life and with the lives of other people in the past.
- Discuss the chronology and sequence of events in the story of the Tuatha Dé Danann.
- Discuss the actions and feelings of Nuada, Bres, Sreang and other characters in the story.
- Use oral and written forms, artwork, drama, mime, movement and ICT to express the story of the Tuatha Dé Danann.

New Words

Firbolg Tuatha Dé Danann Formorians

Lesson Kernel

The threads of this unit are as follows:

- Long ago in Ireland there lived a people called the Firbolg, who divided the country up into five provinces.
- After 40 years of peace, the Tuatha Dé Danann arrived in Ireland and camped at Moytura.
- Sreang (greatest warrior of the Firbolg) reported to King Eochaid that the Tuatha Dé Danann were fierce warriors with whom he would be wise to make a deal. However, the king insisted on fighting.
- A great battle was fought and many lives were lost. Sreang, who now led the Tuatha Dé Danann, decided to end the fighting. The Firbolg were granted the province of Connacht.
- The Tuatha Dé Danann soon found themselves under the power of the Formorians.
- Another battle was fought. The Tuatha Dé Danann won after they defeated Balor of the Evil Eye.

Skills

- **Time and chronology:** Sequencing of events in the story
- **Cause and effect:** Discussing the effects that King Eochaid's stubbornness had on the Firbolg and the Tuatha Dé Danann
- **Empathy:** Looking at the story from the points of view of the various characters
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the Tuatha Dé Danann
- **Continuity and change:** Exploring the text to understand those elements of life during the time of the Tuatha Dé Danann that have changed and those that remain the same

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on what pupils already know about myths and legends.
- Refer back to Unit 1: The Children of Lir.
- Discuss what is meant by the terms 'myth' and 'legend' and how these differ from 'story' or 'fact'.
- Find out if anyone has ever heard of the Tuatha Dé Danann.

Assessment of Learning (Finding out what the pupils have learned)

- Use a large map of Ireland to identify some of the places mentioned in the story.

Ask pupils to:

- Empathise with some of the characters in the story.
- Order and sequence the events of the story.
- Retell the story of the Tuatha Dé Danann in their own words.
- Compile a class book of stories from Ancient Ireland.

Differentiation – More Challenging

1. Rewrite the story in your own words.
2. Retell the story from the point of view of Sreang.
3. Present another Irish myth or legend to the class. You may choose your own method of presentation, e.g. a scrapbook, PowerPoint presentation, mini-book, etc.

Differentiation – Less Challenging

1. Listen to other Irish legends as told by your classmates. Choose one legend and design a poster to advertise a film that will be based on it.
2. Group work: Create a wall-frieze of the story.
3. Complete Activity B on page 5 of the Activity Book.
4. Colour the picture of Lugh of the Long Arm and Balor of the Evil Eye (photocopiable page 89).

Related Websites

www.ireland-information.com/articles/tuathadedanann.htm
Information about the Tuatha Dé Danann

www.shee-eire.com/Magic&Mythology/races/tuatha-de-danann/page1.htm
Additional legends of the Tuatha Dé Danann

www.danann.org/library/arch/firb.html Information about the Firbolg

Extra Ideas

- Create a soundtrack to the story using instruments to compose music for the various scenes.
- Prepare a class play based on the events in the story.
- Use modelling clay or papier mâché to create models of the main characters in the story.

Linkage

Strand: Early People and Ancient Societies, **Strand Unit:** Early Christian Ireland – Examine the role of Irish monks in keeping stories like this alive.

Integration

Geography: Using pictures, maps and globes – examining the places mentioned in the story; looking at the provinces of Ireland

Science: Nuada had a silver arm crafted for him. Look at how science can help people who are less able, e.g. artificial limbs, glasses.

Literacy: Reading from the story and retelling the events in their own words

Visual Arts: Illustrating scenes from the story; understanding and appreciating the work of Jim Fitzpatrick

Drama: Dramatising events from the story, e.g. a 'conscience alley' for King Eochaid, in which he decides whether of not to go battle against the Tuatha Dé Danann

Answers – Textbook

Page 11: A. 1. Greece **2.** Sreang **3.** to give the Tuatha Dé Danann half of Ireland rather than to fight them **4.** Sreang cut off King Nuada's arm. **5.** Bres **6.** Lugh threw a stone that knocked his eye right through to the back of his head. **B. 1.** myth **2.** Meath **3.** Ulster **4.** Firbolg

Answers – Activity Book

Page 4: B. 1. A group of people who arrived in Ireland from Greece, divided the country into the five provinces and ruled in peace for almost 40 years: Firbolg **2.** A group of fierce warriors, named after the goddess Danú and led by Nuada: Tuatha Dé Danann **3.** A group of powerful, magical people who lived on the islands off the coast of Connacht: Formorians

C. 2 The Tuatha Dé Danann set up camp at Moytura. 3 Sreang was dispatched to investigate the new army that had landed in Ulster. 4 The first Battle of Moytura took place and Nuada lost his arm in battle. 5 The Formorians gained control of the Tuatha Dé Danann. 6 The second Battle of Moytura took place. 7 Balor's eye was knocked to the back of his head and he destroyed the Formorian army.

Page 5: A. 1. the Tuatha Dé Danann and the Formorians

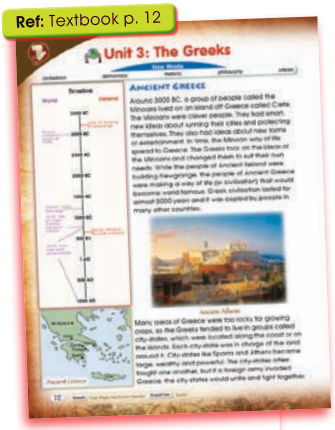
Unit 3: The Greeks

Optional/Alternative Unit

Strand: Early People and Ancient Societies **Strand Unit:** Greeks

Objectives

Ref: Textbook p. 12



The child should be enabled to:

- Become familiar with aspects of the lives of the Greeks, such as their origins, daily lives, homes, work, faith and beliefs, leisure and pastimes, cultural and artistic achievements, and the treatment of women and slaves in their society.
- Examine and become familiar with evidence of the Greeks.
- Record the place of the Greeks on a timeline and relate it to events in Ireland at the time.
- Compare and contrast the lives of the Greeks with those of other early people and ancient societies.

New Words

civilisation democracy rhetoric philosophy citizen

Lesson Kernel

The threads of this unit are as follows:

- The era of the Ancient Greeks began around 3000 BC, when the Minoan civilisation spread from Crete to the mainland. The Greeks took on the Minoan ideas and adapted and refined them.
- The Greeks lived in city-states. Each city was in charge of the surrounding land.
- The city-states joined together if a foreign army invaded. Sparta and Athens were two of the most important city-states.
- Athens was a wealthy city-state, in which learning and art were considered to be very important. Athens was ruled by an assembly of citizens.
- Democracy and philosophy were central ideas introduced by the Athenians.
- Sparta was a military state. Spartans had little interest in wealth. Boys in Sparta were trained from a young age to become soldiers. Women in Sparta were responsible for running the homes and farms while the men were away at war.
- The Greeks loved entertainment. Drama festivals took place in open-air theatres. Athletic games were held at Olympia to honour the god Zeus.
- The Greeks believed in many different gods and honoured them at different times, depending on what they were praying for. The gods were believed to live on Mount Olympus.
- There are many Greek myths and legends involving the gods and their children.

Minoan pottery, c. 2100 BC

Greek stater showing Zeus, c. 360 BC

Skills

- **Time and chronology:** Recording information about the Greeks using a timeline, and understanding and using date conventions, e.g. BC
- **Cause and effect:** Discussing the impact of democracy on the world
- **Empathy:** Looking at the information in the unit from the points of view of some of the Greeks, e.g. how women and slaves must have felt when they were not allowed to vote in Athens
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the Greeks
- **Continuity and change:** Discussing how life has changed since the time of the Greeks, what elements remain the same, and what contributions of the Greeks are evident in society today

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on what pupils already know about Ancient Greece.
- On a blank map of Europe (photocopiable page 90), show Greece and highlight its size, shape, etc. in comparison with Ireland.
- Find out if pupils have ever heard of any Greek myths or legends.
- Find out if anyone in the class has ever been in Greece.
- Discuss the Olympic Games and their origins as a lead in to talking about the Ancient Greeks.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Identify the main city-states and explain how they differed.
- Empathise with some of the people of Ancient Greece by describing what it was like to live there from their points of view.
- Rewrite a Greek myth or legend in their own words.
- Explain what the new words at the start of the unit mean.
- Discuss what democracy means today. Is it the same now as it was in Ancient Greece?

Differentiation – More Challenging

1. Pair work: Create a crossword based on the unit and give it to your partner to solve.
2. Have a class debate on the topic: *Gaelic football should be included in the next Olympic Games.*
3. Complete Activity A on page 7 of the Activity Book.
4. Read the novel, *Return to Troy,* by Pierce Feirtear (Blackwater Press).
5. Present a Greek myth or legend to the class. You may choose your own method of presentation, e.g. a scrapbook, PowerPoint presentation, mini-book, etc.

Differentiation – Less Challenging

1. Listen to Greek myths and legends as told by your classmates and illustrate your favourite one.
2. Pair work: Create a word search based on Ancient Greece and give it to your partner to solve.
3. Group work: Work collaboratively on a frieze of a Greek myth or legend.
4. Pick out interesting facts that you did not know previously about the Ancient Greeks.
5. Locate Greece on a map of Europe (photocopiable page 90).

Related Websites

www.woodlands-junior.kent.sch.uk/Homework/Greece.html
Information about the Ancient Greeks

www.bbc.co.uk/schools/primaryhistory/ancient_greeks/ Explore life in Ancient Greece

www.ancientgreece.co.uk/ Ancient Greek artefacts and ruins, stories and virtual tours

Extra Idea

Contact the Olympic Council of Ireland to find out more about Ireland's participation in the Olympic Games.

Linkage

Strand: Early People and Ancient Societies, **Strand Units:** Romans; Celts – Compare and contrast the lives of people in Ancient Greece with those of people in Ancient Rome or Celtic Ireland.

Strand: Continuity and Change Over Time, **Strand Units:** Schools and Education; Communication; Clothes; Transport

Integration

Geography: Using pictures, maps and globes – exploring Greece in more detail; examining its topography and landscape

Science: Carry out research on the work of Archimedes.

Literacy: Teacher could read an extract from *Percy Jackson and the Lightning Thief* by Rick Riordan (Puffin) or *Return to Troy* by Pierce Feirtear (Blackwater Press) to the class.

Numeracy: Calculating how long ago events on the timeline took place

Drama: Create mini-plays based on some of the myths and legends of Ancient Greece.

PE: Hold a class 'mini Olympic Games' or compete against another class in the school.

Answers – Textbook

Page 14: 3. (a) The walls provided a secure connection from the city to the sea.
(b) Advantages: The walls meant that the people of Athens would not be cut off from supplies if the city came under siege. Travelling between the walls also protected people who were moving goods from being attacked by thieves. Disadvantages: If attackers used a ladder to scale the walls, people travelling between the walls became an easy target. If attackers gained control of the exits, people were trapped inside.

Page 17: A. 1. 6 km **2.** Parthenon **3.** Agora **4.** seven years old **5.** Olympia **B. 1.** the people **2.** mathematican **3.** trade and business **4.** the men were often away at battle

Answers – Activity Book

Page 6: C. civilisation – a group of people living together with a common way of life; rhetoric – the art of public speaking; democracy – being ruled or governed by the people; philosophy – thinking about the meaning of life; citizen – a person who had the right to be on an assembly in Athens

Page 8: A. From left to right, top row: Ares, Artemis, Aphrodite; middle row: Athena, Zeus, Demeter; bottom row: Hades, Apollo, Poseidon

Unit 4: The Celts

Optional/Alternative Unit

Strand: Early People and Ancient Societies **Strand Unit:** Celts

Objectives

Ref: Textbook p. 18

The child should be enabled to:

- Become familiar with aspects of the lives of the Celts, such as their origins, daily lives, homes, work, faith and beliefs, leisure and pastimes, cultural and artistic achievements.
- Examine and become familiar with evidence of the Celts.
- Record the place of the Celts on a timeline and relate it to prior knowledge.
- Compare and contrast the lives of the Celts with those of other early people and ancient societies.

New Words

bronze ring fort wattle and daub mead
taoiseach tánaiste torc Ogham Gallan

Lesson Kernel

The threads of this unit are as follows:

Gold shoe ornaments found in the grave of a Celtic Chieftain in Germany

- Metalworking and the use of Bronze came to Ireland around 2000 BC.
- Around 600 BC, having conquered much of Europe, the Celts arrived in Ireland.
- The Celts travelled from Britain to Ireland in small boats. They met little resistance from the native people.
- They chose to live in small groups and built settlements called ring forts. A ring fort was a circular fort surrounding a number of small houses. The houses were constructed in a circular fashion using wattle and daub.
- We get many of our place-names from Celtic settlements.
- The Celts spent most of their time farming. They also hunted animals for their meat.
- Celtic clothes were very practical in nature, though dyes from berries were used to make them colourful. Jewellery, e.g. brooches and torcs, was commonly worn.
- The Celtic hierarchy was a lot like the feudal system. A taoiseach came under the rule of a Rí Cúige, who was ruled by the High King (Ard Rí) of Ireland.
- Celtic artwork was full of action and colour. Much of it has survived for more than a millennium because of the work of monks.
- The Celts loved storytelling, particularly stories of war and great heroes.
- The Celts celebrated religious festivals such as Samhain and Bealtaine. They believed in life after death and a place called Tír na nÓg.

Skills

- **Time and chronology:** Recording information about the Celts using a timeline, and understanding and using date conventions, e.g. BC
- **Cause and effect:** Discussing the effects that the discovery of iron had on the lives of the Celts
- **Empathy:** Looking at the information in the unit from the points of view of the Celts, e.g. their feelings and motives
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the Celts, e.g. report on them arriving in Ireland
- **Continuity and change:** Discussing how life has changed since the time of the Celts, what elements remain the same, and what contributions of the Celts are evident in society today

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on the pupils' prior knowledge of the Celts.
- Use a map of Europe (photocopiable page 90) to show the origin of the Celts in Central Europe and their territories across the continent.
- Discuss how the people of Scotland and Brittany have languages similar to Gaelic and examine why this is so.
- Show pupils a photograph of a ring fort or a Celtic artefact and discuss where it came from, who constructed/made it, etc.
- Examine local place-names for evidence of Celtic settlements, e.g. 'rath' and 'dún'.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Use a map of Europe (photocopiable page 90) to show the territories of the Celts.
- Empathise with the people mentioned in the unit and put themselves in the shoes of an ordinary Celt, e.g. a Celtic child.
- List 10 things that they did not know about the Celts prior to lesson. (Revisit the KWL chart and fill in what has been learned.)
- Discuss the influence of the Celts on Ireland today.

Differentiation – More Challenging

1. Present a Celtic myth or legend to the class. You may choose your own method of presentation, e.g. a scrapbook, PowerPoint presentation, mini-book, etc.
2. Have a class discussion on whether or not the Tailteann Games should be revived.
3. Dramatise an interview between a Celtic warrior and a reporter for the *Ancient Irish Tribune*.
4. Visit your local library and try to find out about the influence of the Celts on your area.

Differentiation – Less Challenging

1. Listen to the Celtic legends as told by your classmates and illustrate your favourite one.
2. Design a new torc for the High King of Ireland.
3. Write down the 10 most interesting facts that you learned from this unit.
4. Colour the picture of a Celtic brooch (photocopiable page 91).

Related Websites

http://celts.mrdonn.org/dailylife.html	Information on the daily life of the Celts
www.dochara.com/the-irish/ireland-history/celtic-ireland/	Celtic society and Brehon laws
http://resourcesforhistory.com/	Interactive map of Celtic territories
www.bbc.co.uk/wales/celts/	Activities, stories and games based on the Celts

Extra Ideas

- Use recycled materials to build a model of a ring fort.
- Read the story of the Táin to the class and have them create a collage based on it.
- You are a file – a Celtic poet. You have been treated poorly in the house of a local taoiseach. Write a poem giving out about him, his family and his house.

Linkage

Strand: Early People and Ancient Societies, **Strand Units:** Romans; Greeks – Compare and contrast the lives of people in Celtic Ireland with those of people in Ancient Rome and Greece.

Strand: Continuity and Change Over Time, **Strand Units:** Schools and Education; Communication; Clothes; Transport

Strand: Early People and Ancient Societies, **Strand Units:** Early Christian Ireland – Examine the influence of the Celts on the monks that followed them.

Integration

Geography: Using pictures, maps and globes – Examine maps to find place-names that begin with 'rath', 'lios', 'dún' and 'cathair'.

Science: Carry out research on iron as a material.

Literacy: Reading from the unit and retelling the events in their own words

Numeracy: Calculating how long ago events on the timeline took place

Visual Arts: On a flat piece of modelling clay, carve your name using the Ogham alphabet.

Drama: Create a mini-play in Irish.

PE: Recreate some of the events of the Tailteann Games.

Religion: Discuss how the early Christians might have gone about converting the Celts.

Answers – Textbook

Page 23: A. 1. Iron was stronger than the metals their enemies used for making weapons. **2.** circle **3.** wattle and daub **4.** pigs, sheep and cattle **5.** torcs **6.** stories and legends, music (especially from the harp) and games (fidchell, hurling, Tailteann Games) **B. 1.** 2000 BC **2.** iron **3.** 600 BC **4.** rushes **5.** harp

Answers – Activity Book

Page 9: C. bronze – metal alloy of tin and copper; ring fort – circular fort surrounded by a fence or walls; wattle and daub – materials used to build walls in Celtic homes; mead – drink made from water and honey or grain; torc – decorative necklace like a collar, worn by Celts; Ogham – writing made up of lines and dots, used by Celts

Page 10: A. ✓: cheese, pork, milk, mead; ✗: barley, oats, straw, bucket, firewood, books, chocolate, wine, olives, nuts, bread, porridge **B.** Iron made us strong.

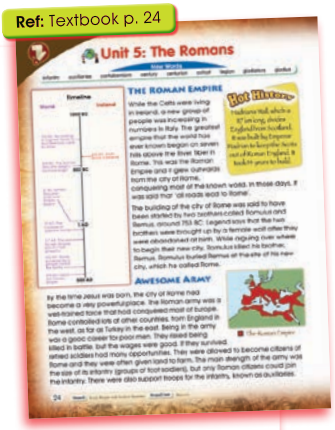
Page 11: A. From top down: taoiseach, tánaiste, nobles, druids, Brehons, filí, freemen, labourers

Unit 5: The Romans

October (1st and 2nd Fortnight)

Strand: Early People and Ancient Societies **Strand Unit:** Romans

Objectives



The child should be enabled to:

- Become familiar with aspects of the lives of the Romans, such as their origins, daily lives, homes, work, military, trade, constructions, faith and beliefs, leisure activities and pastimes and cultural and artistic achievements.
- Examine and become familiar with evidence of the Romans.
- Record the place of the Romans on a timeline and relate it to prior knowledge.
- Compare and contrast the lives of the Romans with those of other early people and ancient societies.

New Words

infantry auxiliaries contubernium century
centurion cohort legion gladiators gladius

Lesson Kernel

Colosseum

The threads of this unit are as follows:

- The Roman Empire grew from small beginnings on seven hills above the River Tiber in 776 BC.
- By the time of Jesus, the empire had grown to cover most of Southern Europe and parts of North Africa.
- The Roman army was a well-oiled fighting machine, which often defeated superior numbers with clever tactics and a well-trained infantry.
- The Romans are famous for their amazing constructions, such as the Colosseum and the Pantheon. Rome was also one of the first cities in the world to have apartment blocks. This allowed for a great number of people to live within the city walls.
- The Roman army paved the way (literally!) for Roman traders to do business throughout the empire.
- Most men and women in Rome worked in the fields outside the city or in workshops.
- The Romans loved entertainment – the bloodier the better. Gladiators fought to the death and mock battles were often arranged to show audiences the glory of emperors' victories.
- The Roman Empire lasted for 1000 years and the ruins of Roman buildings can be seen in many places across Europe.

Skills

- **Time and chronology:** Recording information about the Romans using a timeline, and understanding and using date conventions, e.g. BC
- **Cause and effect:** Discussing the effects that the discovery of concrete had on the lives of the Romans, and examining the influence of the army on the expansion of the empire
- **Empathy:** Looking at the information in the unit from the points of view of the Romans, e.g. their feelings and motives
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the Romans
- **Continuity and change:** Discussing how life has changed since the time of the Romans, what elements remain the same, and what contributions of the Romans are evident in society today

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on the pupils' prior knowledge of the Romans.
- Use a blank map of Europe (photocopiable page 90) to show the origin of the Romans in Italy and their territories across the continent.
- Examine a number of famous Roman buildings and ask pupils to predict what each was used for.
- Find out if anyone in the class has ever been to Rome.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Use a blank map of Europe (photocopiable page 90) to show the territories of the Romans.
- Empathise with the people mentioned in the unit and put themselves in the shoes of an ordinary Roman, e.g. a Roman child or woman.
- List 10 things that they did not know about the Romans prior to the lesson. (Revisit the KWL chart and fill in what has been learned.)
- Discuss the influence of the Romans on Ireland today.

Differentiation – More Challenging

1. Group work: Prepare a list of questions that could be used as a table quiz on the Romans.
2. Create a comparison chart and compare the Ancient Romans with the Ancient Greeks and Celts under various headings such as origins, daily lives, etc.
3. Present a story about a famous Roman to the class. You may choose your own method of presentation, e.g. a scrapbook, PowerPoint presentation, mini-book, etc.

Differentiation – Less Challenging

1. Draw a map showing the extent of the Roman Empire.
2. Write down the 10 most interesting facts that you learned from this unit.
3. Name some famous constructions of Ancient Rome and say what they were used for.

Related Websites

www.bbc.co.uk/schools/primaryhistory/romans/ Explore life in Ancient Rome

www.roman-empire.net/children/index.html 'Picture tours' of Rome and the empire

www.rome.mrdonn.org/ Information about Rome and some famous Romans

www.kidskonnect.com/subject-index/16-history/262-ancient-rome.html
Facts about Ancient Rome

http://www.chiddingstone.kent.sch.uk/homework/romans.html The Romans in Britain

www.salariya.com/web_books/gladiator/index.html Information about gladiators

Extra Ideas

- Read *The Roman Mysteries* by Caroline Lawrence (Orion Children's Books) or visit the website: www.romanmysteries.com.
- Check out www.horrible-histories.co.uk and find out more about the Rotten Romans.
- Make up a puzzle for your partner using Roman numerals.
- Use cardboard to make mock Roman shields and test the testudo formation to see if really works!

Linkage: **Strand:** Early People and Ancient Societies, **Strand Units:** Celts; Greeks – Compare and contrast the lives of people in Rome with those of people in Celtic Ireland and Ancient Greece. **Strand:** Continuity and Change Over Time, **Strand Units:** Schools and Education; Communication; Clothes; Transport

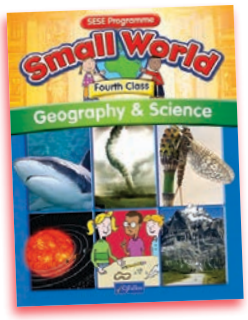
Integration: **Geography:** *Small World Geography & Science* Unit 10: Italy

Literacy: Reading from the unit and retelling the events in their own words

Numeracy: Calculating how long ago events on the timeline took place

Visual Arts: Use bits of coloured paper to create a mosaic in the style of the Romans.

Drama: Divide the class into two groups. One group should try to convince the Roman Emperor to conquer Ireland and the other should tell him why he should not bother.



Answers – Textbook

Page 26: 1. The building of Rome was said to have been started by two brothers called Romulus and Remus. **Page 29: A. 1.** Tiber **2.** The wages were good and when they retired, soldiers were allowed to become citizens and were given land to farm. **3.** 80 **4.** concrete **5.** They were given a wooden sword known as a gladius. **B. 1.** 509 BC **2.** contubernium **3.** testudo **4.** aqueducts

Answers – Activity Book

Page 12: C. infantry – main strength of the army, made up of Roman citizens; auxiliaries – support for the infantry; contubernium – eight soldiers who slept, ate and fought together; century – group of 80 soldiers who always fought together; centurion – commander of a century; cohort – six centuries make up this unit of the army (about 480 men); aqueduct – structure that carried water from the countryside into the city of Rome; Colosseum – huge arena in which fighting contests took place; gladiator – trained fighter who fought to the death in an arena **Page 14: A.** All roads lead to Rome. **B.** From left to right, top row: Roman Forum (3), aqueduct (5), Colosseum (1); bottom row: Pantheon (2), public baths (6)

Unit 6: My Locality

November (1st Fortnight)

Strand: Local Studies **Strand Unit:** My Locality Through the Ages

Objectives

Ref: Textbook p. 30

The child should be enabled to:

- Actively explore some features of his/her local environment, such as old buildings, etc.
- Collect and use a range of pieces of simple historical evidence, such as old photographs, newspaper articles, oral history, etc.
- Investigate various aspects of his/her own locality such as its origins, place-names, elements that have changed, etc.
- Become familiar with important events in the history of the locality.
- Collect related local ballads, stories and traditions.
- Present findings using a variety of media and appropriate timelines.

New Words

historian census ballad artefacts plaque

Lesson Kernel

This unit focuses on how to find out information about the local area.

- Place-names provide a key to the origins of some places – particularly the names in Irish. Streets and buildings are often named after famous local people.
- Old photographs are a great source of evidence – particularly for comparing what has changed and what has stayed the same. Libraries can contain great sources of local information, e.g. local books and newspapers. Songs can also tell us a lot about the local area.
- All around us there is evidence of our history. Ordnance Survey maps often show sites of historical interest. There are also many plaques on walls, bridges, etc. that can tell us a lot about the local area.

Skills

- **Time and chronology:** Charting the major historical events that have taken place in the locality
- **Cause and effect:** Discussing how historical events of the locality have influenced how the area developed
- **Synthesis and communication:** Using evidence to build up a picture of the development of the locality
- **Continuity and change:** Examining old photographs or newspaper articles to find out how the locality looked in the past, what elements have changed and what remain the same

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on the pupils' prior knowledge of their locality.
- Highlight any distinctive features or buildings in the area.
- Draw a map of the locality using the pupils' prior knowledge.
- Ask pupils what a tourist travelling in the area might like to see.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the map drawn prior to the lesson and fill in any new discoveries that have been made.
- Carry out fieldwork with digital cameras to record places of interest or of note.
- Compile a collection of local ballads and stories.
- Create a timeline for the locality listing all major events and historical figures.

Differentiation – More Challenging

1. Do a mini-project on a particular era in your locality's history, or on a historical figure, feature or building.
2. List and explain some of the local place-names, street-names or names of buildings.
3. Take note of any historical sites and plaques of interest on your way home from school.

Differentiation – Less Challenging

1. Group work: Do a mini-project on a particular era in your locality's history or on a particular historical figure.
2. Sketch or paint a picture of a local feature or building.
3. List some of the local place-names and locate them on a map.

Related Websites

www.census.nationalarchives.ie, www.nationalarchives.ie National Archives

www.library.ie, www.osi.ie, www.scoilnet.ie
Resources for finding out information about the locality

Linkage: **Strand:** Early People and Ancient Societies, **Strand Units:** Celts; Early Christian Ireland – Look for evidence of Celtic or monastic settlements in the locality.

Integration: **Geography:** Using pictures, maps and globes **Visual Arts:** Make a collage of the locality in photographs. **Music:** Collect local songs and ballads.

Answers – Textbook

Page 33: A. 1. that it was once the site of a ring fort **2.** old, local newspapers or magazines **3.** A photograph is like a window to the past. **4.** the people who were sent to Australia for stealing food for their starving children during the Great Famine **5.** stone crosses, old forts, passage graves and castles **B. 1.** dún 2. library 3. ballad 4. a plaque **C. 1.** It can often be difficult to look at what we see every day in a historical light, and there is a lot more evidence for things that are further afield. **2. (a)** from stories, drawings, paintings, songs and newspaper articles **3.** They must take care not to disturb anything of historical significance.

Answers – Activity Book

Page 15: C. historian – person who researches the history of events, places or people; census – record of all of the people living in an area on a certain day; ballad – song that tells a story about events of the past; artefacts – ancient objects that tell us about the past; plaque – sign that sometimes shows the name of a bridge or building

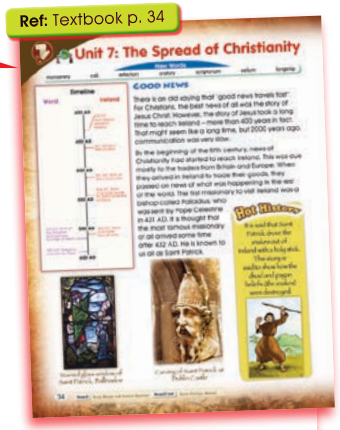
Page 16: A. 3. (a) This is a tradition that consists of 'hunting' a fake wren and putting it on top of a decorated pole. Groups of 'strawboys' celebrate the wren by dressing up in masks and straw suits and parading through towns and villages.

Unit 7: The Spread of Christianity

November (2nd Fortnight)

Strand: Early People and Ancient Societies **Strand Unit:** Early Christian Ireland

Objectives



The child should be enabled to:

- Become familiar with aspects of the lives of people living in Early Christian Ireland, such as their daily lives, homes, work, cultural and artistic achievements, and mission to spread the Gospel.
- Examine and become familiar with evidence of the monks of Early Christian Ireland.
- Record the place of Saint Patrick and the monks who came after him on a timeline and relate these to prior knowledge.
- Compare and contrast the lives of the monks with those of other early people and ancient societies.

New Words

monastery cell refectory oratory scriptorium vellum longship

Lesson Kernel

The threads of this unit are as follows:

- Saint Patrick is thought to have come to Ireland in 432 AD to convert the Irish to Christianity.
- Patrick liked to convert kings or chieftains, as ordinary people usually followed the ideas of their leaders.
- Patrick founded many churches and travelled around Ireland for almost 30 years before dying in 461 AD.
- Many monks followed in Patrick's footsteps. They began to build monasteries and convents.
- The first monasteries were built from wood, but eventually more permanent structures were built. Monasteries were constructed similarly to Celtic settlements.
- Monks worked as a community. They had farmland for planting crops and rearing animals. Each monk had several chores to carry out.
- Irish monasteries became centres of learning. Books were written in scriptoriums and, at a time when learning and knowledge were waning across Europe, Irish monasteries kept them alive.
- Monasteries sometimes became wealthy and were able to pay for ornate chalices and crosses. This made them a target for attackers. Irish chieftains sometimes raided monasteries and stole their treasures.
- Later, the threat of Viking raids caused many monasteries to build round towers for safety.

Skills

- **Time and chronology:** Recording information about Early Christian Ireland using a timeline, and comparing the relative age of objects or evidence to give a clearer picture of the past
- **Cause and effect:** Discussing the influence that the monks had on Ireland and on areas further afield

- **Empathy:** Gaining an understanding of the life of a monk or hermit
- **Synthesis and communication:** Using evidence and imagination to recreate the story of life in Early Christian Ireland
- **Continuity and change:** Discussing changes that occurred to the lives of people in Celtic Ireland with the coming of Christianity, and how life changed once again with the coming of the Vikings

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Find out if any of the pupils have ever visited a monastery or the ruins of a monastery.
- Discuss the life of a monk, nun, brother or priest in modern times. Ask pupils if they think the lives of people in religious orders have always been the same.
- Ask pupils to retell the story of Saint Patrick in their own words. How did things change in Ireland after Patrick's arrival?

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Use a blank map (photocopiable page 92 – handouts can be kept and reused for Unit 8) to label the sites of the major monasteries at Clonmacnoise, Durrow, Kells, Kildare, Swords and Derry.
- Describe in their own words what a monk's daily life was like.
- Discuss the use of a round tower as a means of defense. Was it really a good idea?

Differentiation – More Challenging

1. Design a crossword based on the information in the unit.
2. Read the novel, *Brian Boru*, by Morgan Llywelyn (O´Brien Press) and report on it to your classmates.
3. Create a board game based on Early Christian Ireland and the Vikings.
4. Design a chalice or treasure in the Early Christian Ireland style.
5. List 10 interesting facts that you learned from the lesson.

Differentiation – Less Challenging

1. Prepare a word search based on the information in the unit.
2. Watch the film, *The Story of Kells*, and report on it to your classmates.
3. Decorate the picture of a chalice (photocopiable page 93) with a scene of life in a monastery that appeals to you.

Related Websites

www.askaboutireland.ie Click: Learning zone → Primary Students → 3rd and 4th Class → History → The Full Story → Early Christian Ireland

www.roundtowers.org/ Photographs of round towers

www.earlychristianireland.org/ Early Christian sites

http://historymedren.about.com/od/bookofkell1/ig/Book-of-Kells-Images/
Images from the *Book of Kells*

http://www.docstoc.com/docs/776947/High-School-History-Early-Christian-Ireland
PowerPoint presentation on the arrival of Christianity

Extra Ideas

- Today, missionaries from Ireland still travel around the world teaching about God and helping those in need. Find out more about some of the organisations that do this and compare their work to that of the early monks.
- Have a 'monastic day' in which pupils must eat only simple food and carry out a number of chores around the school, as well as spend time in prayer.

Linkage

Strand: Story, **Strand Unit:** Stories From the Lives of People in the Past, *Small World History* Unit 8: Saint Colmcille

Strand: Early People and Ancient Societies, **Strand Units:** Celts; Vikings

Integration

Geography: Examine OSI maps and find monastic sites around the country.

Science: Use berries, fruit and vegetables to create ink for drawing. Experiment to find out what works best.

Literacy: Read the novel, *The Secret Of Kells*, by Eithne Massey (O'Brien Press).

Numeracy: Calculating how long ago events on the timeline took place

Visual Arts: Examining the artwork in the *Book of Kells* and creating a page in a similar style

Drama: Create a drama based on the life of an Irish missionary.

PE: Invent a chasing game involving Vikings and monks.

Religion: Discuss the life of a monk in relation to his commitment to God.

Answers – Textbook

Page 36: 1. 400 years **3.** Bishop Palladius must not have converted many people to Christianity. **4.** The message of Christianity was spread by word of mouth as people, e.g. traders, travelled from the north to the south.

Page 39: A. 1. 431 AD **2.** Downpatrick **3.** refectory **4.** vellum **5.** 795 AD **B. 1.** fifth **2.** ring forts **3.** Kevin **4.** golden age **C. 1.** There were many wars there and learning and art were not seen as important. **2.** The ordinary people usually followed in their footsteps. **3.** A round tower had a door that was several metres off the ground. If the monks were attacked, they would climb up a rope ladder to get in through the door. They would then sit and wait for the attack to end, before lowering the ladder and returning to work. **4.** Monasteries had become wealthy places. People also listened to what monks had to say.

Answers – Activity Book

Page 17: C. monastery – group of buildings where monks lived, worked and prayed; cell – small home made of wood or stone, where a monk slept; refectory – building in which monks ate their meals; oratory – church where prayer services were held in a monastery; scriptorium – building in which religious books were written down by monks; vellum – material made from calf skin that was written on by monks

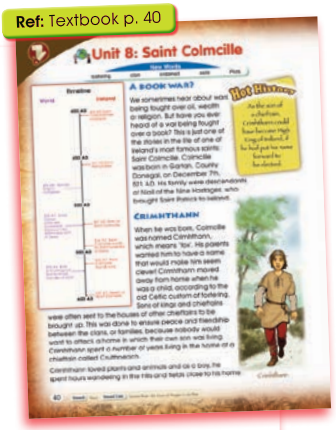
Unit 8: Saint Colmcille

December (1st and 2nd Fortnight)

Strand: Story **Strand Unit:** Stories From the Lives of People in the Past

Objectives

Ref: Textbook p. 40



The child should be enabled to:

- Listen to, discuss, retell and record the story of Saint Colmcille.
- Compare the life of Saint Colmcille with his/her own life and with the lives of other people in the past.
- Discuss the chronology of events in the story of Saint Colmcille.
- Discuss the actions and feelings of Saint Colmcille, Saint Finnian and other characters in the story.
- Explore the idea of a life of solitude bringing a monk closer to God.
- Relate the story of Saint Colmcille to previous knowledge from Unit 7.

New Words

fostering clan ordained exile Picts

Lesson Kernel

The threads of this unit are as follows:

- Saint Colmcille was born in Gartan, County Donegal on December 7th, 521 AD.
- As the son of a chieftain, he was fostered to another chieftain called Cruithneach. Cruithneach was very holy and it was in his home that Colmcille's love of the church and God was cultivated. He decided to become a monk.
- He studied first at the monastery at Moville, County Down, and in 544 AD, he went to the monastery at Clonard, County Meath.
- He worked in Ireland for 17 years, founding over 30 churches and monasteries, including those at Durrow, Kells and Swords.
- Colmcille's friend Finnian had a beautiful book that Colmcille wanted to copy. Finnian refused, so Colmcille decided to copy it in secret. Finnian was furious when he found out. He went to the High King for his judgement on who owned the copy. The High King said, "To every cow its calf and to every book its copy."
- Colmcille was unhappy and gathered an army from his clan. A great battle was fought and many lives were lost. Colmcille saw the hurt and sorrow that he had caused and vowed to leave Ireland.
- In 563 AD, Colmcille and his followers left Ireland and settled on the island of Iona off the coast of Scotland. They set about the task of converting the Picts of Scotland to Christianity.
- Colmcille died in 597 AD. His feast day is celebrated on June 9th each year.

Iona Abbey

Skills

- **Time and chronology:** Recording events in the life of Saint Colmcille using a timeline, and understanding and using date conventions, e.g. AD
- **Cause and effect:** Discussing the effects that copying the book had on Saint Colmcille's life and the lives of other characters in the story
- **Empathy:** Looking at the story from the points of view of various characters, e.g. Finnian, the High King, etc.
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of Saint Colmcille
- **Continuity and change:** Discussing how life has changed since the time of Saint Colmcille, what elements remain the same, and what contributions of Saint Colmcille are evident today

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on the pupils' prior knowledge of Early Christian Ireland.
- Discuss how people travelled from place to place in those days and compare it with travel today.
- Use a photograph of a monastery as a starting point for a discussion. What might have happened there? What were the buildings used for, etc.?

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Label Iona on a blank map (reuse handouts for Unit 7 – photocopiable page 92). (Mark and label the other places mentioned in the story if not done previously.)
- Empathise with ordinary children from the time of Saint Colmcille, e.g. how it would have felt to be sent to live with another family.
- Order and sequence the events of the story.
- Sketch a monastery as it would have looked at the time of Saint Colmcille.
- Retell the story of Saint Colmcille in their own words.

Differentiation – More Challenging

1. Pretend you are one of the monks on Iona. Write a letter to your parents in Ireland telling them about your life on the island.
2. Prepare a mini-project on another saint or monastery of your choice.
3. Find out about old churches or ruins in your locality and make a presentation to the class.

Differentiation – Less Challenging

1. Pair work: Look at images from the *Book of Kells*. Discuss what you like/dislike about them.
2. Pair work: Complete Activity B on page 18 of the Activity Book.
3. Draw a monastery from the time of Saint Colmcille.

Related Websites

www.askaboutireland.ie Click: Learning zone → Primary Students → 3rd and 4th Class → History → The Full Story → Early Christian Ireland

www.undiscoveredscotland.co.uk/iona/abbey/index.html Information about Iona Abbey

www.monasticireland.com Lots of information about Ireland's monastic sites

Extra Ideas

- Debate the topic: *Sending young children to live with another family is a bad idea.*
- Some of the schools or sports clubs in your locality may have been named after saints. Find out about the saints they were named after.

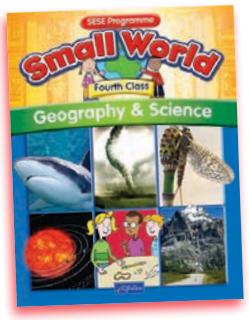
Linkage

Strand: Early People and Ancient Societies, **Strand Unit:** Early Christian Ireland, *Small World History* Unit 7: The Spread of Christianity

Strand: Continuity and Change Over Time, **Strand Unit:** Schools and Education – Study the development of writing and the role of monasteries in education in Ireland.

Strand: Local Studies, **Strand Unit:** My Locality Through the Ages – Perhaps there is an old monastery or ruin in your locality; find out more about the monks who live/lived there.

Integration



Geography: *Small World Geography & Science* Unit 6: A Visit to Arranmore Island – Compare life on an island today and in the past.

Science: Colmcille and his followers travelled to Scotland and back using basic materials. Discuss how they navigated their way to Iona and what type of boat they might have used.

Literacy: Reading from the unit and retelling the events in their own words

Numeracy: Calculate distances between monasteries, length of journeys, etc.

Visual Arts: The events of the story are quite dramatic and lend themselves to the creation of cartoons, paintings and other media. Life on the island of Iona or the journey across the sea could also be used as themes.

Drama: Dramatise conversations between Cruithneach/Colmcille/Finnian/the High King.

Gaeilge: Colmcille and his followers spoke Irish and the Picts would have spoken Scots Gaelic. Practise some everyday phrases that Colmcille and his followers might have used.

Answers – Textbook

Page 43: A. 1. Crimhthann **2.** 546 AD **3.** Saint Finnian **4.** Sligo **5.** the Picts **B. 1.** church **2.** Clonard **3.** copy **4.** Iona **C. 1. (a)** This created bonds of peace. **(b)** (not usually) **3.** Many monasteries and churches had been established and Christianity was widespread.

Answers – Activity Book

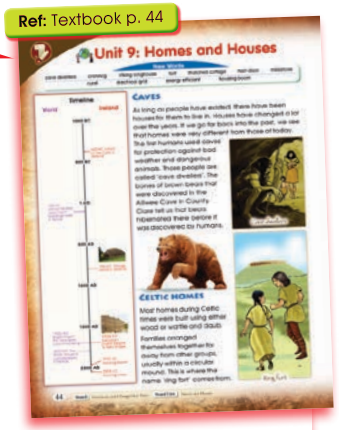
Page 19: C. fostering – sending children away from their parents to be brought up by other families; clan – family or tribe; ordained – final step in becoming a priest; exile – to live away from home without ever intending or being allowed to return; Picts – Scottish tribe **D.** Order from right to left: 2 4 1 3

Unit 9: Homes and Houses

January (1st and 2nd Fortnight)

Strand: Continuity and Change Over Time **Strand Unit:** Homes and Houses

Objectives



The child should be enabled to:

- Identify items of change and continuity in the line of development of homes and houses.
- Identify some of the factors that have caused or prevented change, such as the introduction of electricity, planning, etc.
- Use appropriate timelines in relation to homes and houses.
- Identify different types of house from different time periods.
- Examine homes and houses in his/her own locality and look for key indicators to suggest the periods during which they were built.

New Words

cave dwellers | crannóg | Viking longhouse | fort | thatched cottage | half-door | milestone | rural | electrical grid | energy efficient | housing boom

Lesson Kernel

The threads of this unit are as follows:

- Earliest cave dwellers lived in caves in order to shelter from the elements and wild animals.
- The Celts lived in homes made from wattle and daub, arranged in small communities in ring forts.
- When Christianity arrived in Ireland and monasteries were built, people began to build their homes close to monasteries. This is how the first villages and towns developed.
- The Vikings lived in large groups. They started the cities of Dublin, Waterford and Limerick.
- The arrival of the Normans saw wealthy lords building large forts and, eventually, castles.
- By the eighteenth and nineteenth centuries, there was a clear division between the rich and the poor in terms of houses. Wealthy landlords owned large estates. They lived in large, luxurious houses, while poor people lived in small cottages.
- The job of bringing electricity to homes in rural areas of Ireland got under way in the 1940s.

Skills

- **Time and chronology:** Using appropriate timelines to show the development of homes and houses
- **Cause and effect:** Discussing the introduction of electricity and analysing changes in the way houses have been built over time
- **Empathy:** Developing a sense of what it was like to live in houses at different points in history
- **Synthesis and communication:** Using evidence to examine styles of architecture
- **Continuity and change:** Discussing changes in the way houses have been built over time

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on the pupils' prior knowledge of homes and houses.
- Discuss the various types of homes and houses in the local area.
- Discuss the things pupils would consider to be extremely important to have in their homes.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the KWL chart and fill in what has been learned during the lesson.

Ask pupils to:

- Identify different types of house and the period to which they belong.
- Place houses and homes on an appropriate timeline.

Differentiation – More Challenging

1. List the materials that were used in the construction of your own home.
2. Discuss the impact that constructing a new housing estate would have on the surrounding area.
3. Design a two-storey house with seven or eight rooms. Each room must have at least one window and door. Decide if your house will have a chimney/s, and, if so, where the fireplace/s will be.

Differentiation – Less Challenging

1. Design a house that appeals to you.
2. Make a list of items that you would like to include in your house.
3. Identify the various types of home in your locality (semi-detached, apartment, bungalow, etc.).

Related Websites

www.chiddingstone.kent.sch.uk/homework/houses.html Homes and houses in England

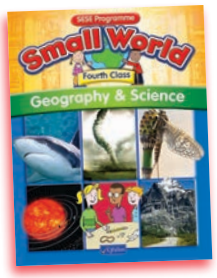
www.askaboutireland.ie/learning-zone/primary-students/looking-at-places/carlow/home-life-in-carlow/housing/houses-in-the-past/ Houses in Ireland in the past

www.mylearning.org/exploring-homes-in-the-past/p-3120/ Exploring homes in the past

Linkage: **Strand:** Early People and Ancient Societies, **Strand Units:** Celts; Early Christian Ireland; Vikings **Strand:** Life, Society, Work and Culture in the Past, **Strand Unit:** Life in Medieval Towns and Countryside in Ireland and Europe

Integration: **Geography:** Planning and choosing a site for a new home

Science: *Small World Geography & Science* Unit 18: Materials and Change – Examine the various materials used to construct homes.



Answers – Textbook

Page 47: A. 1. Strong stakes were hammered firmly into the ground. Lighter branches called 'wattles' were woven in and out between the stakes. The wattles were covered with mud called 'daub'. **2.** to trade and for protection **3.** Dublin, Limerick and Waterford **4.** They charged rent from the tenants, who also worked on the estate for the landlord. **5.** Georgian **B. 1.** monastery **2.** ring forts **3.** the 1940s **4.** ghost estate **C. 1.** the style of architecture, the front door, the street its on, etc. **2.** Mostly for trade and work, but also for protection and a sense of community

Answers – Activity Book

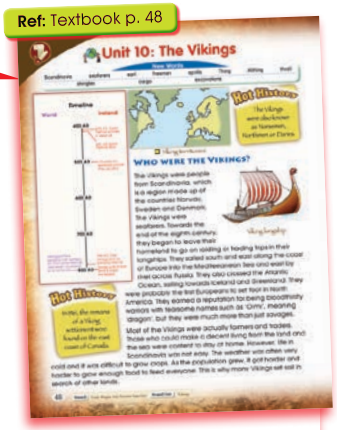
Page 21: C. From left to right, top row: 400 BC, 900 AD, 1750 AD, 1960 AD; bottom row: 700 AD, 1200 AD, 1840 AD, 1990 AD **Page 22: A.** milestone – a major step forward that marks a big change in how things were done; longhouse – large house in which Viking families lived; energy efficient – well-insulated house that makes the best use of electricity and heating; rural – areas outside of large towns and cities; thatched cottage – small house with a roof made of straw; half-door – device that allowed smoke to escape from a cottage without a chimney

Unit 10: The Vikings

(Optional/Alternative Unit)

Strand: Early People and Ancient Societies **Strand Unit:** Vikings

Ref: Textbook p. 48



Objectives

The child should be enabled to:

- Become familiar with aspects of the lives of the Vikings, such as their origins, daily lives, trade, homes, crafts, work, cultural and artistic achievements.
- Examine and become familiar with evidence of the Vikings.
- Record the place of the Vikings and their relationship with Ireland on a timeline and relate these to prior knowledge.
- Compare and contrast the lives of the Vikings with those of other early people and ancient societies.

New Words

Scandinavia seafarers earl freemen spoils
Thing Althing thrall shingles cargo excavations

Lesson Kernel

The threads of this unit are as follows:

Dragon head from the Oseberg Ship

- The Vikings came from Scandinavia. They were mostly farmers and traders, who set sail across the sea in search of adventure and better lands.
- Vikings lived in different kingdoms, with each kingdom having a chieftain in charge.
- Vikings held meetings called 'Things', which were assemblies of various kingdoms.
- Viking women had a number of rights that women in other societies did not have at the time.
- Viking homes were made of wattle and daub and usually only had one room.
- Vikings were skilled craftsmen, making everything they needed.
- They were also expert shipbuilders, building longships that could carry up to 60 warriors. A longship usually had a fierce dragon carved into the prow to ward off sea monsters.
- Vikings first attacked Lambay Island in 795 AD.
- Vikings set up settlements on the banks of the Rivers Liffey, Slaney, Suir, Shannon and Lee.
- Vikings in Ireland began trading with people in settlements across Europe.
- Brian Boru defeated the Vikings in the Battle of Clontarf in 1014 AD.

Skills

- **Time and chronology:** Recording information about the Vikings using a timeline, and understanding and using date conventions, e.g. AD
- **Cause and effect:** Discussing the effects that the arrival of the Vikings had on the lives of the people of Ireland
- **Empathy:** Gaining an insight into the lives of an ordinary Viking and a warrior
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the Vikings in Ireland
- **Continuity and change:** Discussing how life has changed since the time of the Vikings, what elements remain the same, and what contributions of the Vikings are evident in Ireland today

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Brainstorm the word 'Vikings' and see what pupils already know about the topic.
- Find out if pupils have ever heard any Viking myths or legends.
- Ask pupils if they know what countries the Vikings came from.
- Discuss the means of travel 1000 years ago. What was the quickest way to get around?
- Find out if anyone has ever been to a country in Scandinavia.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Use a blank map of Ireland (photocopiable page 94) to mark sites that are associated with the Vikings such as Limerick, Waterford, Dublin, Lambay Island, etc.
- Point out the countries of Scandinavia on a blank map of Europe (photocopiable page 90), and explain how the Vikings would have travelled from place to place.
- Offer explanations for the phrase 'to go Viking'.
- Describe how the people of Ireland must have felt when they saw Viking longships approaching the coast.
- Assess the impact of the Vikings on the Irish people and the Irish landscape.

Differentiation – More Challenging

1. Discuss and explain the effects the arrival of the Vikings had on Ireland.
2. Read the novel, *Brian Boru,* by Morgan Llywelyn and present a report to your classmates.
3. Pair work: Create a board game based on Early Christian Ireland and the Vikings.

Differentiation – Less Challenging

1. Write down the 10 most interesting facts that you learned about the Vikings from this unit.
2. Listen to your classmates' reports on the novel, *Brian Boru.* Choose a scene that appeals to you and illustrate it.
3. Use the internet or the library to find out more about the myths and legends of the Vikings and about their gods.

Related Websites

www.rte.ie/vikings/index.html The *Sea Stallion* project

www.bbc.co.uk/schools/primaryhistory/vikings/ Information about the Vikings

www.dochara.com/the-irish/ireland-history/vikings/ The Vikings in Ireland

www.ncte.ie/viking/ Stories, projects and other resources on the Vikings

www.arthurquinn.ie Arthur Quinn website

Extra Ideas

- Use recycled materials to build models of vehicles that float.
- If you live close to a Viking site, carry out some fieldwork.
- Visit the National Museum of Ireland to find out more about the raiders from the north.
- Read the novel, *Arthur Quinn and the World Serpent*, by Alan Early (Mercier Press).

Linkage

Strand: Story, **Strand Unit:** Stories From the Lives of People in the Past, *Small World History* Unit 11: The Saga of Leif Erikson

Strand: Early People and Ancient Societies, **Strand Units:** Celts; Greeks; Romans; Early Christian Ireland

Strand: Continuity and Change Over Time, **Strand Unit:** Homes and Houses

Integration

Geography: Charting the journey of the Vikings; examination of Viking settlements in Ireland to find reasons why they settled there

Literacy: Reading from the unit and retelling the events in their own words

Numeracy: Calculating how long ago events on the timeline took place

Drama: Create a drama based on a Viking myth or legend.

Gaeilge: Logainmneacha that come from the time of the Vikings

Answers – Textbook

Page 53: A. 1. Norway, Sweden and Denmark **2.** in search of treasure and better land on which to grow food **3.** She was allowed to own land and property and had a right to a share of her husband's wealth. **4.** shingles **5.** near rivers and coastal areas **B. 1.** farmers and warriors **2.** a Thing **3.** 60 **4.** weather and countryside **C. 1.** Better farming techniques and more wealth meant that more children survived. **3.** wattle and daub **4.** It was difficult to gather everyone together.

Answers – Activity Book

Page 23: C. seafarers – people who took to the sea in search of new lands and wealth; Thing – public meeting held in a Viking village and attended by nobles and freemen; Althing – large meeting held twice a year and attended by Vikings from different kingdoms; excavations – digging carried out by archaeologists at historical sites; Scandinavia – region made up of the countries Norway, Sweden and Denmark; thrall – slave who could be bought and sold by her/his master; spoils – treasures stolen by Viking warriors during raids; cargo – goods carried on a ship; shingles – small wooden tiles used to cover the roof of a house; freemen – free Vikings whose chiefs were earls; earl – landowner/noble and chief of all of the freemen in the village

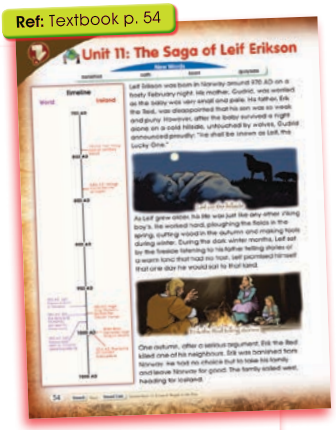
Unit 11: The Saga of Leif Erikson

February (1st Fortnight)

Strand: Story **Strand Unit:** Stories From the Lives of People in the Past

Objectives

Ref: Textbook p. 54



The child should be enabled to:

- Listen to, discuss, retell and record the story of Leif Erikson.
- Compare the life of Leif Erikson with his/her own life and with the lives of other people in the past.
- Discuss the chronology of events in the story of Leif Erikson.
- Discuss the actions and feelings of Leif Erikson, Erik the Red and other characters in the story.
- Explore the idea of a life of solitude on a faraway island and how this compares with the life of solitude of monks in Early Christian Ireland.
- Relate the story of Leif Erikson to previous knowledge from the unit on the Vikings.

New Words

banished oath knarr quayside

Lesson Kernel

The threads of this unit are as follows:

- Leif Erikson was born in Norway in 970 AD and became known as Leif, the Lucky One.
- Leif's father, Erik the Red, killed one of his neighbours and was banished from Norway.
- The family moved to Iceland, where, unfortunately, Erik's temper got the better of him again and he was banished once more.
- The family finally reached a land that Erik called the 'island at the edge of the world'.
- Life was tough there. After three years, Erik returned to Iceland to convince more people to follow him. He tricked them by calling his new land 'Greenland'. The journey back was difficult and many ships were lost.
- Leif tried to convince his father to sail west again. He eventually agreed.
- Leif and his followers finally reached a land without frost. They saw grapevines growing, so Leif named the place 'Vinland'.
- After a year, Leif and his followers returned to Greenland.

Leiv Eriksson Discovers North America by Christian Krohg, 1893

Skills

- **Time and chronology:** Recording information about the life of Leif Erikson using a timeline, and understanding and using date conventions, e.g. AD
- **Cause and effect:** Discussing the implications of Erik the Red losing his temper, e.g. the family being banished, Leif sailing to find a land without frost, the L'Anse aux Meadows settlement in Newfoundland
- **Empathy:** Looking at the story from the point of view of the various characters
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of Leif Erikson
- **Continuity and change:** Discussing how life has changed since the time of Leif Erikson, what elements remain the same, and what contributions of the Vikings are evident in Ireland today

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on what pupils already know about North America.
- Discuss people's beliefs about the Earth being flat in the past.
- Show pupils an image of the Earth from space and ask what this image proves beyond any doubt, i.e. that the Earth is round.
- Refer back to Third Class, in which pupils covered the stories of Saint Brendan and Christopher Columbus. Introduce the story of Leif Erikson.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Dramatise some of the events in the story.
- Put themselves in the shoes of one of the characters in the story and tell the story from his/her point of view.
- Sequence the events of the story.
- Use a variety of media to retell the story of Leif Erikson in their own words.

Differentiation – More Challenging

1. Use a blank map (photocopiable page 95) to chart the journeys of Leif Erikson. Label the places mentioned in the story.
2. Explore how Leif Erikson and his followers would have found their way at sea.
3. Organise a class 'Thing' to decide whether or not to head west with Leif Erikson to find the land without frost.
4. Use the internet to find out more about Erik the Red and Leif Erikson.

Differentiation – Less Challenging

1. Participate in the class 'Thing' to decide whether or not to head west with Leif Erikson to find the land without frost.
2. List the places mentioned in the story and find them on a map of the world.
3. Sketch a picture of what you think the settlement in L'Anse aux Meadows looked like.

Related Websites

www.fordham.edu/halsall/mod/1000Vinland.asp
The discovery of North America by Leif Erikson

www.bbc.co.uk/history/historic_figures/erikson_leif.shtml Synopsis of the life of Leif Erikson

http://kids.britannica.com/comptons/article-9274197/Leif-Eriksson
Information about Leif Erikson

www.pc.gc.ca/eng/lhn-nhs/nl/meadows/index.aspx
Information about L'Anse aux Meadows

Extra Ideas

- You are a reporter for the *Viking Voice*. Interview Leif Erikson or Erik the Red about his travels at sea.
- Write an acrostic poem using 'LEIF ERIKSON' as your starting point.
- In Newfoundland, they celebrate Leif Erikson Day. Find out more about it and prepare a celebration of your own.
- Make up a word puzzle, crossword or word search based on information in the unit.
- Illustrate the unit in comic-strip form.

Linkage

Strand: Early People and Ancient Societies, **Strand Unit:** Vikings, *Small World History* Unit 10: The Vikings

Strand: Continuity and Change Over Time, **Strand Units:** Homes and Houses; Transport and Travel

Integration

Geography: Charting the journeys of Leif Erikson; examining maps to find the places mentioned in the story

Science: Examine how seafarers find their way at sea – look at a compass, astrolabe, sextant, radar, GPS system, etc.

Literacy: Reading from the unit and retelling the events in their own words

Numeracy: Calculating how long ago events on the timeline took place

Drama: Dramatising events from the story

Visual Arts: Create a collage of the events in the Saga of Leif Erikson.

Music: Compose a piece of music that would be suitable for a scene of a journey at sea in a film about Leif Erikson.

Answers – Textbook

Page 53: A. 1. 970 AD **2.** Iceland **3.** Thorgeir Grey-Beard **4.** 25 **5.** grapes, salmon and wild boar **B. 1.** Norway **2.** wolves **3.** warmer lands **4.** knarr

Answers – Activity Book

Page 26: C. banished – to be sent away from a place and not allowed to return; oath – serious promise, usually of revenge or something that would last a lifetime; knarr – cargo ship that was wider and deeper than a longship; quayside – dock where a ship can load or unload its cargo

Unit 12: Princess Hase of Japan

February (2nd Fortnight)

Strand: Story **Strand Unit:** Myths and Legends

Objectives

The child should be enabled to:

- Listen to, discuss, retell and record the story of Hase-Hime.
- Compare the life of Hase-Hime with his/her own life and with the lives of other people in the past.
- Discuss the chronology of events in the story of Hase-Hime.
- Discuss the actions and feelings of Hase-Hime, her father, stepmother and other characters in the story.

Ref: Textbook p. 58


Unit 12: Princess Hase of Japan

A LITTLE PRINCESS

TRAGEDY

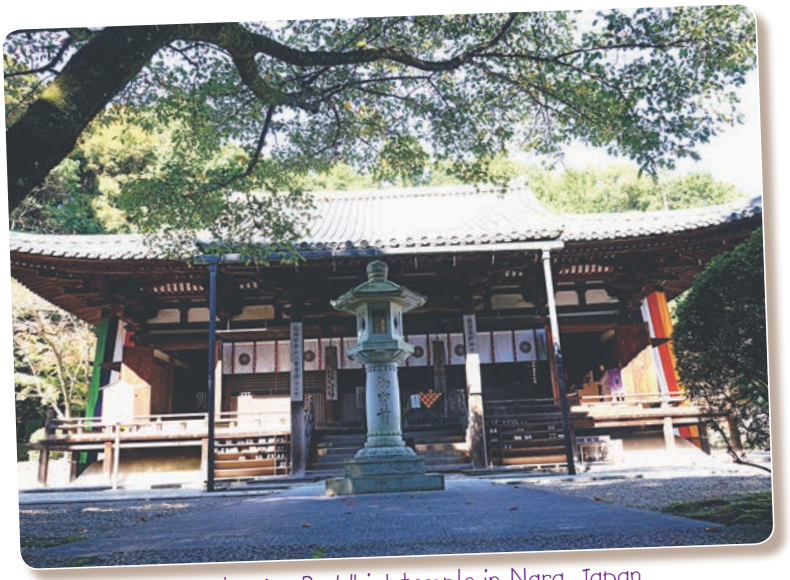
New Words

Koto remote needlework Buddhist tapestry embroider

Lesson Kernel

The threads of this unit are as follows:

- Long ago in Japan, Prince Toyonari and Princess Murasaki had a baby girl, whom they named Hase-Hime.
- When the young princess was five years old, her mother became ill and died.
- Prince Toyonari decided to marry again and chose a woman named Princess Terute.
- Terute was very different from Murasaki, but Hase-Hime treated her with respect, as her mother would have wished.
- Terute became very jealous of Hase-Hime. She plotted to get rid of the girl. While the prince was away on a hunting trip, she told the servants to take Hase-Hime into the wilderness and kill her.
- Katoda, the head servant, took Hase-Hime away, but instead of killing her, he brought her to a cottage in the mountains and looked after her there.
- Hase-Hime's father was very sad about her disappearance. He searched everywhere but could not find her.
- His friends organised a hunting trip to cheer him up, during which they stumbled across the cottage in the mountains. Hase-Hime was reunited with her father.
- Terute returned to her father's house in disgrace.


Example of a Buddhist temple in Nara, Japan

Skills

- **Time and chronology:** Sequencing events in the story
- **Cause and effect:** Discussing the effect that Hase-Hime's father's decision to marry again had on his life and the lives of other characters in the story
- **Empathy:** Looking at the story from the points of view of the various characters
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of Hase-Hime
- **Continuity and change:** Comparing and contrasting the story of Hase-Hime with that of the Children of Lir

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Fill in a KWL chart based on the pupils' knowledge of myths and legends, including the Children of Lir and the Tuatha Dé Danann.
- Review what is meant by the terms 'myth' and 'legend' (as discussed in previous units) and how these differ from 'story' or 'fact'.
- Brainstorm the word 'Japan' to find out what the children already know about the country.
- Show Japan on a world map and relate it to Ireland in terms of distance, size, population, etc.

Cherry blossom

Assessment of Learning

(Finding out what the pupils have learned)

Ask pupils to:

- Use a large map of Japan to identify some of the places mentioned in the story.
- Organise and sequence the events of the story.
- Tell the story from the points of view of various characters.
- Compare and contrast the story with that of the Children of Lir.
- Illustrate a scene from the story of Hase-Hime, using a variety of media, e.g. paints, pastels, pencils, charcoal, etc.

Differentiation – More Challenging

1. Rewrite the story in your own words.
2. Retell the story from the point of view of Terute.
3. Do a mini-project on Japan.
4. Tell your classmates a myth or legend from another land in your own words. Use whatever visual aids you need.
5. Create a character profile of any of the characters in the story by sketching a picture of him/her and writing sentences to describe him/her.
6. Write a haiku about Hase-Hime and her story.

Differentiation – Less Challenging

1. Pair work: Listen to other myths and legends as told by your classmates and discuss your favourite.
2. Pair work: Create a character profile of Hase-Hime by drawing a picture and writing adjectives that describe her.

Related Websites

http://web-japan.org/kidsweb/explore/history/index.html
Information about the history of Japan

www.kidspast.com/world-history/0252-japan.php Information about the history of Japan

http://countries.mrdonn.org/japan.html Lesson plans, games and activities on Japan

http://japan.pppst.com/history.html PowerPoint presentations on Japan

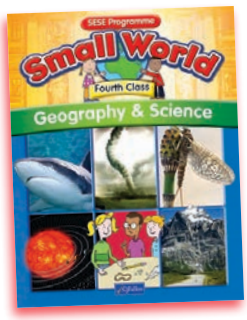
Extra Ideas

- Use Google Earth or Google Maps to find the places mentioned in the story and trace the journey of Hase-Hime.
- Why not try out some traditional Japanese food? There are many recipes online.
- Have a class debate on the topic: *Ireland should have an emperor.*

Linkage

Strand: Story, **Strand Unit:** Myths and Legends, *Small World History* Unit 1: The Children of Lir

Integration



Geography: *Small World Geography & Science* Unit 13: Japan – Compare and contrast life in Japan with life in Ireland.

Literacy: Reading from the unit and retelling the events in their own words

Drama: Prepare a play based on the story of Hase-Hime.

Visual Arts: Illustrating scenes from the story using a variety of media

Music: Listen to some Japanese traditional music and compare it with Irish traditional music.

Answers – Textbook

Page 61: A. 1. Nara **2.** mercy **3.** Princess Terute **4.** She had a cruel heart and she was unkind to Hase-Hime. **5.** Festival of the Cherry Flowers **B. 1.** poet **2.** 4000 **3.** five **4.** harp
C. 1. by obeying her wishes despite her wicked stepmother **3.** It made her look bad.
4. He liked Hase-Hime too much to harm her and he knew she was innocent.

Answers – Activity Book

Page 28: A. 2 Princess Murasaki became ill and died. 3 Prince Toyonari married Princess Terute. 4 Princess Terute and Hase-Hime performed together for the emperor. 5 Princess Terute developed a plan to get rid of Hase-Hime. 6 Katoda took Hase-Hime to the mountains and built a cottage for her. 7 Prince Toyonari's friends arranged a hunting trip to cheer him up. 8 Prince Toyonari heard beautiful Koto music coming from a cottage. 9 Hase-Hime was reunited with her father in the mountains. 10 Hase-Hime returned to her father's house and lived to an old age.

Unit 13: Medieval Towns of Europe

March (1st and 2nd Fortnight)

Strand: Life, Society, Work and Culture in the Past **Strand Unit:** Life in Medieval Towns and Countryside in Ireland and Europe

Objectives

Ref: Textbook p. 62


Unit 13: Medieval Towns of Europe

The child should be enabled to:

- Become familiar with aspects of the lives of people in medieval towns, such growth of towns, homes, clothing, trades, craftsmanship, guilds, leisure and pastimes.
- Examine and become familiar with evidence of the Middle Ages, especially evidence that can be found locally.
- Record people and events of the Middle Ages on a timeline and relate these to prior knowledge.
- Relate what was happening in medieval Europe to what was taking place in Ireland at the same time.

New Words

Middle Ages medieval tradespeople moat sewer
loom stonemason cobbler guild apprentice journeyman
masterpiece wares quayside tavern jousting

Lesson Kernel


King John's Castle, Limerick

The threads of this unit are as follows:

- The Middle Ages is the time from 500 AD to 1500 AD. This period is also known as 'medieval times'.
- One of the first innovations of the Middle Ages was the construction of castles. As castles and forts grew, people saw the opportunity for trade, safety and protection within the walls.
- Towns were busy places with shop-fronts opening out onto narrow streets. Towns with a port were busier still, with ships arriving daily with goods from other lands. Ships and trade were vital to the growth of towns. Major cities have developed from medieval towns, e.g. London.
- Medieval craft workers were highly skilled. Everything had to be made by hand. People travelled to towns to avail of the skills of craft workers. Craft workers joined together to form guilds. To qualify as a master craftsman, an apprentice had to meet criteria set out by a guild.
- Small towns held a market day once a week, e.g. a meat market on Monday. Larger towns often had different areas for selling different types of goods.
- Medieval clothes were a sign of a person's importance or wealth.
- Festivals were very popular in medieval towns. Jousting, archery and sword-fighting took place at sporting events.
- The 1340s brought a disease called the Black Death, which decimated the population of medieval towns across Europe.

Skills

- **Time and chronology:** Recording information about the Middle Ages using a timeline, and understanding and using date conventions, e.g. AD
- **Cause and effect:** Discussing the development of castles and towns, the effects these had on the population of Europe, and what happened as a result
- **Empathy:** Gaining an insight into the lives of a number of people from this period, e.g. a labourer, craftsman, merchant, etc.
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of life in a medieval town
- **Continuity and change:** Examining what changed during the 1000-year period of the Middle Ages with regard to technology, homes, crafts, etc. and what remained the same

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Discuss what life might have been like in Ireland 50, 100 and 500 years ago. Ask pupils: Was it the same in other parts of Europe? What about 1000 years ago?
- Display a map of Europe on the IWB and highlight the major cities. Ask pupils: Were they always there? Why do you think they grew to be so big? Are there any similarities between them?
- Ask pupils if they have ever visited any of these cities. Find out if they visited any historical places while they were there.
- If there are places of medieval relevance in the locality, ask pupils if they have visited these.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Discuss the role of castles in the development of urban life in Europe and Ireland.
- Retell the story of the Middle Ages in their own words.
- Sequence the steps to becoming a master craftsman.
- Have a class debate on the topic: *Being part of a guild was a great idea.*
- Carry out research to find any evidence of medieval sites in the local area.

Differentiation – More Challenging

1. Relate your knowledge of towns in Europe in the Middle Ages to what was happening in Ireland at the time.
2. Group work: Create a class guild to take part in a mini-project with contests in spellings, European capitals, artwork, PE, etc. The guild decides what is regarded as satisfactory or unsatisfactory.
3. Write a description of what life might have been like for an apprentice learning a craft during the Middle Ages.
4. Plan a new town within the town walls (photocopiable page 96), using all of your knowledge of the Middle Ages.

Differentiation – Less Challenging

1. Write down any 10 facts that you learned about the Middle Ages from this unit.
2. Use the new words on page 62 of the Textbook to create a word search.
3. Take part in the discussion about the criteria for qualifying as a master in the class guild.
4. Use what you have learned to design a new castle for a medieval king.

Related Websites

www.cosmolearning.com/videos/bayeux-tapestry-animated-version/
Animated version of the *Bayeux Tapestry*

http://medievaleurope.mrdonn.org/ Information about the Middle Ages

www.bbc.co.uk/history/british/middle_ages/ Information about the Middle Ages in Britain

www.bbc.co.uk/schools/primaryhistory/anglo_saxons/
Information about Anglo-Saxons and Normans

Extra Ideas

- Find out more about the Black Death.
- Castles and forts were a major innovation of the early Middle Ages that attracted people to towns and cities. What do you think will be the next big innovation or discovery to have a similar effect?

Linkage: **Strand:** Continuity and Change Over Time, **Strand Unit:** Homes and Houses, *Small World History* Unit 9: Homes and Houses

Strand: Early People and Ancient Societies, **Strand Unit:** Early Christian Ireland – Compare life in monastic Ireland to life in the towns and cities of Europe.

Integration: **Geography:** Examine maps of Europe and determine the main factors associated with the growth of cities. Why do people move to large urban areas today?

Science: Hygiene and cleanliness

Literacy: Read stories set during the Middle Ages, e.g. about Robin Hood, King Arthur.

Numeracy: Compile a modern *Domesday Book* by carrying out a mini-survey of occupations that the pupils would like to have when they are older, and analyse data to graph the results.

Visual Arts: Creating a piece of artwork like the *Bayeaux Tapestry*

Answers – Textbook

Page 67: A. 1. fifth **2.** Towns were no longer under the protection of Rome, and building castles and forts was a way for people to protect themselves. **3.** Towns were busy, dirty and smelly, but there was always a chance to get rich by learning a trade. **4.** blacksmith, stonemason, locksmith, tailor, cobbler, potter, carpenter, candlemaker **5.** because of the weather and because there were pirates lurking in the coastal waters, waiting to raid merchant ships **B. 1.** Viking **2.** moat **3.** guild **4.** cities **C. 1.** Europe went through a long period of tribal and civil wars with each group fighting for control. Nobody cared about the 'light' of knowledge and learning. **2.** Churches and homes contained valuable objects, e.g. chalices, jewels and furniture, and warehouses stored goods for trade. **4.** Moving goods was easier by boat than by land, so there was a greater volume of trade in these towns, and they grew faster as a result.

Answers – Activity Book

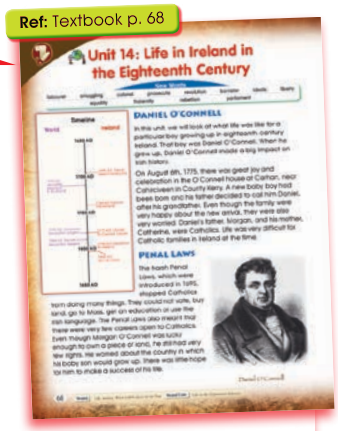
Page 29: medieval – belonging to the Middle Ages; journeyman – an apprentice would qualify as this after seven years; masterpiece – fine example of work in any craft; stonemason – craft worker who made things from stone (usually buildings); apprentice – person who is learning the skills of a trade from a master craftsman; jousting – sport on horseback, in which two opponents try to knock each other off with long poles; guild – group of craft workers who inspected the work of others; tavern – medieval pub, where people often drank ale and played cards

Unit 14: Life in Ireland in the Eighteenth Century

(Optional/Alternative Unit)

Strand: Life, Society, Work and Culture in the Past **Strand Unit:** Life in the Eighteenth Century

Objectives



The child should be enabled to:

- Become familiar with aspects of the lives of people in living in Ireland in the eighteenth century, by looking at the life of Daniel O'Connell.
- Examine and become familiar with evidence from the eighteenth century.
- Record events in the life of Daniel O'Connell on a timeline.
- Identify examples of continuity and change in relation to earlier and later time periods.
- Discuss the actions and feelings of different people mentioned in the story, e.g. Daniel O'Connell, Morgan O'Connell, Maurice O'Connell.

New Words

labourer smuggling colonel prosecute revolution barrister
ideals liberty equality fraternity rebellion parliament

Lesson Kernel

Daniel O'Connell

The threads of this unit are as follows:

- Daniel O'Connell was born on August 6th, 1775, at Carhan, near Caherciveen in County Kerry. Daniel's family was Catholic at a time when life was difficult for Catholics in Ireland.
- Daniel's father was fortunate in that he was allowed to own some land. His family was well-off compared with other Catholics in the area.
- Daniel was sent away to live with a labourer, whose family spoke only Irish. He saw first-hand the tough life of the ordinary people of Ireland.
- Daniel's uncle, Maurice, offered to adopt Daniel. The boy moved to Maurice's home, Derrynane House, where he lived until he was 15 years old. Maurice was quite wealthy. He made money from trading and smuggling.
- Daniel attended a hedge school for some time, before Maurice decided to send him to France, where a revolution was taking place. The ideals of the French Revolution ('Liberty, Equality and Fraternity') inspired Daniel to become a lawyer and return to Ireland to campaign for the cause of Irish freedom.
- He became the first Catholic elected to parliament.

Skills

- **Time and chronology:** Recording events mentioned in the unit using a timeline, and understanding and using date conventions, e.g. AD
- **Cause and effect:** Discussing the effects that the introduction of the Penal Laws had on the people of Ireland
- **Empathy:** Gaining an insight into the lives of ordinary Irish people in the eighteenth century
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of life in Ireland in the eighteenth century
- **Continuity and change:** Identifying items of change and continuity from earlier and later time periods, e.g. education and homes

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Ask pupils what they think a century is, and then ask what century we are living in at present.
- Discuss what is meant by the term 'eighteenth century', i.e. from 1700 to 1799.
- Ask pupils what they think life was like 100, 200 and 300 years ago. Record these ideas on the board.
- Using the ideas elicited above, identify items that have changed and items that have stayed the same.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Discuss the effects that the Penal Laws had on the people of Ireland in the eighteenth century.
- Compare life in the eighteenth century in Ireland with life during earlier times and now.
- Create images of life in Ireland in the eighteenth century in order to empathise with the general population.
- Carry out some research locally to find out what life was like in the area during the eighteenth century. Who were the major landowners? What buildings were constructed at the time?

Differentiation – More Challenging

1. Retell the story of Daniel O'Connell in your own words, using a variety of media.
2. Pair work: Discuss whether or not Daniel O'Connell should be regarded as an ordinary citizen of Ireland in the eighteenth century.
3. Write a letter from Daniel to his uncle, telling him of life in France and his plans for the future.
4. Examine the introduction of the Penal Laws and their effects on the ordinary people of Ireland.
5. Compare the lives of Catholics and Protestants in Ireland in the eighteenth century.

Differentiation – Less Challenging

1. Choose eight facts about Daniel O'Connell and write them in chronological order.
2. Write the events from Daniel O'Connell's life on a timeline.
3. Complete Activity D on page 31 of the Activity Book.
4. Compare life in the eighteenth century with life in Ireland now.

Related Websites

www.clarelibrary.ie/eolas/coclare/people/daniel.htm Biography of Daniel O'Connell

www.askaboutireland.ie/learning-zone/primary-students/subjects/history/history-the-full-story/ireland-in-the-19th-centu/famous-irish-people/
Short biography of Daniel O'Connell

http://askaboutireland.ie/learning-zone/primary-students/5th-+-6th-class/history/my-school-history/17th-and-18th-century-hed/ Information about hedge schools

Extra Ideas

- Daniel's parents were worried about his future when he was born. Dramatise the discussion between his mother and father.
- Use a freeze-frame activity to illustrate events from Daniel's early life.

Linkage

Strand: Continuity and Change Over Time, **Strand Unit:** Schools and Education

Strand: Local Studies, **Strand Unit:** My Locality – Find out what life in your locality was like during the eighteenth century.

Strand: Life, Society, Work and Culture in the Past, **Strand Unit:** Life in the Nineteenth Century, *Small World History* Unit 16: Life in Ireland in the Nineteenth Century

Integration

Geography: Identify the places mentioned in Daniel's story on a map. Explore the country of France in greater detail. **Science:** A number of major scientific discoveries were made in the eighteenth century. Find out more about the invention of the steam engine, spinning jenny, lightning rod, or power loom. **Literacy:** Reading from the unit and retelling aspects of the life of Daniel O'Connell in their own words **Numeracy:** Calculating how long ago events on the timeline took place **Visual Arts:** Creating a comic strip illustrating the Penal Laws
SPHE: Discussing the ideas of liberty, equality and freedom, and how they apply to us now

Answers – Textbook

Page 69: 1. 1695 AD

Page 73: A. 1. Carhan, near Cahirciveen, County Kerry **2.** There was a tax on windows and most people couldn't afford to pay it. **3.** trading and smuggling **4.** vote, buy land, go to Mass, get an education, use the Irish language **5.** Maurice thought that Daniel would have a better chance of success if he went to school in France instead of a hedge school. **B.1.** Catholics **2.** hedge school **3.** Swans 4. Liberator **C. 1.** As a Catholic in Ireland in the eighteenth century, he had few prospects for the future. **2.** He saw how difficult life was for the ordinary people of Ireland.

Answers – Activity Book

Page 31: B. equality – idea that everyone should be treated the same way; fraternity – idea that everyone is joined together; revolution – a complete turn-around in the way that things are done; liberty – word that is sometimes used instead of the word 'freedom'; ideals – goals or ideas that people hope to achieve; rebellion – fighting against someone who is in charge; prosecute – to bring someone to court and charge him/her with a crime; barrister – another name for a lawyer – a person who argues in court

Unit 15: Great Irish Musical Maestros

April (1st Fortnight)

Strand: Story **Strand Unit:** Stories From the Lives of People in the Past

Objectives

Ref: Textbook p. 74

The child should be enabled to:

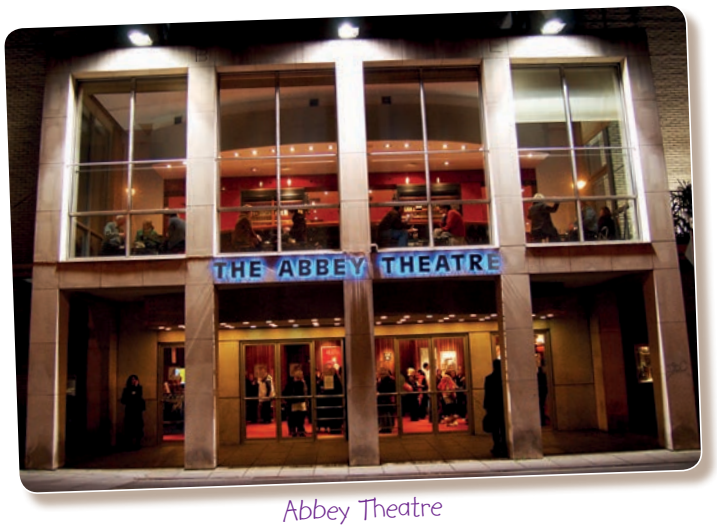
- Become familiar with aspects of the lives of two musical maestros: Turlough O'Carolan and Seán Ó Riada.
- Discuss the chronology of events in the lives of both men.
- Examine, and make deductions based on, simple evidence.
- Discuss the attitudes and motivations of both men.
- Express or record the stories of O'Carolan and Ó Riada through oral and written forms, artwork, music and other media.
- Compare and contrast the lives of O'Carolan and Ó Riada.

New Words

maestro smallpox melodies planxty
Gaeltacht traditional compose score

Lesson Kernel

The threads of this unit are as follows:



Abbey Theatre

- Turlough O'Carolan and Seán Ó Riada are two of the most famous composers of Irish traditional music.
- Turlough O'Carolan was born in Meath in 1670. He contracted smallpox at a young age and became blind. His mother arranged for him to learn how to play the harp. A local wealthy lady sponsored his lessons and paid for a guide and a horse for him. He travelled the country entertaining people and got a warm welcome wherever he went. He composed many melodies for the harp, which he named in honour of the people with whom he stayed. He also composed poems and song lyrics to go with his melodies. Turlough eventually settled in Leitrim and got married. He and his wife had seven children. His final composition was called 'Farewell to Music'. He died in 1738.
- Seán Ó Riada was born in Limerick in 1931. He learned how to play the fiddle and studied music in UCC. His first job was Assistant Director of Music at Raidió Éireann. He left Raidió Éireann after five years to concentrate on his own music. He continued to compose music while working as musical director at the Abbey Theatre. Seán and his family moved to a

Gaeltacht area in Cork and he began lecturing in Music at UCC. He formed a traditional music group called Ceoltóirí Chualann and the famous Cór Chúl Aodha. He composed music for many masses and the film score for the film, *Mise Éire*, which won a prize at the Cannes Film Festival. He won the Composer of the Year Award in 1968 and died in 1971.

Skills

- **Time and chronology:** Recording events mentioned in the unit using a timeline, and using prior knowledge to place the life of Turlough O'Carolan in the context of Ireland in the eighteenth century
- **Cause and effect:** Examining the impact of smallpox on O'Carolan's life, and discussing the influence of O'Carolan and Ó Riada on Irish music
- **Empathy:** Gaining an insight into the lives of O'Carolan and Ó Riada
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the stories of the lives of O'Carolan and Ó Riada
- **Continuity and change:** Comparing and contrasting the lives of O'Carolan and Ó Riada and their roles in the preservation and promotion of Irish traditional music

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Have a class discussion about Irish music and make a list of the bands and musicians with whom pupils are familiar.
- Play pieces of music composed by O'Carolan and Ó Riada and ask pupils to describe them.
- Discuss what is meant by the term 'traditional' and create a flow chart of Irish traditions.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Compare and contrast the work of O'Carolan and Ó Riada.
- Compare the work of O'Carolan and Ó Riada with other composers such as Bach, Strauss, etc.
- Explain what is meant by the term 'Irish traditional music'.
- Identify some of the instruments played by Irish traditional musicians and differentiate between various types of tune, e.g. reel, jig, hornpipe and slow air.

Differentiation – More Challenging

1. Discuss the roles of Turlough O'Carolan and Seán Ó Riada in the preservation of Irish traditional music.
2. Compare and contrast the lives of Turlough O'Carolan and Seán Ó Riada with those of Strauss, Bach, Wagner, etc.
3. Find out if there are any songs or tunes associated with your locality.

Differentiation – Less Challenging

1. Retell the stories of Turlough O'Carolan and Seán Ó Riada in your own words.
2. Write down any eight facts that you learned from this unit.
3. Create a word search based on the information in this unit.

Related Websites

www.comhaltas.ie Comhaltas Ceoltóirí Éireann website

www.pipers.ie Information about uilleann pipes

www.itma.ie Irish Traditional Music Archive

www.contemplator.com/carolan/index.html
Information about Turlough O'Carolan with audio samples of his music

www.seanoriada.ie/ Information about Seán Ó Riada

Extra Ideas

- Try out *Trad is Fab*, an audio-visual lesson scheme for primary schools produced by Comhaltas Ceoltóirí Éireann.
- Contact your local Comhaltas Ceoltóirí Éireann branch and ask them to come to the school to play.

Linkage

Strand: Life, Society, Work and Culture in the Past, **Strand Units:** Life in the Eighteenth Century, *Small World History* Unit 14: Life in Ireland in the Eighteenth Century

Strand: Local Studies, **Strand Unit:** My Locality

Strand: Continuity and Change Over Time, **Strand Unit:** Caring for the Sick – Find out about Edward Jenner's discovery of the smallpox vaccine.

Integration

Geography: Identify the places mentioned in the unit on a map. Explore the means of transportation available to O'Carolan and Ó Riada.

Science: A number of major scientific discoveries were made in the eighteenth century. Find out more about the steam engine, the spinning jenny, the lightning rod or the power loom.

Literacy: Reading from the unit and retelling aspects of the lives of O'Carolan and Ó Riada in their own words

Numeracy: Calculating how long ago events on the timeline took place

Music: Listening and responding to Irish traditional music; comparing the work of different composers

Gaeilge: Sing Irish traditional songs.

Answers – Textbook

Page 77: A. 1. near Nobber, County Meath **2.** He became blind, so his mother thought it would be a good career for him. **3.** 'Farewell to Music' **4.** Abbey Theatre **5.** a Gaeltacht area in Macroom, County Cork **B. 1.** Farewell **2.** tribute **3.** Gaeltacht **4.** Brian Boru

Answers – Activity Book

Page 33: C. maestro – master musician or composer; smallpox – disease that can lead to blindness; melodies – pieces of music; planxty – tune written as a tribute to someone; score – music that is written to go with a film or television programme; compose – to write a new piece of music; Gaeltacht – area in Ireland, where Irish is the main language spoken; traditional – something that has been done for many years

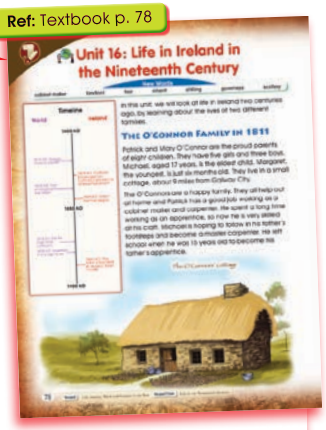
Unit 16: Life in Ireland in the Nineteenth Century

April (2nd Fortnight) and May (1st Fortnight)

Strand: Life, Society, Work and Culture in the Past **Strand Unit:** Life in the Nineteenth Century

Objectives

Ref: Textbook p. 78



The child should be enabled to:

- Become familiar with aspects of the lives of people living in Ireland in the nineteenth century, by looking at the lives of the O'Connor and Barrington families.
- Examine and become familiar with evidence from the nineteenth century.
- Record events mentioned in the unit on a timeline.
- Identify examples of continuity and change in relation to earlier and later time periods.
- Discuss the actions and feelings of different people mentioned in the story, e.g. Patrick O'Connor, Muireann O'Connor, the Murphy family, Emma-Jane Barrington, etc.

New Words

cabinet maker | landlord | heir | inherit | shilling | governess | scullery

Lesson Kernel

The threads of this unit are as follows:

- This unit looks at the lives of three families living in Ireland in the nineteenth century.
- The O'Connors are a working-class family living in a small cottage outside Galway City. The cottage has two bedrooms, a kitchen and a living room. Patrick O'Connor, is a cabinet maker and carpenter. His wife, Mary, sells vegetables at the local market. Their eight children all have chores to do around the house. The family survives by being self-sufficient.
- The O'Connors' neighbours, the Murphys, are not as well-off. With 14 children and a smaller house, life for the Murphys is a constant struggle.
- The Barringtons are a wealthy, upper-class family, living in a large house in Galway City. The house has three floors, as well as a basement and an attic. George Barrington moved his family from London to Galway because he has business there. His children are taught by a governess. They get lessons each day in reading, writing and sums. They also learn about nature and music.

'Bridget O'Donnell and Her Children', from *The Illustrated London News*, 1849

Skills

- **Time and chronology:** Recording events mentioned in the unit using a timeline, and understanding and using date conventions, e.g. AD
- **Cause and effect:** Discussing the effects that the Great Famine had on the people of Ireland
- **Empathy:** Gaining an insight into the lives of ordinary and wealthy people in Ireland in the nineteenth century
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the stories of the lives of the O'Connors, the Murphys and the Barringtons
- **Continuity and change:** Identifying items of change and continuity from earlier and later time periods, e.g. education, homes, etc.

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Ask pupils what they think life was like in Ireland 200 years ago.
- Ask pupils if they know of anything that is 200 years old, e.g. buildings, trees, furniture, etc.
- Tell pupils to sketch a quick picture of what they think life was like for a poor/rich child growing up in the nineteenth century.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Discuss the effects that the Great Famine had on the people of Ireland in the nineteenth century.
- Compare life in the nineteenth century in Ireland with life during earlier times and now.
- Revisit their sketches from earlier and adjust them to reflect what they now think life was like for a poor/rich child in the nineteenth century.
- Discuss what has changed in their sketches.
- Compare the lives of the wealthy Barrington family to the lives of the other families mentioned in the unit.
- Empathise with the children mentioned in the story and retell the story from their points of view.

Differentiation – More Challenging

1. Retell the story of the O'Connor and Barrington families in your own words, using a variety of media.
2. Compare and contrast the life of a child in the nineteenth century to the life of a child today.
3. Discuss the effects of the Great Famine on the people of Ireland in the nineteenth century.
4. Research the founding of the FA and the GAA in the nineteenth century.
5. Write a short drama based on the lives of the O'Connor and Barrington families.
6. Find out about some of the scientific discoveries and inventions that took place in the nineteenth century.
7. Compare what was happening in Ireland in the nineteenth century to what was taking place elsewhere in the world.

Differentiation – Less Challenging

1. Make a list of things you have at home that would not have been available for use in the nineteenth century.
2. Write a paragraph about why you think life is easier/better now and another paragraph about why you think it was easier/better in the nineteenth century.
3. Take part in a drama about the O'Connor and Barrington families.
4. Sketch a picture of what you think the Barringtons' and the O'Connors' houses might have looked like inside.

Related Websites

www.askaboutireland.ie/learning-zone/primary-students/5th-+-6th-class/history/my-school-history/national-schools-in-the-1/ National Schools in the nineteenth century

www.emocourt.net/schoolssection/SchoolLife.htm School life in the nineteenth century

www.esb.ie/main/about-esb/numbertwentynine/default.htm
Information about a Georgian house in Dublin

www.gaa.ie GAA website

Extra Ideas

- Draw a map of what you think your locality might have looked like in the nineteenth century.
- You are a wealthy landowner during the Great Famine and some of the labourers on your land are starving. Think of four ways you can help them.
- Have a class debate on the topic: *Irish people were let down by those in charge during the Great Famine.*
- Take a class vote to decide on the top invention or discovery of the nineteenth century.

Linkage: **Strand:** Continuity and Change Over Time, **Strand Unit:** Schools and Education **Strand:** Local Studies, **Strand Unit:** My Locality – Find out what life in your locality was like during the nineteenth century. **Strand:** Life, Society, Work and Culture in the Past, **Strand Unit:** Life in the Eighteenth Century, *Small World History* Unit 14: Life in Ireland the Eighteenth Century

Integration: **Geography:** Examine maps of County Galway from the nineteenth century. Look at census figures for the late-nineteenth century and find out about the population at the time. **Science:** A number of major scientific discoveries were made in the nineteenth century. Find out more about the invention of the lightbulb, photograph, locomotive or internal combustion engine. **Literacy:** Reading from the unit and retelling aspects of the life of Daniel O'Connell in their own words **Numeracy:** Calculating how long ago events on the timeline took place **Visual Arts:** Look at nineteenth-century architecture. **Drama:** Dramatising the lives of the O'Connor and Barrington families

Answers – Textbook

Page 83: A. 1. 10 **2.** knitting, sewing and mending clothes **3.** Mary O'Connor told stories to the children. **4.** He said, "It's the closest port in Western Europe to the Americas." **5.** The servants prepared meals and cleaned dishes there. The butler's office and wine cellar were also there. **B. 1.** eighteenth **2.** apprentice **3.** inherit **4.** scullery

Answers – Activity Book

Page 35: C. landlord – person who owns land and rents it to others; heir – person who is next in line to take over; cabinet maker – person who makes furniture; inherit – to receive something from a relative on her/his death; shilling – 12 pence in old money; governess – woman employed to teach the children of a wealthy family; scullery – place where dishes were washed

Unit 17: My School

(Optional/Alternative Unit)

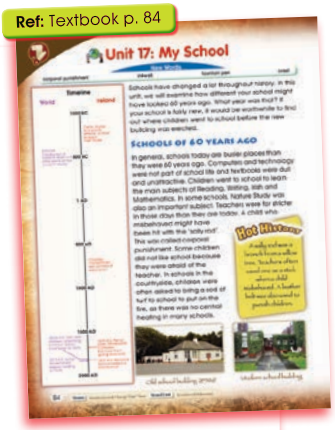
Strand: Continuity and Change Over Time **Strand Unit:** Schools and Education

Objectives

The child should be enabled to:

- Investigate the development of his/her school building/s and examine the history of earlier school buildings.
- Become familiar with the story of the founder/s of his/her school.
- Reconstruct a school day in the past using a variety of evidence from oral and written sources and photographs.
- Compare and contrast school furniture and equipment with those in the past.
- Refer to and use appropriate timelines associated with schools.

Ref: Textbook p. 84



New Words

corporal punishment inkwell fountain pen creel

Lesson Kernel

The threads of this unit are as follows:

- The purpose of this unit is to encourage pupils to think about what school was like in the past with a particular focus on drawing comparisons with their own school.
- An extract from the novel, *What Was the Question, Sir?* by Flan Quigney tells of life in a rural school in East Clare in the 1950s. The extract is a starting point for pupils to begin to describe their own school and to come up with questions to ask their parents and grandparents about school life in the past.

Skills

- **Time and chronology:** Using appropriate timelines to record the development of schools in Ireland and the history of pupils' own school
- **Cause and effect:** Discussing the effects of the rural electrification scheme on schools in Ireland
- **Empathy:** Gaining an insight into the lives of pupils and teachers in the 1950s
- **Synthesis and communication:** Using evidence to highlight the differences between school life today and in the past
- **Continuity and change:** Identifying how schools have changed with each passing decade and how they have stayed the same

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Brainstorm the name of your school to find out what the pupils already know about it.
- Ask pupils what school might have been like when their parents and grandparents were young.
- Make a list of things that have stayed the same and things that have changed.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Create a timeline for your school, highlighting significant events and achievements.
- Carry out a class project on the history of your school.
- Check out other schools that were built around the same time as your school. Are there similarities between the buildings?

Differentiation – More Challenging

1. Discuss the changes that have taken place in schools in the last 60 years.
2. Examine the impact of technology on schools and teaching.
3. Design the school and classroom of the future.
4. Examine in detail some textbooks and copies used by pupils in your school in the past.

Differentiation – Less Challenging

1. Make a list of things that you would like to have included in a new school.
2. Sketch a picture of what you think a classroom looked like 60 years ago.
3. Write four things that are different for you in school than they were for your parents.

Related Websites

www.woodlands-junior.kent.sch.uk/Homework/victorians/children/schools.htm
Information about Victorian schools

www.bbc.co.uk/schools/primaryhistory/victorian_britain/children_at_school/
Quiz and activities about Victorian schools

http://homepage.eircom.net/~heathschool/HISTORY.htm
The history of a school established in County Laois in 1824

Extra Ideas

- Create a school time capsule. Discuss the items it should contain and the length of time it should be buried for.
- Write a class book about your school, with each pupil contributing in some way.
- Compose a school anthem or write a poem about an important event in the history of your school.

Linkage: **Strand:** Story, **Strand Unit:** Stories from the Lives of People in the Past

Integration: **Geography:** Draw a map showing your journey from home to school.
Visual Arts: Use fabric and fibre to create a collage called 'A Day in the Life of Our School'.

Answers – Textbook

Page 87: A. 1. Today, we have computers and technology, and more subjects. In the past, teachers were stricter and textbooks were dull. School building styles differ. **2.** Their school depended on a turf fire for heat. **3.** She laid the table for the meal while she taught. **4.** The weather was becoming cooler/wetter. **5.** milk, or a bottle of tea/cocoa, homemade bread and butter/jam **B. 1.** subjects **2.** Penal Laws **3.** corporal **4.** monasteries

Answers – Activity Book

Page 37: C. creel – cartload of turf; inkwell – space on a desk where a bottle of ink was kept for writing; fountain pen – pen that was used with a bottle of ink

Unit 18: Caring for the Sick

May (2nd Fortnight) and June (1st Fortnight)

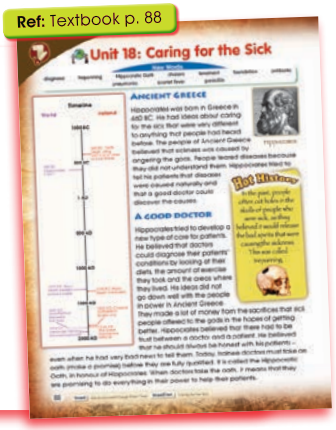
Strand: Continuity and Change Over Time **Strand Unit:** Caring for the Sick

Objectives

The child should be enabled to:

- Study aspects of scientific developments in medicine over a long period of time.
- Identify items of change and continuity in the line of development in caring for the sick.
- Identify some of the factors that have caused or prevented change in the way healthcare is administered.
- Refer to and use appropriate timelines.

Ref: Textbook p. 88

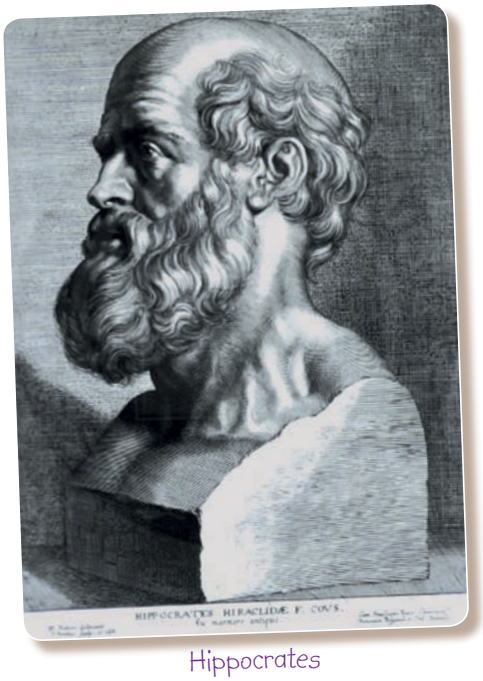


New Words

diagnose, foundation, trepanning, antibiotic, Hippocratic Oath, pneumonia, cholera, scarlet fever, tenement, penicillin

Lesson Kernel

The threads of this unit are as follows:


Hippocrates

- Hippocrates was born in Greece in 460 BC. He believed that sickness and disease were caused naturally and that a good doctor could discover the causes. He looked at a patient's lifestyle, diet and home to diagnose his/her condition. Today, all doctors take a Hippocratic oath promising to do everything in their power to help their patients.
- Catherine McAuley was born in Dublin in 1778. Her mother and father died when she was quite young. At the age of 15, she went to live in Coolock with Mr and Mrs William Callaghan, a wealthy couple with no children of their own. Catherine saw many people in need in the area and she started to help them. In 1824, she used some money left to her by the Callaghans to build a centre on Baggot Street to care for poor and sick people. In 1831, she founded the Sisters of Mercy. Their charitable work spread around Ireland and, eventually, around the world. The 1832 cholera epidemic saw the Sisters set up a temporary hospital in a building on Townsend Street. Catherine died in 1841.
- Alexander Fleming worked as a doctor in Saint Mary's Hospital in London. He spent a long time trying to figure out a way to kill the bacteria that cause disease. In 1928, he discovered a mould growing on dirty dishes in his laboratory that had amazing properties – it killed the bacteria on the dishes. Fleming called this mould 'penicillin'. It took Alexander a further 12 years to develop penicillin into an antibiotic drug. This was used to treat soldiers who had been wounded in World War II. Fleming and his fellow scientists were awarded the Nobel Prize for Medicine in 1945.

Skills

- **Time and chronology:** Using appropriate timelines to highlight changes in caring for the sick over a long period of time
- **Cause and effect:** Discussing how discoveries and advances in science have caused changes in medicine and the administration of healthcare
- **Empathy:** Gaining a broad understanding of the influence of three historical figures in medicine by looking at their stories and the stories of those whom they helped
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the stories of the lives of Hippocrates, Catherine McAuley and Alexander Fleming
- **Continuity and change:** Identifying items of change and continuity in caring for the sick

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Create a concept map on the topic, 'People who help us'. Focus on people in our community who provide healthcare.
- Find out how many pupils have been to the GP recently.
- Ask pupils to describe a visit to the GP's surgery.
- Compare a visit to the GP's surgery with a trip to the hospital.
- Discuss different types of healthcare professional and their roles in caring for the sick, e.g. a doctor in a hospital, a nurse, surgeon, GP.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Compare and contrast the stories of Hippocrates, Catherine McAuley and Alexander Fleming.
- Discuss the contributions of these three historical figures in caring for the sick.
- Discuss the role of technology in medicine, e.g. X-ray and life-support machines, and emergency vehicles such as ambulances and helicopters.
- Explain how the healthcare system works in their own words.

Differentiation – More Challenging

1. Discuss the roles of Hippocrates, Catherine McAuley and Alexander Fleming in the development of medicine and healthcare.
2. Explain the contributions of these three historical figures in your own words.
3. Find out more about the lives of Catherine McAuley and Alexander Fleming.
4. Compare and contrast healthcare 200 years ago with healthcare today.

Differentiation – Less Challenging

1. Retell the stories of Hippocrates, Catherine McAuley and Alexander Fleming in their own words.
2. Explain how Alexander Fleming accidentally discovered penicillin.
3. Make a list of things that make caring for sick people easier today than in the past.
4. Place the events mentioned in the unit on a timeline.

Related Websites

www.sistersofmercy.ie/about/catherine.cfm Information about Catherine McAuley

www.historyforkids.org/learn/science/medicine Information about 'ancient' diseases

www.knowitall.org/kidswork/hospital/history/index.html
Short timeline of the history of medicine

www.history-timelines.org.uk/events-timelines/10-history-of-medicine-timeline.htm
Detailed timeline of the history of medicine

Extra Ideas

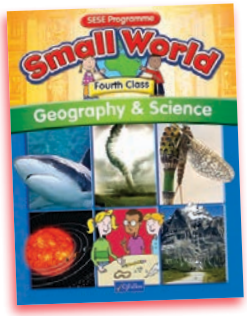
- Find out about Edward Jenner and Florence Nightingale: www.bbc.co.uk/schools/famouspeople/.
- Find out about Alexander Fleming's early life and his association with Winston Churchill.
- Ask a doctor or nurse to visit the school to talk about his/her job.
- Check out other Noble Prize winners and see what contributions they made to medicine and science.
- Examine the work of Wilhelm Rontgen and how his discovery of X-rays revolutionised medical care.

Linkage

Strand: Early People and Ancient Societies, **Strand Unit:** Greeks, *Small World History* Unit 3: The Greeks

Strand: Life, Society, Work and Culture in the Past, **Strand Units:** Life in the Nineteenth Century, *Small World History* Unit 16: Life in Ireland in the Nineteenth Century

Integration



Science: *Small World Geography & Science* Unit 11: The Story of Firsts – Read about the first human heart transplant and the different types of scanner that allow doctors to look inside our bodies.

Literacy: Reading from the unit and retelling aspects of the lives of Hippocrates, Catherine McAuley and Alexander Fleming in their own words

Visual Arts: Bacteria are very interesting to look at. Examine a number of microscopic images of bacteria and create your own images using a medium of your choice.

SPHE: People in the community who help us; nutrition and healthy eating; personal hygiene

Answers – Textbook

Page 91: A. 1. the patient's diet, the amount of exercise s/he took and the area where s/he lived **2.** cholera **3.** Sisters of Mercy **4.** Saint Mary's Hospital, London **5.** penicillin
B. 1. naturally **2.** relatives **3.** 1778 **4.** Nobel **C.** They cared for people with cholera, despite the risk of catching this deadly disease.

Answers – Activity Book

Page 39: B. trepanning – cutting a hole in the skull to release bad spirits that cause disease; tenements – large houses owned by wealthy people and rented to poor families; penicillin – type of mould that grows on food that has gone bad; Hippocratic Oath – oath sworn by doctors to do everything in their power to help patients; diagnose – to identify a disease based on its symptoms; antibiotic – medicine used to fight the bacteria that cause infection

Unit 19: Amelia Earhart

June (2nd Fortnight)

Strand: Story **Strand Unit:** Stories from the Lives of People in the Past

Objectives

Ref: Textbook p. 92


Unit 19: Amelia Earhart

AMELIA'S EARLY LIFE

HER FIRST CAREER

The child should be enabled to:

- Listen to, discuss, retell and record the story of Amelia Earhart and her contribution to the history of aviation.
- Discuss the chronology of events in the life of Amelia Earhart and sequence the events in the story.
- Examine, and make deductions from, simple evidence related to Amelia Earhart.
- Discuss the attitudes and motivations of Amelia Earhart, Captain Hilton H. Railey, George Putnam, etc.
- Assess the contribution made by Amelia to the advancement of women in society.

New Words

solo immigrant transatlantic navigator

Lesson Kernel

The threads of this unit are as follows:

- Amelia Earhart was born in Kansas in 1897. The Earhart family had to travel around a lot, because Mr Earhart could not hold onto a steady job. Even though Amelia missed a lot of school, she was bright and did very well at her studies.
- She graduated from high school in 1916 and decided to become a nurse in order to help soldiers who were wounded in World War I. She also studied medicine for a time.
- She got her first taste for flying at an air-show. She decided she wanted to become a pilot and worked hard to raise $1000 for flying lessons. In 1921, she made her first solo flight.
- In 1928, along with two other pilots, Amelia flew from America to England, making her the first woman to take a transatlantic flight. At that time, she met her future husband, George Putnam, who was reporting on the story for the newspapers.
- For the next number of years, Amelia continued to break flying records. In 1932, she flew solo across the Atlantic and landed in Derry.
- In 1937, while she was attempting to fly all the way around the world, her aeroplane disappeared.


Amelia Earhart

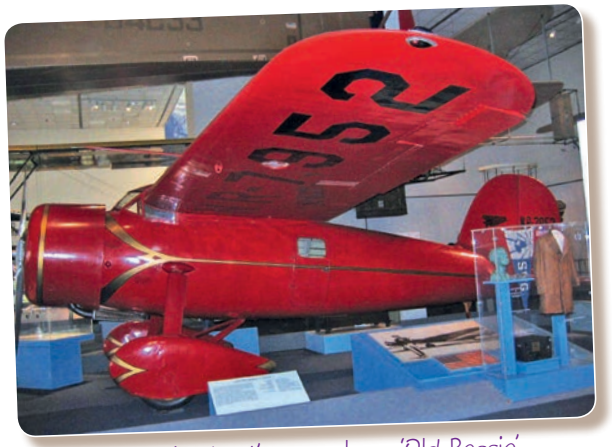
Skills

- **Time and chronology:** Sequencing events in the life of Amelia Earhart
- **Cause and effect:** Discussing Amelia Earhart's contribution to the history of aviation and her influence in inspiring other female pioneers
- **Empathy:** Examining the story of Amelia Earhart the points of view of various figures, e.g. Captain Hilton H. Railey, George Putnam, etc.
- **Synthesis and communication:** Using evidence and imagination to recreate elements from the story of the life of Amelia Earhart
- **Continuity and change:** Placing Amelia Earhart's story in the line of development for transport

Assessment for Learning

(Finding out what the pupils know *before* the unit)

- Find out how many pupils have been on an aeroplane and the destinations to which they travelled.
- Discuss pupils' first experiences of air travel. What was it like? Were they nervous, etc?
- Discuss how people travelled overseas in the past, before aviation began.
- Discuss the first flight made by the Wright Brothers.
- Ask pupils if they know of any pioneers or adventurers. Make a list to be referred to later.



Amelia Earhart's aeroplane, 'Old Bessie'

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Order and sequence events in the life of Amelia Earhart.
- Chart Amelia's final journey on a world map.
- Discuss what might have happened to Amelia and Fred.
- Refer back to the list of pioneers and adventurers. Does Amelia belong on the list?

Differentiation – More Challenging

1. Discuss the important role that Amelia played in the history of aviation.
2. Examine the example set by Amelia for women at this time.
3. Plan your own journey around the world.
4. Prepare a slideshow presentation on another pioneer of your choice.

Differentiation – Less Challenging

1. Retell the story of Amelia Earhart in your own words.
2. Listen to your classmates' presentations about other pioneers.
3. Write down any five facts about Amelia Earhart that you learned from this unit.
4. What do you think might be the next big invention in transport? Draw your invention and explain how it works.

Related Websites

http://library.thinkquest.org/J002076/Earhart.html
A young person's project on Amelia Earhart

www.ameliaearhart.com/
Official Amelia Earhart website, including a trailer of the film, *Amelia*

http://acepilots.com/earhart.html Information about Amelia Earhart

http://gardenofpraise.com/ibdearha.htm Games and activities based on Amelia Earhart

www.ameliaearhartmuseum.org/ Website of the Amelia Earhart Birthplace Museum

Extra Ideas

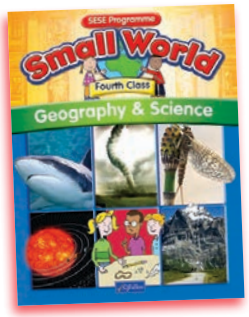
- Have a class debate to decide on the greatest adventurer of all time.
- Write the 'next chapter' in the story of Amelia and Fred.

Linkage

Strand: Continuity and Change, **Strand Unit:** Transport

Strand: Story, **Strand Units:** Stories from the Lives of People in the Past – Examine the lives of other pioneers such as Robert Falcon Scott, Tom Crean, Edmund Hillary and Tenzing Norgay, etc.

Integration



Geography: Charting Amelia Earhart's final journey; *Small World Geography & Science* Unit 2: Getting Around – Read about air travel.

Science: Conduct simple investigations involving spinners and parachutes. Discuss the principles of flight, i.e. thrust and uplift.

Literacy: Reading from the unit and retelling aspects of the life of Amelia Earhart in their own words

Visual Arts: Use charcoal or pastels to draw a picture of 'Old Bessie' in flight.

Drama: Dramatise the scene of Amelia Earhart's arrival in Gallagher's Field in Derry.

PE: Outdoor and adventure activities, e.g. orienteering

English: Read the novel, *Kensuke's Kingdom,* by Michael Morpurgo (Egmont Books), which tells of a boy who gets lost at sea on a journey around the world.

Answers – Textbook

Page 95: A. 1. Atchison, Kansas **2.** Neta Snook **3.** the first solo transatlantic flight **4.** President Herbert Hoover **5.** Senegal, Thailand, Singapore, Java, Australia, New Guinea **B. 1.** nineteenth **2.** 1903 **3.** World War I **4.** ship

Answers – Activity Book

Page 40: C. solo – to do something on your own; immigrant – person who lives permanently in a foreign country; transatlantic – journey that involves crossing the Atlantic Ocean; navigator – person in charge of reading maps and deciding which direction to take

Website List for Digging Deeper Activity Sections

Ask pupils to key in the following words in a Google search. They will be brought **directly** to the correct page on each website.

Unit 3: The Greeks (page 17)

To find out lots more about the Ancient Greeks, key in the words: **BBC Primary Schools Ancient Greeks** or **Ancient Greeks for Kids** or **Woodlands Junior School Ancient Greece** or **Ancient Greece Timeline** or **Scoilnet Ancient Greece.**

Unit 5: The Romans (page 29)

To find out more fascinating information about the Ancient Romans or to try a crossword, key in the words: **BBC Primary History Rome** or **Scoilnet Ancient Rome Crossword.**

Unit 6: My Locality (page 33)

To find out information about your ancestors and other local people, key in the words: **Census National Archives 1901.**

Unit 8: Saint Colmcille (page 43)

To find out more information about Saint Colmcille, key in the words: **Saint Colmcille Ask About Ireland.**

Unit 9: Homes and Houses (page 47)

To find out more about Irish houses in the past, key in the words: **Houses in the Past Ask About Ireland.**

To find out more about Áras an Uachtaráin, key in the words: **Áras Kids.**

Unit 10: The Vikings (page 53)

To find out lots more information about the Vikings, key in the words: **Vikings RTÉ** or **Vikings NCTE** or **Vikings Ask About Ireland** or **Scoilnet Vikings** or **BBC Vikings Primary History.**

Unit 12: Princess Hase of Japan (page 61)

To find out more about Ancient Japan, key in the words: **Japan Kids Web** or **National Geographic Japan Kids.**

Unit 13: Medieval Towns of Europe (page 67)

To find out more about medieval times, key in the words: **Norman Ireland Medieval Ask About Ireland.**

Unit 14: Life in Ireland in the Eighteenth Century (page 73)

To find out more about events and life in eighteenth-century Ireland, key in the words: **Eighteenth Century Ireland Ask About Ireland.** To try a quiz about eighteenth-century Ireland, key in the words: **Scoilnet Eighteenth Century Quiz.**

Unit 15: Great Irish Musical Maestros (page 77)

To find out more information about Irish musical instruments, key in the words: **Irish Musical Instruments Ask About Ireland.**

Unit 16: Life in Ireland in the Nineteenth Century (page 83)

To investigate your ancestors, key in the words: **Census 1901 National Archives.**

To take a virtual tour of an Irish nineteenth-century house, key in the words: **House Number 19 Dublin.**

To find out about schools in nineteenth-century Ireland, key in the words: **National Schools Nineteenth Century Ask About Ireland.** To find out about hedge schools in nineteenth-century Ireland, key in the words: **Hedge Schools Nineteenth Century Ask About Ireland**.

Unit 17: My School (page 87)

To find out about school life in Laois in the nineteenth century, key in the words: **Emo Court School.**

To find out about school life in Victorian Britain, key in the words: **Woodlands Junior Victorians Children Schools.**

Unit 18: Caring for the Sick (page 91)

To try a quiz about medicine in the Ancient World, key in the words: **Medicine Through the Ages Quiz Scoilnet.**

Unit 19: Amelia Earhart (page 95)

To find out lots more information about Amelia Earhart, key in the words: **Garden of Praise Amelia Earhart.**

Website List for Activity Book

Unit 3: **The Greeks (D page 6)** – Key in the words: **Tour Ancient Olympia.**

Unit 5: **The Romans (A page 13)** – Key in the words: **Rome Reborn Virginia Gallery.**

Unit 6: **My Locality (B page 16)** – Key in the words: **Boys Barr na Sráide Lyrics.**

Unit 9: **Homes and Houses (B page 22)** – Key in the words: **Houses Through History Woodlands.**

Unit 10: **The Vikings (A page 24)** – Key in the words: **Vikings RTÉ Sea Stallion.**

Unit 13: **Medieval Towns of Europe (A page 30)** – Key in the words: ***Bayeux Tapestry*** **Cosmo Learning.**

Unit 19: **Amelia Earhart (D page 40)** – Key in the words: **Amelia Earhart History Video.**

Useful History Resources

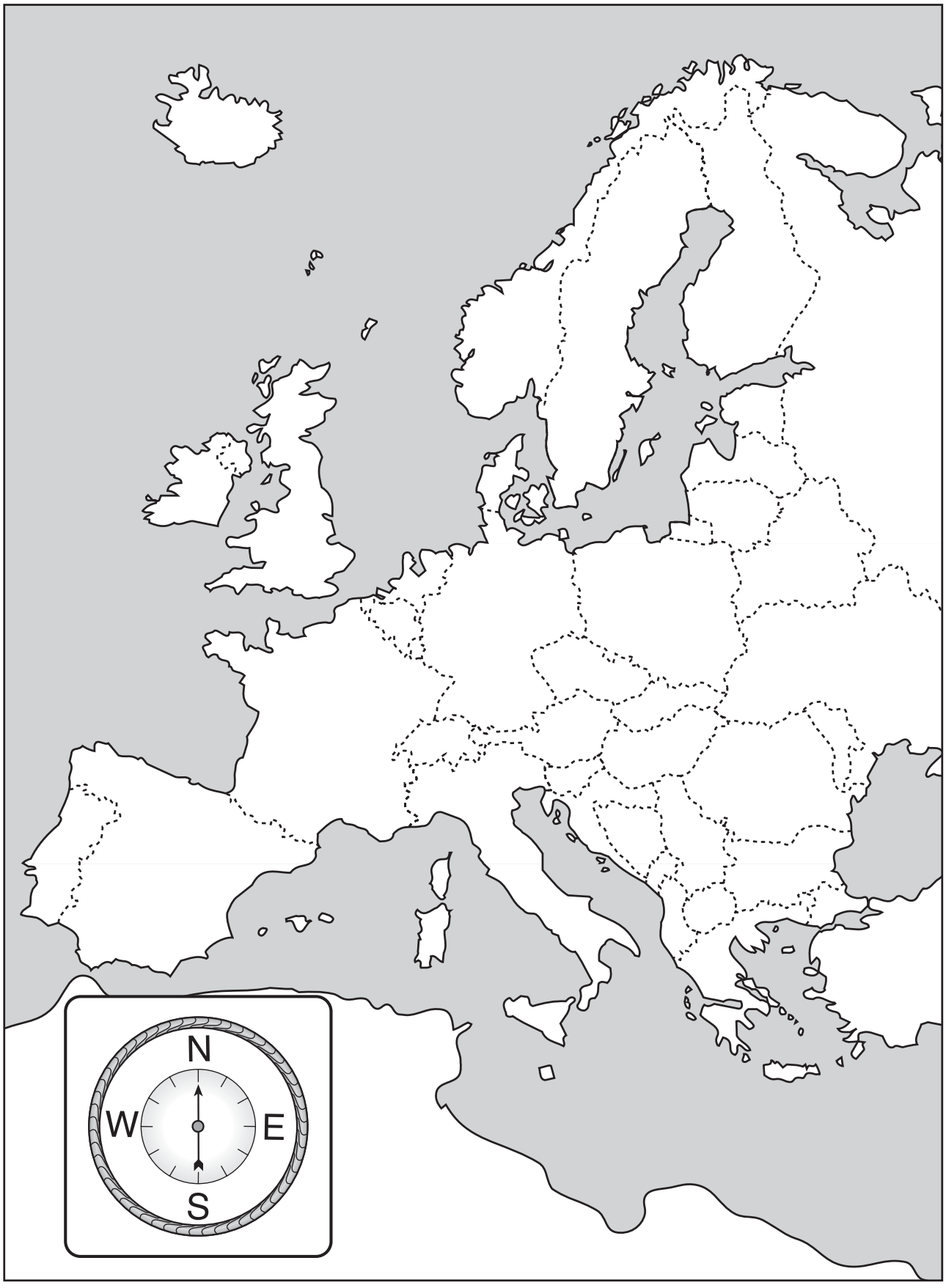
- Historical novels
- Phone apps, e.g. Dublin Castle Walls App
- History in a Box (replicas of historical objects available from the Teacher's Centres)
- Educational Resource Packs from the National Library of Ireland
- 'A History of Ireland in 100 Objects', a series by Fintan O'Toole, published in the *Irish Times Weekend Review* on Saturday (There is also a book of the series, published by the Royal Academy of Ireland, and an app is available.)
- Trócaire packs
- GAA
- National Museum of Ireland – curriculum-linked workshops, tours and resources
- Australian Embassy Ireland – free Indigenous Resource Kit for schools, containing replicas of artefacts, books, DVDs, CDs, flags, maps and teaching materials
- Websites:
  - www.historyireland.com
  - www.scoil.net
  - www.teachnet.ie
  - www.bbc.co.uk/history/forkids/
  - www.ncte.ie – digital photographs for non-commercial use, i.e. 'creative commons'
  - www.eyewitnesstohistory.com
  - www.dublinculturetrail.ie – virtual tour of Dublin from Dublin Cultural Trail
- National Library of Ireland's Lawrence Photographic Project, where you can compare old and new photographs
- Resources: Use the Teacher's Centres and the TPC (Teacher's Professional Centre), local libraries and the Heritage Council

Colour this Scene from the Second Battle of Moytura

Name: Date: Class:

Map of Europe

Name: Date: Class:



Colour the Celtic Brooch

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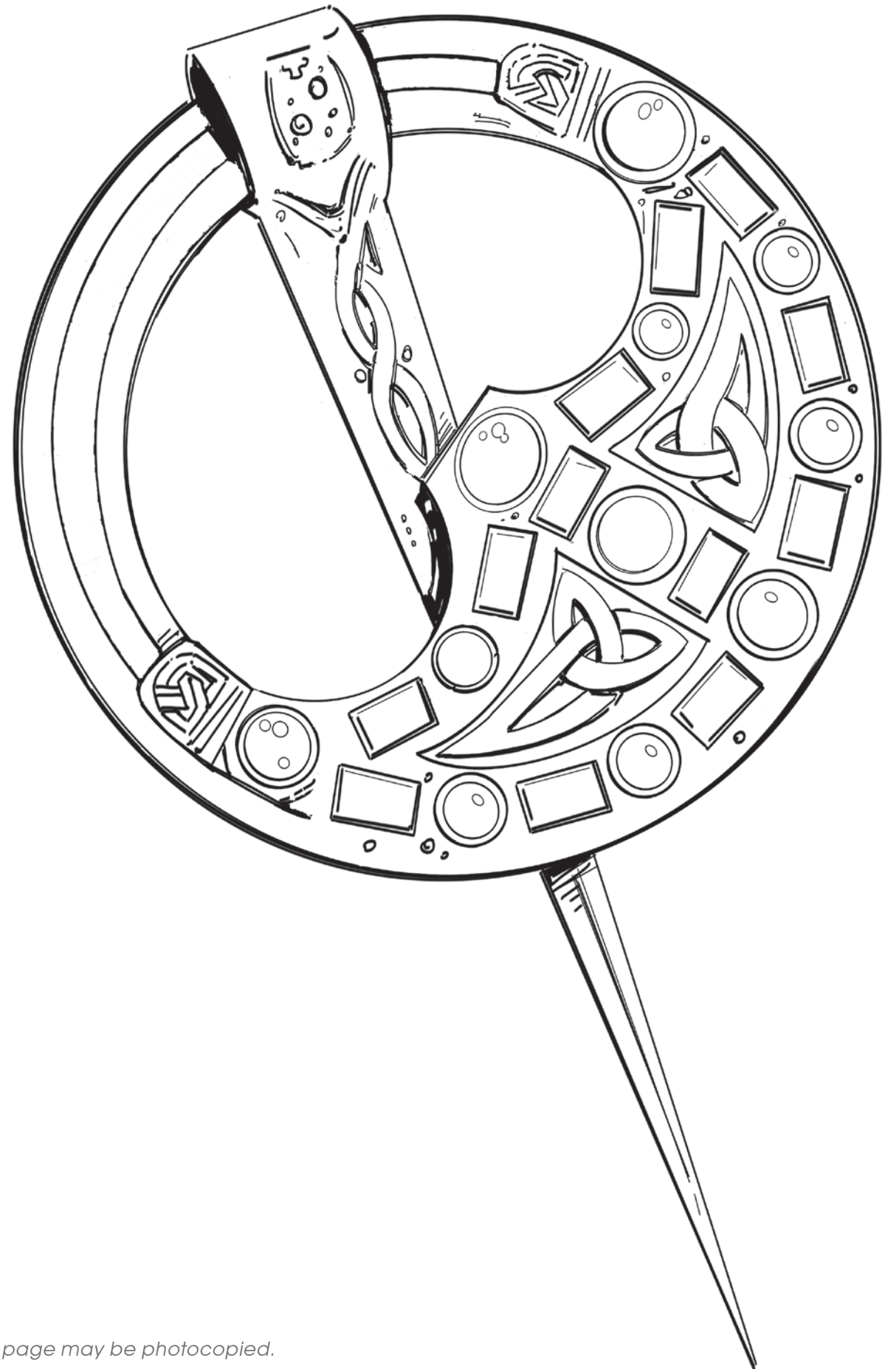

Map of Major Monastic Sites

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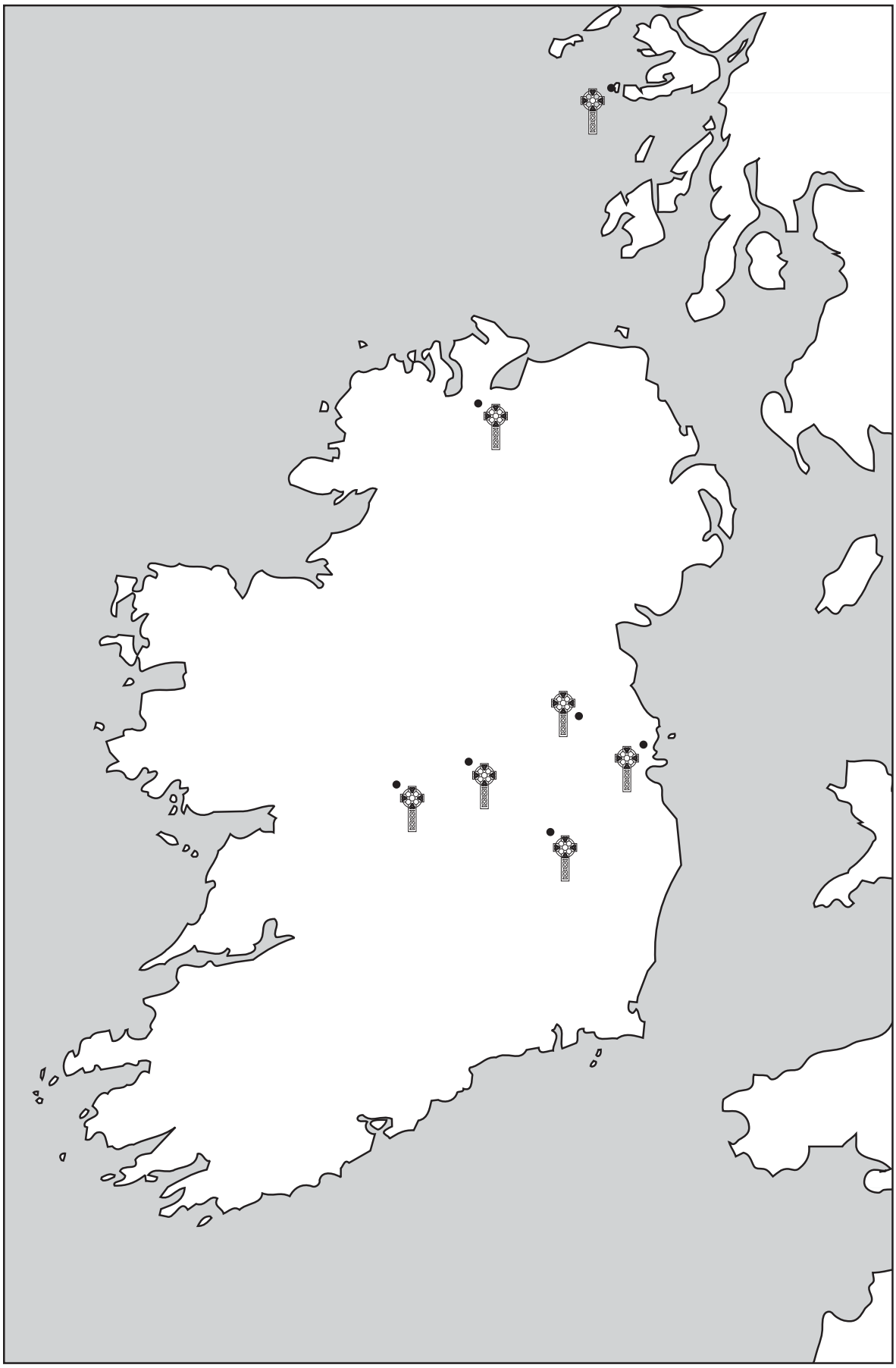
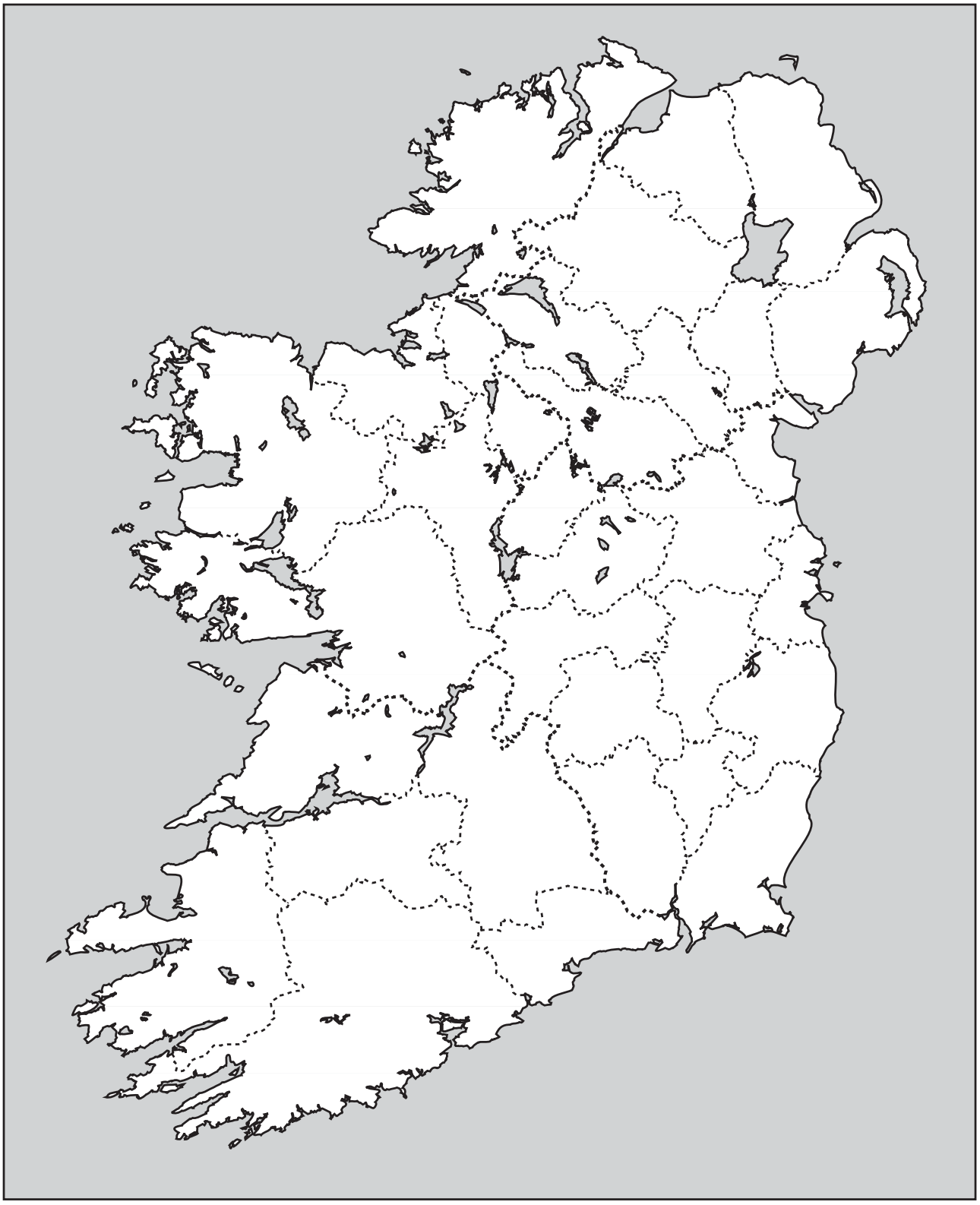


Decorate the Chalice with Scenes from a Monastery

Name: Date: Class:

Map of Ireland

Name: Date: Class:

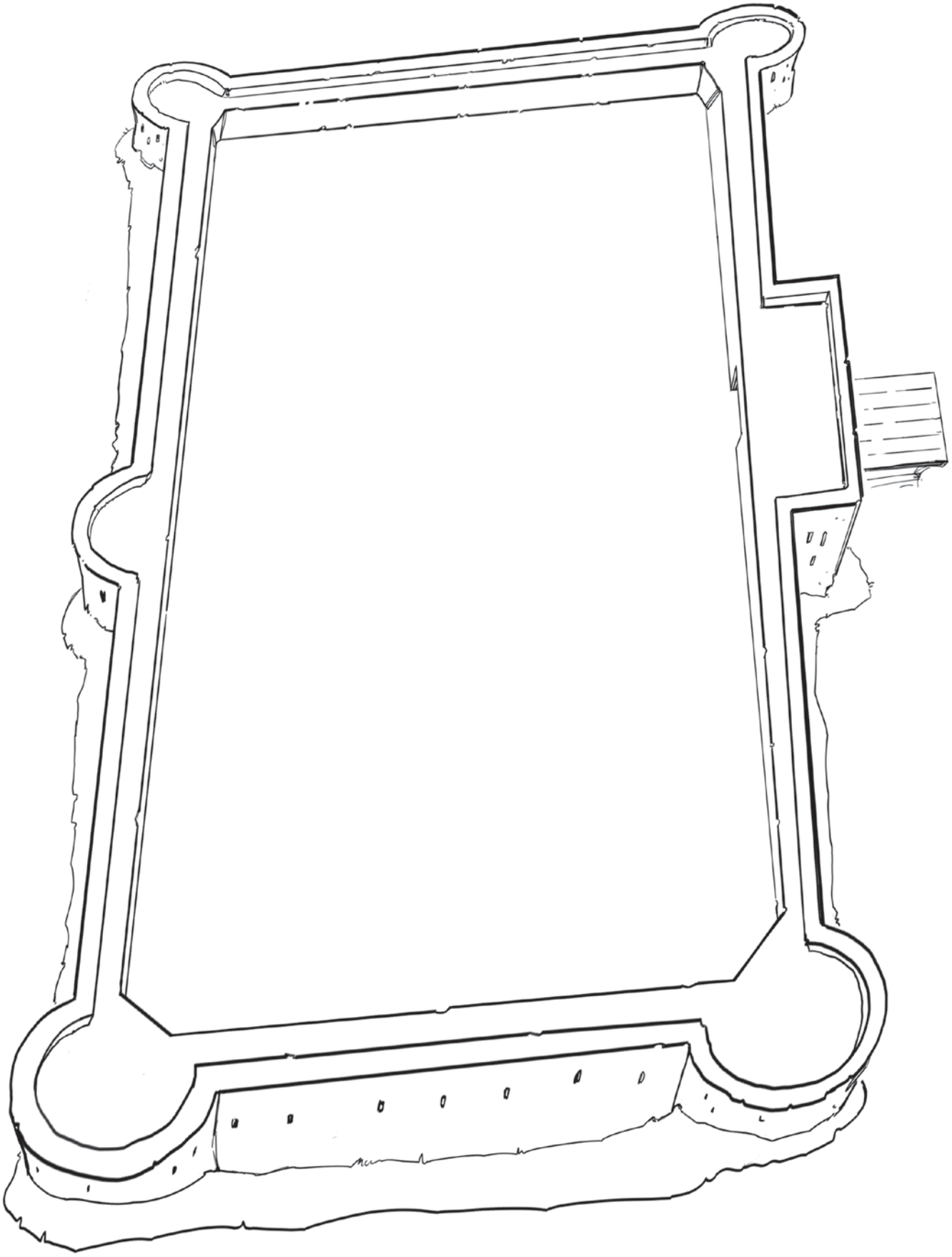


Map of Leif Erikson's Journeys

Name: Date: Class:

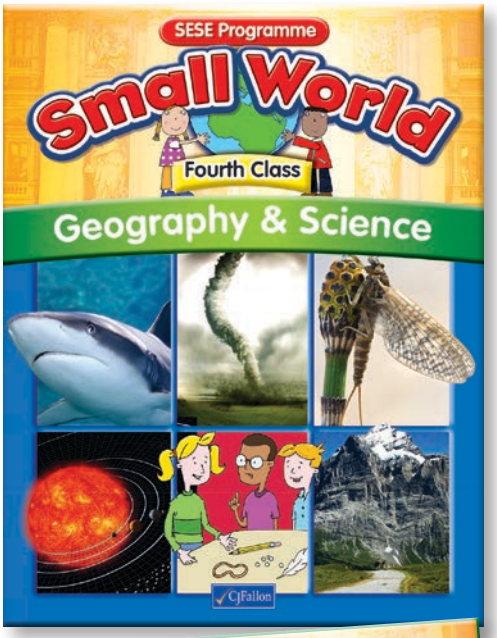
Medieval Town Walls

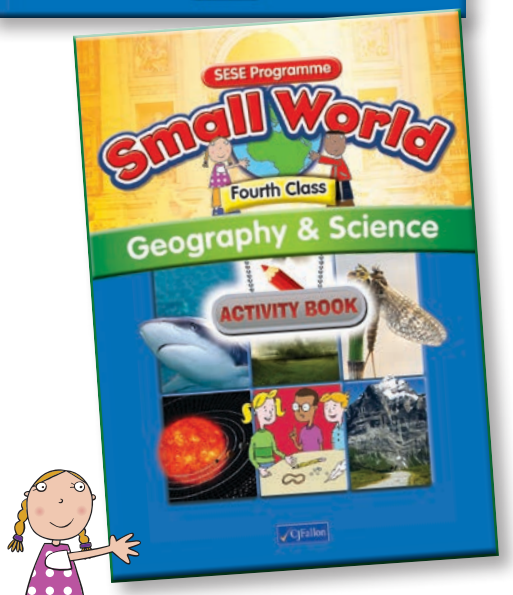
Name: Date: Class:



Teacher's Notes

Geography & Science





Geography & Science – Suggested Yearly Scheme at a Glance

The order in which the units appear in the Textbook was determined on the basis of the literacy level required and the difficulty of the concept. Naturally, the order in which the units are taught will be at the discretion of the teacher.

Month	Unit	Strand, Strand Unit	Content Objectives The child should be enabled to:	Skills – The student will work as a geographer/ scientist in using the following skills:
September	**Unit 1: Nature Is Powerful**	**Geography:** Natural Environments, The Local Natural Environment **Science:** Environmental Awareness and Care, Science and the Environment	▪ Become aware of the natural features in the locality and in a contrasting part of Ireland and their relationship to the lives of people living in these places. ▪ Become aware of place-names and their origins.	▪ List features of his/her local natural environment, e.g. forests, lakes, rivers, etc. ▪ Look for ways in which humans interact with the natural world. ▪ Look for names of nearby towns and regions whose names originate in Irish.
	Unit 2: Getting Around	**Geography:** Human Environments, People Living and Working in the Local Area (Transport and Communications) **Science:** Environmental Awareness and Care, Environmental Awareness	▪ Become aware of forms of transport and transport routes in the locality and in a contrasting part of Ireland. ▪ Investigate the work of people involved in transport.	▪ List forms of transport used regularly, e.g. bus, bicycle. ▪ Identify forms of transport used occasionally, e.g. ferry, aeroplane. ▪ Recognise forms of transport that, in our geographical space, might be regarded as exotic. ▪ Distinguish between transport requirements for goods and people.

October	**Unit 3: Animals**	**Science:** Living Things, Plants and Animals **Geography:** Environmental Awareness and Care, Environmental Awareness	▪ Observe, identify and investigate the animals that live in local environments. ▪ Develop an increasing awareness of animals from wider environments. ▪ Observe and explore some ways in which animal behaviour is influenced by, or adapted to, environmental conditions. ▪ Sort and group living things into sets according to observable features. ▪ Use simple keys to identify common species of animals. ▪ Come to appreciate that animals depend on plants and, indirectly, on the sun for food. ▪ Discuss simple food chains. ▪ Become aware of some of the basic life processes in animals.	▪ Observe the behaviours of some animals in an Irish habitat (forest). ▪ Identify some characteristics of some animals, e.g. warm-blooded, nocturnal. ▪ Investigate the habits of such animals, e.g. eating, predation.
	Unit 4: People at Work	**Geography:** Human Environments, People Living and Working in the Local Area (People at Work) **Science:** Environmental Awareness and Care, Environmental Awareness	▪ Explore and investigate, especially through practical studies, a small number of the common economic activities of people in the locality and in a contrasting part of Ireland.	▪ Recognise the wide variety of occupations necessary to ensure the smooth running of our communities. ▪ Map skills to particular jobs – that teachers need communication skills, that medical professionals are caring, that business people are organised, etc. ▪ Become aware of the evolution of occupations (sense of time). ▪ Become aware of the link between job types and the locality (sense of place).

November	**Unit 5:** **Trees**	**Science:** Living Things, Plants and Animals **Geography:** Natural Environments, The Local Natural Environment	▪ Observe, identify and investigate plants that live in local environments. ▪ Develop an increasing awareness of plants from wider environments. ▪ Observe and explore some ways in which plant behaviour is influenced by, or adapted to, environmental conditions. ▪ Sort and group living things into sets according to observable features. ▪ Understand that plants use light energy from the sun. ▪ Investigate the factors that affect plant growth.	▪ Classify trees as deciduous or evergreen. ▪ Examine trees and/or pictures of trees and label the principal parts. ▪ Study specific trees such as oak and holly. ▪ Identify four tree seed types: fruit, nut, winged and cone.
	Unit 6: **A Visit to Arranmore Island**	**Geography:** Human Environments, People Living and Working in a Contrasting Part of Ireland **Science:** Environmental Awareness and Care, Environmental Awareness	▪ Become aware of the natural features on Arranmore Island and their relationship to the lives of people living there. ▪ Learn about, and come to appreciate and respect, the people and communities who live and work on Arranmore. ▪ Explore, investigate and come to appreciate the major features of the built environment on Arranmore. ▪ Explore and investigate a small number of the common economic activities on Arranmore. ▪ Become aware of forms of transport on, and transport routes to, Arranmore.	▪ Develop some awareness of the distinctive human and natural features of some places in Ireland. ▪ Develop an understanding of the relative location and size of major natural and human features. ▪ Develop some familiarity with, and engage in practical use of, maps and photographs. ▪ Identify major geographical features and find places on the globe.

December	**Unit 7:** **Weather and Climate**	**Geography:** Natural Environments, Weather, Climate and Atmosphere **Science:** Environmental Awareness and Care, Environmental Awareness	▪ Study weather variations during the year and their influence on plants, animals and humans. ▪ Begin to appreciate the importance of solar energy for the Earth. ▪ Develop some awareness of weather and climate patterns and their relationship to plant, animal and human life in some environments in other parts of the world. ▪ Collect and record weather lore from the locality.	▪ Develop some familiarity with, and engage in practical use of, maps and photographs of different scales and purposes. ▪ Ask questions about natural and human features and processes in the environment and their interrelationships. ▪ Look for and recognise patterns and relationships in the environment, e.g. seasonal patterns in weather observations. ▪ Interpret information and offer explanations. ▪ Draw conclusions from suitable aspects of the evidence collected. ▪ Record and present findings and conclusions using a variety of methods.
	Unit 8: **People and Places**	**Geography:** Natural Environments, Land, Rivers and Seas of My County **Science:** Environmental Awareness and Care, Environmental Awareness	▪ Become familiar with the names and locations of some major natural features in the county and/or Ireland. ▪ Develop some familiarity with the relationship of these features with each other and with elements of the built environment. ▪ Become familiar with the location and names of urban areas in the county. ▪ Develop some knowledge of the relative location of the county and neighbouring counties. ▪ Become familiar with the location and names of a few of the larger towns and cities in the region and in Ireland.	▪ Develop some familiarity with, and engage in practical use of, maps and photographs of different scales and purposes. ▪ Develop an understanding of, and use, some common map features and conventions. ▪ Make simple maps of home, the classroom, the school and the immediate environment. ▪ Identify major geographical features and find places on the globe. ▪ Explore and become familiar with some of the distinctive human and natural features of the locality and county. ▪ Develop an understanding of the relative location and size of major natural and human features. ▪ Establish and use cardinal compass points in the locality. ▪ Use maps to record routes and directions in the locality.

January	**Unit 9: Rocks**	**Science:** Materials, Properties and Characteristics of Materials **Geography:** Natural Environments, Rocks and Soils	▪ Observe, collect and examine different rocks in the immediate and other environments. ▪ Sort and group constituent materials in samples. ▪ Compare and contrast materials, focusing on certain criteria. ▪ Begin to explore the influence of soils and rocks on animal and plant life.	▪ Ask questions about natural and human features and processes in the environment and their interrelationships. ▪ Observe, discuss and describe natural features and processes in the environment and their interrelationships. ▪ Offer hypotheses based on observations about the likely results of an investigation. ▪ Carry out simple investigations and collect information about rocks from a variety of sources. ▪ Use appropriate simple instruments and equipment to collect data, and use appropriate standard units of measurement. ▪ Sort, group and/or classify data on rocks using a range of appropriate criteria. ▪ Record and present findings on a rock investigation record sheet.
	Unit 10: Italy	**Geography:** Human Environments, People and Other Lands	▪ Study some aspects of the environment and the lives of people in Italy. ▪ Develop an awareness of the interdependence of the lives of people in Italy and people in Ireland. ▪ Begin to develop a sense of belonging to local, county, national, European and global communities.	▪ Develop some awareness of the distinctive natural and human features of some places in Italy. ▪ Develop an understanding of the relative location and size of major natural and human features in Italy. ▪ Develop some awareness of the names and relative location of some of Italy's European neighbours. ▪ Develop some familiarity with, and engage in the practical use of, maps and photographs of different scales and purposes, and develop an understanding of, and use, some common map features and conventions. ▪ Identify major geographical features and find places on the globe.

February	**Unit 11:** **The Story of Firsts**	**Science:** Environmental Awareness and Care, Science and the Environment **Geography:** Environmental Awareness and Care, Environmental Awareness	▪ Begin to explore and appreciate the application of science and technology in familiar contexts. ▪ Identify some ways in which science and technology contribute positively to society.	▪ Ask questions about animals, plants, objects and events in the immediate environment and their relationships. ▪ Ask questions that will identify problems to be solved. ▪ Ask questions that will help in drawing conclusions and interpreting information. ▪ Record and present findings and conclusions using a variety of methods.
	Unit 12: **Rivers and Seas**	**Geography:** Natural Environments, The Local Natural Environment **Science:** Living Things, Plants and Animals	▪ Become familiar with the names and locations of some major natural features in the county. ▪ Develop some familiarity with the relationship of these features with each other and with elements of the built environment such as roads, bridges, towns and cities.	▪ Explore and become familiar with some of the distinctive human and natural features of the locality, county, country and world. ▪ Develop an understanding of the relative location and size of major natural and human features. ▪ Develop some familiarity with, and engage in practical use of, maps. ▪ Develop an understanding of, and use, some common map features and conventions. ▪ Ask questions about natural and human features and processes in the environment. ▪ Observe, discuss and describe natural and human features and processes in the environment.

March	**Unit 13: Japan**	**Geography:** Human Environments, People and Other Lands	▪ Study some aspects of the environments and lives of people in one location in another part of the world. ▪ Develop an awareness of the interdependence of these people and the people in Ireland. ▪ Begin to develop a sense of belonging to local, county, national, European and global communities.	▪ Develop some awareness of the distinctive human and natural features in Japan. ▪ Develop an understanding of the relative location and size of Japan. ▪ Develop some familiarity with, and engage in practical use of, a map of Japan. ▪ Develop an understanding of, and use, some common map features and conventions. ▪ Identify major geographical features and find places on the globe.
	Unit 14: Magnetism	**Science:** Energy and Forces, Magnetism and Electricity	▪ Learn that magnets can push or pull magnetic materials. ▪ Explore how magnets have poles and investigate how these poles attract and repel each other. ▪ Explore the relationship between magnets and compasses. ▪ Examine and classify objects and materials as magnetic or non-magnetic. ▪ Investigate that magnets attract certain materials through other materials.	▪ Carry out a range of investigations on magnetism. ▪ Ask questions about magnets. ▪ Observe and describe magnetism in the immediate environment. ▪ Offer suggestions based on observations about the likely results of investigations. ▪ Design, plan and carry out simple investigations. ▪ Sort and group objects based on whether they are attracted to magnets or not. ▪ Recognise relationships between objects while sorting them. ▪ Record the results of investigations. ▪ Recognise a need to adapt or change an object. ▪ Develop craft-handling skills and techniques. ▪ Recognise that modifications to the plan may have to be made throughout the task.

April	**Unit 15: Forces**	**Science:** Energy and Forces, Forces	▪ Explore how objects may be moved. ▪ Explore how some moving objects may be slowed down. ▪ Explore the effects of friction on movement, through experimenting with objects on various surfaces. ▪ Explore how levers may be used to help lift objects.	▪ Observe the ways in which ordinary objects and machines in the immediate environment work. ▪ Collect information and data from a variety of sources. ▪ Learn how to use a force meter to measure force in newtons. ▪ Sort movements into push and pull. ▪ Classify movement according to its cause. ▪ Look for, and recognise, relationships when making observations. ▪ Interpret information from investigations, offer explanations and draw conclusions from suitable aspects of the evidence collected. ▪ Record and present findings and conclusions of investigations.
	Unit 16: Energy	**Science:** Environmental Awareness and Care, Environmental Awareness **Geography:** Environmental Awareness and Care, Environmental Awareness	▪ Recognise and investigate human activities which may have positive or adverse effects on local and wider environments. ▪ Become aware of the Earth's renewable and non-renewable resources. ▪ Come to appreciate the need to conserve the Earth's resources.	▪ Develop some awareness of the distinctive human and natural features of some places in Ireland and other parts of the world. ▪ Ask questions about natural and human features and processes in the environment and their interrelationships. ▪ Look for, and recognise, patterns and relationships in the environment. ▪ Interpret information and offer explanations. ▪ Draw conclusions from suitable aspects of the evidence collected. ▪ Record and present findings and conclusions using a variety of methods.

May	**Unit 17: The Sun**	**Geography:** Natural Environments, Planet Earth in Space **Science:** Energy and Forces, Heat	▪ Observe, describe and record the positions of the sun when rising and setting, and the changing lengths of day and night during the seasons. ▪ Investigate shadows and sunlight. ▪ Understand the importance of sunlight for plants and animals. ▪ Begin to understand the influence of the sun on weather and atmospheric conditions. ▪ Become aware of the dangers of sunlight for skin and eyesight.	▪ Ask questions about natural and human features and processes in the environment and their interrelationships. ▪ Observe, discuss and describe natural and human features and processes in the environment and their interrelationships. ▪ Offer suggestions based on observations about the likely results of an investigation. ▪ Carry out simple investigations and collect information. ▪ Look for and recognise patterns and relationships in the environment. ▪ Interpret information and offer explanations. ▪ Draw conclusions from suitable aspects of the evidence collected. ▪ Record and present findings.
	Unit 18: Materials and Change	**Science:** Materials, Materials and Change	▪ Explore the effects of heating and cooling on a range of liquids, solids and gases. ▪ Experiment to establish which materials are conductors of heat and which are insulators. ▪ Investigate how materials may be changed by mixing. ▪ Investigate the characteristics of different materials when wet and dry. ▪ Examine the changes that take place in materials when physical forces are applied. ▪ Explore some simple ways in which materials may be separated.	▪ Ask questions about objects and events in the immediate environment and their relationships. ▪ Ask questions that will identify problems to be solved and help in drawing conclusions and interpreting information. ▪ Observe and describe the natural state of materials in the environment. ▪ Offer hypotheses based on observations about the likely results of an investigation. ▪ Collect information and data from a variety of sources. ▪ Design, plan and carry out simple investigations. ▪ Identify one or two obvious variables relevant to the investigation, and realise that an experiment is unfair if relevant variables are not controlled. ▪ Use a thermometer to measure heat and compare results. ▪ Sort and group data during investigations, look for patterns and interpret results. ▪ Record and present findings and conclusions.

June	**Unit 19: Light**	**Science:** Energy and Forces, Light **Geography:** Natural Environments, Planet Earth in Space	▪ Learn that light is a form of energy. ▪ Recognise that light comes from different natural and artificial forces. ▪ Investigate that light can be broken up into different colours. ▪ Investigate the relationship between light and materials. ▪ Investigate how mirrors and other shiny surfaces are good reflectors of light. ▪ Recognise that the sun gives us heat and light, without which people and animals could not survive. ▪ Become aware of the dangers of looking directly at the sun.	▪ Carry out a range of investigations to develop a hands-on knowledge of light. ▪ Ask questions about light and think about its role in the world. ▪ Observe and describe processes in the immediate environment. ▪ Offer suggestions based on observations about the likely results of investigations. ▪ Design, plan and carry out simple investigations and identify one or two obvious variables relevant to the investigations. ▪ Sort and group objects into these categories: opaque, transparent and translucent. ▪ Recognise relationships between objects while sorting them into categories. ▪ Record the results of investigations. ▪ Recognise a need to adapt or change an object. ▪ Use appropriate tools and a range of materials. ▪ Recognise that modifications to the plan may have to be made throughout the task.
	Unit 20: The Living Body	**Science:** Living Things, Human Life	▪ Become aware of, and investigate, breathing. ▪ Become aware of the names and structure of some of the body's major external and internal organs.	▪ Ask questions about animals, plants, objects and events in the immediate environment. ▪ Ask questions that will help in drawing conclusions and interpreting information. ▪ Design, plan and carry out simple investigations. ▪ Record and present findings and conclusions using a variety of methods.

Geography & Science – Fortnightly Plan at a Glance

Month	Unit	Textbook page	Activity Book page	Manual page
SEPTEMBER (1st fortnight)	1: Nature Is Powerful	6	3	109
SEPTEMBER (2nd fortnight)	2: Getting Around	11	5	112
OCTOBER (1st fortnight)	3: Animals	18	6	116
OCTOBER (2nd fortnight)	4: People at Work	23	7	119
NOVEMBER (1st fortnight)	5: Trees	30	8	123
NOVEMBER (2nd fortnight)	6: A Visit to Arranmore Island	35	9	126
DECEMBER (1st fortnight)	7: Weather and Climate	42	12	130
DECEMBER (2nd fortnight)	8: People and Places	47	16	134
JANUARY (1st fortnight)	9: Rocks	52	19	138
JANUARY (2nd fortnight)	10: Italy	57	22	141
FEBRUARY (1st fortnight)	11: The Story of Firsts	64	26	144
FEBRUARY (2nd fortnight)	12: Rivers and Seas	69	27	147
MARCH (1st fortnight)	13: Japan	78	29	150
MARCH (2nd fortnight)	14: Magnetism	83	31	153
APRIL (1st fortnight)	15: Forces	88	32	156
APRIL (2nd fortnight)	16: Energy	93	36	160
MAY (1st fortnight)	17: The Sun	100	37	164
MAY (2nd fortnight)	18: Materials and Change	105	38	167
JUNE (1st fortnight)	19: Light	110	40	170
JUNE (2nd fortnight)	20: The Living Body	115	41	173

Unit 1: Nature Is Powerful

September: 1st Fortnight

Subject: Geography **Strand:** Natural Environments
Strand Unit: The Local Natural Environment

Subject: Science **Strand:** Environmental Awareness and Care
Strand Unit: Science and the Environment

Objectives

The child should be enabled to:

- Become aware of the natural features in the locality and in a contrasting part of Ireland and their relationship to the lives of people living in these places.
- Explore place-names and their origins in natural features.

Ref: Textbook p. 6

New Words

crannóg reservoir chlorine fluoride quarry

Lesson Kernel

The threads of this unit are as follows:

- The constant tussle between humans and nature: Humans have always used naturally-occurring phenomena to their advantage, e.g. timber from forests, water from rivers, stone from quarries. Life would not be possible without harnessing the power of nature. Humans have, and continue to, overexploit nature. Many natural resources are at vanishing point, e.g. peak oil. Pupils need to be educated in terms of renewable resources.
- Nature does not always readily surrender its resources. Consider the benign ways in which it can overtake neglected man-made features, e.g. the old graveyard, and also the ways in which we are reminded of its immense power, e.g. waves and tides.
- The unit also looks at place-names – the many towns and villages whose names are anglicised versions of logainmneacha as Gaeilge. Children should become familiar with the connections between words like 'baile' and 'Bally', 'dún' and 'Dun', 'cill' and 'Kil', etc.

Old graveyard

Skills

- **Listing** features of the local natural environment, e.g. forests, lakes, rivers
- **Examining** the ways in which humans interact with the natural world
- **Investigating** the names of nearby towns and regions whose names originate in Irish

Working as a Geographer

This unit links the terms 'nature' and 'Geography'. Pupils will explore the notions that nature is at work around them and that it is a powerful force.

Assessment for Learning (Finding out what the pupils know *before* the unit)

The aim of this lesson is for pupils to learn how humans exploit the natural environment to their advantage. Discuss how many of the necessities of life – e.g. water, food, fuel, building materials – originate naturally and locally.

Assessment of Learning (Finding out what the pupils have learned)

- Completion and correction of the written exercises that accompany the unit. (The same applies for all units.)
- Ask pupils to talk or write about a natural feature in your locality (e.g. a quarry, bog, forest, reservoir, stream, or coastline), and the benefits that accrue from it to humans.
- Ask pupils to think about the features/phenomena listed in the table that follows, and write how each may be both helpful and damaging. The first one is done.

	Helpful	Damaging
Sunlight	It gives us light so that we can see, and helps crops to grow.	Strong sunlight can damage your skin and eyes.
Heat from the sun		
Wind		
Rain		
Snow		
Rivers		
Sea or ocean		
Lake or pond		
Quarry or mine		

- Ask pupils to say or write the name of a town beginning with 'Dun', 'Bally', 'Kil', 'Castle', 'Carrick,' 'Glen', 'Ath' and 'Clon'. Teacher-designed tests might be compiled for this assessment.

Differentiation – More Challenging

1. Complete the written exercises in the Textbook and Activity Book. (The same applies for all units.)
2. List the names of 10 geographical features in your locality. They might be the names of roads, districts, towns, villages, rivers, mountains, etc.
3. Find the Irish name for each of the features on your list. (In suburbs, the Irish name is often written on the road sign above or below the English name.)
4. Does the English or Irish name of each of the features on your list give you any clue as to why the feature was so named?

Differentiation – Less Challenging

1. Complete the exercises in the Textbook orally or with a partner. (The same applies for all units.)
2. How many items in a house can you think of that are made from wood?
3. How many ways can you think of in which we use water?
4. How many ways can you think of in which nature provides us with energy or fuel for energy?

Related Websites

www.logainm.ie Database of Irish place-names

www.irish-place-names.com
Lots of background information on the meanings and provenance of place-names

www.libraryireland.com/IrishPlaceNames/Contents.php
Historical context of many Irish place-names

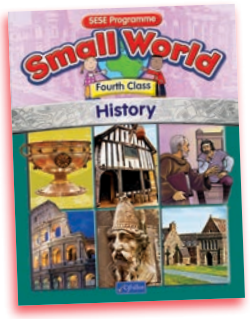
Extra Ideas

- Aerial photographs offer a unique perspective on our localities. Obtain such a photograph of your school and its student-catchment area, and try to identify familiar features as seen from above. If possible, compare it with an aerial photograph from a contrasting area of Ireland. Use Google Streetview and/or Google satellite to look at your locality.
- Find out about the nearest forest to your school, the reservoir that provides your water supply, local quarries or mines, wind farms and other natural features that influence how we live.

Linkage

Geography Strand: Human Environments, **Strand Unit:** People Living and Working in a Contrasting Part of Ireland

Integration



Literacy: The topic of Irish place-names is a rich and diverse literary source, which easily allows for integration with the Irish language syllabus. Many place-names owe their provenance to the Irish language, and pupils can uncover much about their locality when given some key Irish translations. Also, read the full version of the story of King Canute.

History: *Small World* History Unit 9: Homes and Houses – Read about crannógs and other homes.

Answers – Textbook

Page 10:

A. Set 1: Ballyvaughan; Kilkenny; Carrick-on-Shannon; Dungarvan **Set 2:** Castlebar; Kildare; Ballymun; Droichead Nua **Set 3:** Clonmel; Killarney; Buncrana; Portlaoise **Set 4:** Kilkee; Longford; Carrickmacross; Mullingar **Set 5:** Glendalough; Clondalkin; Athenry; Tullamore **Set 6:** Roscrea; Ballinasloe; Bundoran; Skibbereen

B. 1. c. 30 m **2.** straight **3.** where a river meets the sea **4.** probably late spring or early summer – some fields are waterlogged, trees are in leaf, fields are beginning to turn green

Unit 2: Getting Around

September: 2nd Fortnight

Subject: Geography **Strand:** Human Environments
Strand Unit: People Living and Working in the Local Area (Transport and Communications)

Subject: Science
Strand: Environmental Awareness and Care
Strand Unit: Environmental Awareness

Objectives

The child should be enabled to:

- Become aware of forms of transport and transport routes in the locality and in a contrasting part of Ireland.
- Investigate the work of people involved in transport.

Ref: Textbook p. 11

New Words

pedestrian reflective transported
export import container perishable

Background Information for the Teacher

Road-accident Statistics

- In Ireland, more deaths occur on the road on Sundays than any other day.
- The hours between 6:00 pm and 8:00 pm are the most dangerous for road-users.
- Road statistics often only mention fatalities; many people are badly injured on our roads every year.

Road Types in Ireland

- National roads (N or M) account for 6 percent of the total road network and carry 45 percent of the traffic. National Primary routes are major roads linking cities.
- National Secondary routes link major towns and the Primary routes.
- Regional roads (R) link National roads, while Local roads (L) include all other urban and rural roads.
- Arterial roads are the stretches of road before entering towns.
- Residential roads go through business, shopping and residential areas of cities and towns.

(Source: www.rsa.ie)

Lesson Kernel

The threads of this unit are as follows:

- Crossing the road safely is a good starting point for the lesson. Don't assume that pupils are old and wise enough to follow basic safety procedures. Consult the Road Safety Authority website, which contains a section dedicated to road safety for children that includes a cartoon on cycling to school and interactive games: www.rsa.ie/en/RSA/Road-Safety/Road-safety-for-kids/.

- From familiar to unfamiliar, the unit begins with the child's own likely experiences in terms of transport (bicycle, car, etc), moves through those s/he experiences less often, and on to those which may be unknown to him/her (e.g. tuk-tuk, felucca).
- The unit distinguishes between the transportation of goods and the transportation of people. Each has different requirements.
- Transporting goods: Much depends on the need for immediacy. A newspaper is of little value if it is a day late. Overripe fruit and vegetables cannot be sold to consumers. However, it is acceptable for some products to spend weeks in transit. For example, the manager of an electrical appliance shop may order a consignment of a product from Japan weeks in advance to allow for slow transportation.
- Transporting people: Generally, a traveller wishes to arrive at his/her destination as quickly and safely as possible. A commuter tries to avoid rush-hour traffic. A holidaymaker wants to reach his/her destination ASAP. On the other hand, certain industries have grown up around the notion of 'slow' transport, e.g. cycling holidays and sea cruises.
- Safety is a major transport issue and would make for a worthwhile discussion. Talk about road traffic accidents caused by drivers speeding/drink driving/using handheld devices, the rules governing what is not allowed to be taken on board an aeroplane, and the dangers caused by overcrowding on trains and ferries – particularly in less developed countries.

Tuk-tuk

Felucca

Skills

- **Listing** forms of transport used frequently
- **Identifying** forms of transport used occasionally
- **Exploring** forms of transport that are used in other lands
- **Discriminating** between requirements for transporting goods and people

Ship carrying containers

Working as a Geographer

In this unit, pupils learn about and experience some of the methodologies that a geographer uses to study a local place or a contrasting place elsewhere by conducting traffic surveys (photocopiable pages 192–194). Using a tally is a very useful skill in conducting a survey, making it much easier to work out total counts at the end. Remind pupils that four vertical strokes plus one diagonal stroke makes a group of five.

Assessment for Learning (Finding out what the pupils know *before* the unit)

Children are familiar with modes of transport that they have experienced. Explore:

- How goods are transported from source to shop.
- How we transport people over long distances.
- Modes of transport in other cities and countries.

Assessment of Learning (Finding out what the pupils have learned)

- Ask pupils to say or write how they should cross the road safely.
- Tell pupils that you need to travel from here to X (e.g. Dublin, Cork, London, Sydney). Ask them to write all the forms of transport you would need to use.
- Ask pupils to write all the forms of transport that may have been used to deliver X (e.g. bananas) from Africa to your local shop.
- Have pupils used a range of technology to explore the theme of transport?
- Have they completed a range of tasks, puzzles or problems on transport? Can they use a tally, for example?
- Have they conducted surveys on transport and how well were results recorded, interpreted and presented?

Differentiation – More Challenging

1. Conduct Traffic Survey A (photocopiable page 192). Before you set out, fill in the Investigation Sheet on page 43 of your Activity Book. After you conduct the survey, fill in the Investigation Record Sheet on page 44 of your Activity Book. (Both pages in the Activity Book may be photocopied.)
2. Do some research on the distances that some products have travelled to reach your dinner table.
3. We can now enjoy almost any fresh fruit or vegetable at any time of year. What do you think is the cost to the environment?

Differentiation – Less Challenging

1. Conduct Traffic Survey B (photocopiable page 193). Before you set out, fill in the Investigation Sheet on page 43 of your Activity Book. After you conduct the survey, fill in the Investigation Record Sheet on page 44 of your Activity Book.
2. Use an atlas to name a city you might land in if you were flying from: **(a)** Shannon to the USA and **(b)** Cork to Europe.
3. If you flew from Dublin to Strandhill, County Sligo, over which counties would you fly?

Related Websites

www.rsa.ie Road Safety Authority website

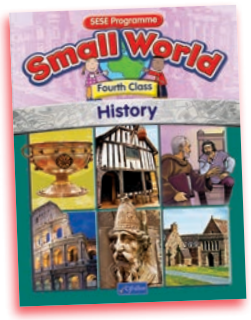
www.lartiguemonorail.com/index.php
Information about the once-famous Lartigue Monorail

www.factmonster.com/ipka/A0909591.html
Links, activities and worksheets based on transport

Linkage

Geography Strand: Human Environments, **Strand Unit:** People and Other Lands – looking at transport from a global perspective

Integration



History: *Small World History* Unit 19: Amelia Earhart

Literacy: Researching transport in books, magazines, fliers and websites provides great opportunities for functional reading or reading for purpose.

Numeracy:

- Create a maths trail based on transport. For example:
  - How many passenger seats in a bus/a school bus/a train carriage/ a taxi/an aeroplane?
  - How many wheels on the biggest lorry you have seen?
  - What is the price of a ticket for a bus/train journey?
  - How many stops does the bus take between here and X?
  - How many times might a bicycle wheel turn if it travels across the yard?
  - Name a street where there is no right turn for a car.
  - How many road signs can you draw and explain?
- Bus, train and airport timetables are great sources for real-life maths investigations.

Answers – Textbook

Page 13: 1. Paris – France; Heathrow – England; Roma – Italy; Copenhagen – Denmark; JFK (NY) – USA; Amsterdam – Netherlands; Palma – Spain

Page 15: A. 1. Royal Canal, Grand Canal **2.** camels **3.** export **4.** fruit, vegetables, meat/fish/ poultry, dairy, flowers **B. 1.** van **2.** tuk-tuk **3.** snowmobile **4.** segway **5.** jet skis **6.** tricycle **7.** helicopter

Answers – Activity Book

Page 5: A. pedestrian – a person walking beside a road; reflective material – material that can be seen at night; transported – carried; export – send goods to another country; import – bring goods in from another country; container – an object that can hold other objects or liquids; perishable food – something that will rot and decay

B. 1. (a) River Liffey **(b)** Trinity College **(c)** St. Stephen's Green **2.** six **3.** Pearse St. **4.** Abbey St. **5.** Inns/Lower Ormond/Wellington/Burgh/City Quay **6.** Nassau St. **7.** Kildare St.

Unit 3: Animals

October: 1st Fortnight

Subject: Science **Strand:** Living Things
Strand Unit: Plants and Animals

Subject: Geography **Strand:** Environmental Awareness and Care
Strand Unit: Environmental Awareness

Objectives

Ref: Textbook p. 18

The child should be enabled to:

- Observe, identify and investigate animals that live in local environments.
- Develop an increasing awareness of animals from wider environments.
- Observe and explore some ways in which animal behaviour is influenced by, or adapted to, environmental conditions.
- Sort and group living things into sets according to observable features.
- Use simple keys to identify common species of animals.
- Discuss simple food chains.
- Become aware of some of the basic life processes in animals.

New Words

termites mammal marsupial protected species
extinct diurnal nocturnal echolocation

Lesson Kernel

The threads of this unit are as follows:

- The characteristics of mammals and marsupials are explored. Marsupials are not indigenous to Ireland.
- The differences between wild and domesticated animals, and farm animals and pets, are explored.
- Some species of animals need to be protected from extinction. We may be inclined to believe that it is only in foreign countries that animals are facing extinction. This is not so. The Conserve Ireland website (www.conserveireland.com) provides an account of the many Irish species that are endangered.
- Pupils need to be educated about the need to be kind to animals and that cruelty towards animals is a cowardly crime.
- Pupils will learn about animals that live in our native forests and parklands, e.g. their eating habits, appearance and characteristics, threats, homes, behaviours and young.

Skills

- **Observing** the behaviour of some animals in an Irish habitat (forest)
- **Identifying** some characteristics of animals, e.g. warm-blooded, nocturnal, etc.
- **Investigating** the habits of animals, e.g. eating, predation

Working as a Scientist

- It is not always easy to observe animals. Visits to a meadow or seashore may be hit-and-miss and very much dependent on which animals happen to be about, and not scared off by a 30-strong group of 10-year-olds! Visits to farms and zoos are more controlled, but the settings are somewhat contrived.
- It may be practical to build a wormery in the classroom.
  - Use a large plastic container with a lid that has holes (worms require air). Line the bottom of the container with shredded newspaper and cover this with a layer of sand. On top of the sand, lay a thick layer of compost, perhaps with some garden soil and farmyard manure. Introduce your earthworms (available from all good gardens!) and cover with some more compost.
  - To get the earthworms 'working', place a layer of organic kitchen waste (no meat or cheese) such as potato peelings, salad leaves, apple cores, orange rinds, banana skins, etc. on top of the compost. Moisten with a little water – not too much or the worms will drown (that's why you see earthworms on the surface of soil in very wet weather – they come up to breathe.) Cover the container with the lid and place it in a cool, dark place. You can continue to add organic waste to the mix periodically. After a few months, the worms will have digested much of the matter and you will have terrific growing compost. See www.youtube.com/watch?v=ordM5TWyFLw for a video on how to create a wormery.

Assessment for Learning

(Finding out what the pupils know *before* the unit)

Children's experiences of animals are varied depending on whether their background is rural or urban and whether or not there is a pet at home.

- Question pupils to find out if they can recognise common Irish animals.
- Find out if they are familiar with animal behaviours.
- Do they understand the importance of being kind to animals?

Assessment of Learning

(Finding out what the pupils have learned)

- Developing respect for animals is one of the main aims of this strand unit. Pupils should be made aware that cruelty to animals is unacceptable and that pets need constant care and attention. This is not an easy thing to assess, as it is an attitude and state of mind rather than a skill or piece of factual knowledge. Give pupils an opportunity to talk about pets and the steps that are undertaken by their owners to ensure that they are looked after properly.
- Ask pupils to sort or classify animals according to various criteria, e.g. (1) mammals/marsupials/repitles/amphibians/birds, (2) wildlife/farm animals/pets.
- Ask pupils to give an oral, written or pictorial account or description of animals they have seen or studied.

Differentiation – More Challenging

Group work: Nominate a pupil to bring a pet to school for a day, so that the whole class may observe its habits. (Note to teacher: Observe common-sense precautions, being careful not to endanger the children or frighten the animal. Ensure that none of the children suffers from pet allergies.)

Differentiation – Less Challenging

The animal kingdom is vast and varied. Some pupils will undoubtedly have a keen interest in animals and in a particular ecosystem. You may have a pigeon fancier or a pupil who knows all about the Arctic. Exploit these interests and ask the children to share their knowledge.

Related Websites

www.conserveireland.com/ Information about protected species in Ireland

http://www.askaboutireland.ie/learning-zone/primary-students/3rd-+-4th-class/3rd-+-4th-class-environme/furry-friends/
Information about Ireland's wildlife

http://www.askaboutireland.ie/reading-room/environment-geography/
Enfo portal with a multitude of articles and e-zines on environmental geography and science

Extra Ideas

- Encourage the class to feed the birds during cold winter spells and to make sure they have drinking water when ponds are frozen over. A bird feeder might be set up in the school playground or somewhere that can be seen from the classroom.
- Discuss animals that provide us with food such as milk, honey, eggs, etc. and those that are killed for meat (and fish/poultry).
- Vegetarianism might be a topic for discussion in the context of this unit.

Linkage

Science Strand: Living Things, **Strand Unit:** Plant Life – Animals are dependent on the flora of their habitat to support them, directly or indirectly.

Integration

Literacy: Introducing new terminology related to the natural world will add greatly to the child's vocabulary and contribute to oral language development.

Numeracy: Animals lend themselves to some estimating games, e.g. How long is a worm? How heavy is an elephant? How much water could a camel drink? How many fairyflies might fit on your finger? How fast can a cheetah run?

Answers – Textbook

Page 22:
A. Set 1: swarm of bees; murder of crows; pack of wolves; herd of cows; flock of birds
Set 2: scurry of squirrels; cloud of bats; flock of sheep; shoal of fish; troop of monkeys
B. Set 1: cat – kitten; cow – calf; deer – fawn; butterfly – caterpillar; swan – cygnet
Set 2: bat – pup; horse – foal; fox – cub; squirrel – kitten; kangaroo – joey **C. 1.** red deer
2. an animal that is protected by law, in order to prevent it from becoming extinct
3. Irish Society for the Prevention of Cruelty to Animals **4.** The trees provide shelter and food and they can protect the animals from hunters. **5.** an animal that eats insects **6.** echolocation

Answers – Activity Book

Page 6: A. 1. extinct **2.** mammal **3.** marsupial **4.** diurnal **5.** echolocation **6.** nocturnal

Unit 4: People at Work

October: 2nd Fortnight

Subject: Geography **Strand:** Human Environments
Strand Unit: People Living and Working in the Local Area (People at Work)

Subject: Science **Strand:** Environmental Awareness and Care
Strand Unit: Environmental Awareness

Objectives

The child should be enabled to explore and investigate, especially through practical studies, *a small number* of the common economic activities of people in the locality and in a contrasting part of Ireland.

Ref: Textbook p. 23

New Words

solicitor depot raw materials
creamery accountant technician

Lesson Kernel

The threads of this unit are as follows:

- Pupils will begin to appreciate the infinite variety of occupations that exist. The traditional job model (i.e. 'nine to five') still exists, but the modern world offers many other possibilities.
- The working-from-home model is discussed at length. Due to the growth of internet functionality and broadband availability, working from home is becoming increasingly common. It is also important to stress the contribution of stay-at-home parents.
- Other models that might be discussed include: shift work, working abroad (temporarily/ permanently, by choice or out of necessity), commuting to work, contract work, part-time work, training for work (colleges and courses).

Working from home

- The notion of competition should also be explored. For example: 'What would happen if a competitor started selling a similar product at a cheaper price? Would the competitor offer the same quality and guarantees?' etc.
- Note: Unemployment will probably be an issue for several of your pupils' parents and older siblings. Treat this issue with sensitivity.

Skills

- **Recognising** the wide variety of occupations necessary to ensure the smooth running of our communities
- **Linking** jobs to particular skills, e.g. teachers need communication skills, medical professionals must be caring, business people must be well organised, etc.
- **Developing** an awareness of the link between types of jobs and the locality
- **Developing** an awareness of the evolution of occupations to reflect/meet the demands of changing societies

Working as a Geographer

In this unit, pupils will learn about the relationship between employment/industry and the locality. For example:

- Many industries develop in certain areas because of the availability of power, natural resources and a labour force.
- Successful business people often recognise opportunities for businesses in certain parts of a locality, e.g. opening a coffee shop in a shopping centre.
- In the absence of traditional raw materials such as iron and steel, Ireland has developed and sustains alternative industries, e.g. software development, agri-food, internet and banking services, etc.

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Beat the clock: 'How many jobs can you write down in one minute? Go!'
- Discuss what certain people do during their working day, e.g. What does an architect do? What does a website developer do?
- Parents and grandparents are a terrific resource. Maybe a pupil's dad or mum is a firefighter or an accountant. Invite them in to talk about their jobs.

Assessment of Learning (Finding out what the pupils have learned)

- Pupils should recognise that there is a rich web of occupations in the world around them, all of which make a valuable contribution to fulfilling the needs of society and making our world a better place in which to live.
- At the end of the lesson, ask pupils to name one occupation that they had never heard of before.
- From farm to table: Ask pupils to think of a vegetable they might eat for dinner. Instruct them to use the yoghurt diagram on page 25 of the Textbook as a starting point for a similar diagram. They must show the journey of a vegetable from farm to table and the people who were involved in its production. Establish the following assessment criteria in advance. Pupils can assess their own or each other's work based on the rubric below:

	Overall presentation	'Obvious' people (farmer, shopkeeper)	Less obvious people (van driver, food processing personnel…)	The 'journey' (e.g. planting, growing, ripening, picking, freezing, packaging, distributing, washing, chopping, cooking, etc.)	Total
Marks	/5	/5	/5	/5	/20

Differentiation – More Challenging

1. Examine the issue of health and safety in the workplace by looking for the following: **(a)** ways in which a working environment has been made safer (fire extinguishers, emergency exits and lighting, food handlers wearing hair nets and gloves, etc.), and **(b)** ways in which a working environment might have safety shortcomings (absence of signage, slippery surfaces, lack of protective clothing, eye and ear protectors, etc.).
2. Try to think of two examples for each of the following: **(a)** jobs that existed in the past that have no relevance today, **(b)** jobs that might exist in the future that do not exist today, and **(c)** existing jobs that require workers to keep retraining in order to be familiar with new developments.

Differentiation – Less Challenging

What is a guarantee? Think of a product that you or someone in your family bought recently and investigate the guarantee that came with it. For how long is it covered under the guarantee? Did the product have to be registered by post or online? Does the receipt need to be kept? Would the guarantee work if the item got lost or if you dropped it and it got broken?

Related Websites

http://rmhh.co.uk/occup/index.html
Interesting index of old occupations (British), many now defunct

http://videos.howstuffworks.com/science/how-its-made-videos-playlist.htm?page=2#video-37440 Short video on how guitars are made

http://videos.howstuffworks.com/science-channel/37440-how-its-made-assorted-chocolates-video.htm Short video on how assorted chocolates are made

www.youtube.com/watch?v=bNSw0m9rccs Video about a professional chocolate taster

Extra Ideas

- Write an advertisement for a newspaper offering a service to customers (e.g. grass cutting or dog walking). Include a short account of the service you offer, with the price you charge, your contact details, words of praise from satisfied customers, etc. Draw a suitable picture for your advertisement.
- Dramatise: 'Driving a hard bargain!'

  Two characters: One is selling a product or service and the other is considering buying.

  Scene:

  – Dad opens the door to a salesperson selling…

  – There's a leak in the ceiling and Mum rings a plumber…

  – A pupil makes buns and sets up a stall…

  – (There are numerous possibilities.)

  Dynamic: The seller wishes to extract as high a price as possible for the goods/service, while the buyer wishes to pay as little as possible. Contrast the difference between the unsolicited and the solicited, i.e. the door-to-door salesperson is unsolicited and has a different bargaining position to the plumber who has been summoned.)

Linkage

Geography Strand: Human Environments, **Strand Units:** The Local Natural Environment – Look at raw materials available locally and their impact on job creation; Transport and Communications – Examine the relevance of these industries to almost every business model.

Integration

Literacy: Vocabulary development through identifying and understanding the roles of many occupations

Numeracy: Group work – Set up an imaginary business. Each group should design a small business, e.g. making and selling buns or sandwiches, washing cars, growing and selling bedding plants (from seeds). They will need to price the ingredients/materials and work out the full cost of making the product/delivering the service. Secondary costs could also be considered, e.g. the production of flyers for advertising purposes. The activity also provides an opportunity to discuss the terms 'profit' and 'loss'.

Drama: Dramatising 'Driving a hard bargain!'

Answers – Textbook

Page 24:

1. Goods: tyre maker, paint factory, candlemaker, sweet factory worker, baker, wheat farmer
Service: taxi driver, nurse, teacher, postman, plumber, vet, solicitor, translator, librarian, tour guide, radio presenter, tyre fixer, forestry worker, website maker

3. Set 1: Mary Cooper – barrel maker; Tom Taylor – clothes maker; Mike Slater – roofer; Sally Cook – food maker; Willie Wheeler – wheel maker **Set 2:** Sean Smith – blacksmith; Jim Waterman – boatman; Ellen Coleman – coalman; Sheila Barber – hairdresser; Pat Parker – park ranger

Page 27:

A. Set 1: leather – shoe; oil – plastic; wood – paper; cocoa bean – chocolate
Set 2: gold – ring; flower petals – perfume; aluminium – can; sand – glass

B 1. carpenter **2.** plumber **3.** electrician **4.** dentist **5.** surgeon **6.** pharmacist **7.** florist **8.** locksmith

Unit 5: Trees

November: 1st Fortnight

Subject: Science **Strand:** Living Things
Strand Unit: Plants and Animals

Subject: Geography **Strand:** Natural Environments
Strand Unit: The Local Natural Environment

Objectives

The child should be enabled to:

- Observe, identify and investigate plants that live in local environments.
- Develop an increasing awareness of plants from wider environments.
- Observe and explore some ways in which plant behaviour is influenced by, or adapted to, environmental conditions.
- Sort and group living things into sets according to observable features.
- Understand that plants use light energy from the sun.
- Investigate the factors that affect plant growth.

Ref: Textbook p. 30

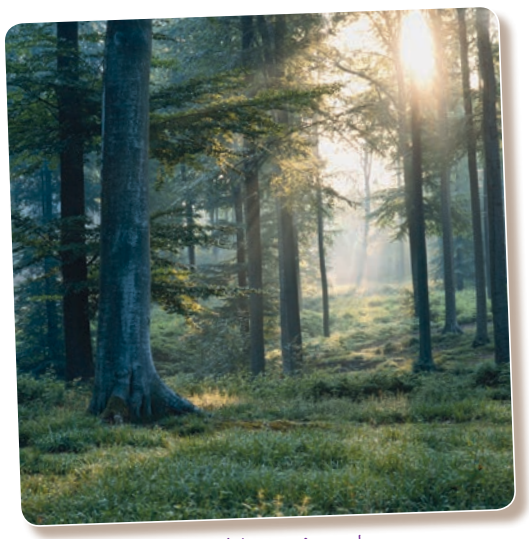
New Words

deciduous minerals carbon dioxide oxygen
canopy digitalis fungus

Lesson Kernel

The threads of this unit are as follows:

- There is so much interesting information about trees that it is easy to become swamped in detail. This unit chooses a few of the more important aspects (deciduous/evergreen, parts of a tree, woodland habitat, some native Irish trees, tree seeds), but there are others you may wish to explore, e.g. other native Irish trees, trees that don't grow in Ireland, timber, forestry, leaves, bark, etc.
- The concept cartoon at the beginning of the unit draws the pupils' attention to the fact that a tree's age can be determined by counting the number of annual rings in a cross-section of the trunk. Every year, a tree produces a ring that has a wide, light-coloured part alongside a narrow, dark part. These rings are also a valuable source of information about weather over the years, as the width of the ring may be proportionate to the favourability of the growing conditions. (Thin rings suggest unfavourable conditions such as a drought or a cold summer.)



Deciduous forest

Background Information for the Teacher

It is possible to study the rings of a tree without felling it. A thin sample in the shape of a straw is extracted from a living tree using a gadget called an increment borer. You may be interested to know that this branch of science is called dendrochronology or tree ring dating.

Skills

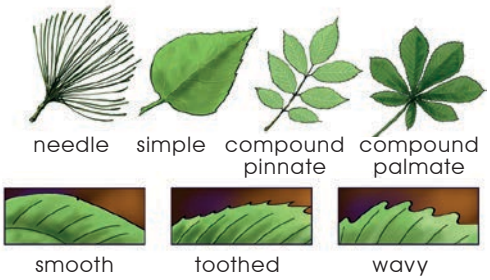
- **Classifying** trees as deciduous or evergreen
- **Examining** trees and/or pictures of trees and labelling the principal parts
- **Studying** specific trees, e.g. oak and holly
- **Identifying** four tree seed types: fruit, nut, winged and cone

Oak tree

Working as a Scientist

Looking at leaves: Leaves are usually green because of the chlorophyll they contain. They change colour in autumn as they prepare for abscission (leaf fall). However, leaves have many characteristics besides colour, most notably shape, edge type and venation. Pupils may collect leaves from different trees and classify them as follows:

- Colour: Describe the colour of the leaf. Find a pencil or crayon with as similar a colour as possible.
- Shape: Does the leaf have a stalk and veins, or is it like a needle? Does the stalk have one single leaf (simple) or many little leaves (compound)? If the leaf is compound, are the leaves at the end of the stalk (palmate) or on both sides of the stalk (pinnate)?
- Edges: Explain that the edge is not the surface but rather the part around which you would trace if you wanted to draw an outline. Is the edge smooth or not? If it isn't smooth, how would you describe it (with teeth or wavy)?
- Veins: If you can see the veins in the leaf, are they parallel (not touching) or do they crisscross (network)?



Assessment for Learning (Finding out what the pupils know *before* the unit)

- Can pupils identify a few native tree species?
- Are they familiar with some of the fascinating characteristics of trees?

Assessment of Learning (Finding out what the pupils have learned)

- Give pupils the task of drawing four pictures of a mature oak tree – one for each season of the year. Pupils can assess their own or each other's work based on the rubric below:

	Spring (young leaves and catkins)	Summer (full leaves and acorns)	Autumn (leaves falling, change in colour)	Winter (bare limbs)	Total
Marks	/5	/5	/5	/5	/20

- Has each pupil observed accurately both inside and outside the classroom? Has s/he predicted the outcomes of investigations? Is s/he able to estimate, measure and compare? Has s/he sorted or grouped events and natural phenomena, and recognised patterns?

Differentiation – More Challenging

Trees support wildlife. Find out more about the insects and birds that live in trees, or that rely on trees for food.

Differentiation – Less Challenging

Trees support life by providing tasty nuts (seeds) and fruit. Name as many types of nut and fruit as you can.

Acorns

Related Websites

www.coillte.ie/coillteforest/environment/learn_about_trees/
Irish forestry website with sections for primary school pupils

http://www.sylva.org.uk/myforest/documents/myForest_Tree_Identification_Key.pdf
Useful PDF to help identify trees and leaves

Extra Ideas

- In spring, plant a chestnut or an acorn in a pot of moist compost and watch it germinate and grow. Transplant the seedling, if possible, to a suitable growing place.
  See: www.coillte.ie/fileadmin/templates/pdfs/learn_about_trees_1st_2nd.pdf
  (Worksheet 6).
- Investigate flowers that grow on trees. Consider cherry blossom around Easter time or the beautiful flowers that appear on fruit trees, whitethorn, lilac, etc.

Hot Science

It is preferable for people not to trim hedges between March 1st and August 31st, as this may disturb wildlife nesting within. (Though of course trimming may be absolutely necessary in some circumstances, e.g. if hedges are causing a visual obstruction on a country road.)

Linkage

Science Strand: Environmental Awareness and Care,
Strand Unit: Environmental Awareness

Geography Strand: Environmental Awareness and Care,
Strand Unit: Environmental Awareness – caring for the environment

Integration

Literacy: Researching trees in books and other media gives pupils practice at finding appropriate information and distilling it for memory or for presentation to others in the class. Oral language development: Think of a fairytale that is set in/involves a forest and retell it in your own words. (Examples: *Hansel and Gretel, Little Red Riding Hood, Rapunzel, Goldilocks and the Three Bears, Sleeping Beauty, Snow White, Beauty and the Beast, Chicken Licken, The Sly Fox and the Red Hen, Pinocchio, Rumpelstiltskin*)

Numeracy: Counting annual rings in illustrations and photographs of tree-trunk cross-sections

Answers – Textbook

Page 34:

A. 1. autumn **2.** bark **3.** top **4.** fungi **5.** cuileann

B. 1. a tree that keeps its leaves throughout the year **2.** foxglove **3.** climbers **4.** oak **5.** holly **6.** Derry, Kildare, Edenderry, Derrybeg, Derryclare, Derrydonnell, Glencullen **7.** The sparks from the fire could set the whole forest alight. **8.** oxygen

Answers – Activity Book

Page 8: A. 1. deciduous **2.** carbon dioxide **3.** oxygen **4.** digitalis **5.** canopy

Unit 6: A Visit to Arranmore Island

November: 2nd Fortnight

Subject: Geography **Strand:** Human Environments
Strand Unit: People Living and Working in a Contrasting Part of Ireland

Subject: Science
Strand: Environmental Awareness and Care
Strand Unit: Environmental Awareness

Objectives

Ref: Textbook p. 35

The child should be enabled to:

- Become aware of the natural features of Arranmore and their relationship to the lives of people living there.
- Learn about and come to respect the people/communities who live and work on Arranmore.
- Explore and come to appreciate the major features of the built environment on Arranmore.
- Explore a small number of the common economic activities in Arranmore, e.g. accommodation for tourists, leisure and recreation activities, fishing and shops.
- Appreciate the interdependence of people in an island community.
- Become aware of the modes of transport on Arranmore and possible routes for travelling there from the mainland.

New Words

population destination Gaeltacht
inhabited island hopping sea stack draper

Lesson Kernel

The threads of this unit are as follows:

- The Walshs from Blanchardstown are going on holiday to Arranmore Island in County Donegal. Jack and Niamh have looked up photographs of Arranmore to get an impression of the island before they travel.
- There are many inhabited islands around the coast of Ireland, all with their own distinctive features. Some of these are shown on a map of Ireland.
- Islands often have a number of dramatic coastal features, e.g. beach, cliff, sea arch, sea stack and sea cave.
- Access to and from islands is a significant feature of island living. The Walshs consider the most suitable transport route from their home to Arranmore.
- The island is mountainous with a rocky summit and much of the land is poor for farming.
- Tourism is very important for the local people to make a living. Many people are employed in services for visitors. There is a variety of accommodation on the island to cater for guests: hotels, B&Bs, hostels and cottages.
- A tourist map is a good source of information on local attractions.
- Maeve grew up on the island, and she tells Jack and Niamh about the lives of local people in the past.

Skills

- **A sense of place:** Developing some awareness of the distinctive human and natural features of a place in Ireland
- **A sense of space:** Developing an understanding of the relative location and size of major natural and human features
- **Using pictures, maps and globes:** Engaging in practical use of maps of different scales with different purposes, developing an understanding of some common map features and conventions, e.g. symbols, and making simple maps

View of Donegal mainland from Arranmore

Working as a Geographer

Geographers use a variety of techniques and evidence to find out about the uniqueness of a particular place. Pupils learn about Arranmore through the following:

- Photographs are used to predict what the place may be like.
- Maps of Ireland and the island are explored.
- Transport routes are examined.
- Video clips are provided in the Related Websites section.

Assessment for Learning (Finding out what the pupils know *before* the unit)

Ask pupils to:

- Use a blank map of Ireland (photocopiable page 94) to label the islands that you know. Can you label the seas?
- Look at a blank map of Arranmore (photocopiable page 195). Brainstorm the words or phrases that come to mind about life on the island and write them around the map.
- Pretend you are going on a visit to an island. Write the questions that you would ask to find out more about the trip. Write down the sources of information that you could use to find out about your destination.
- Draw a line down the centre of a copy page and create two columns for 'Same' and 'Different'. Write the ways in which you think Arranmore will be the same as, or different from, your local place.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Return to the blank map of Ireland (photocopiable page 94) and label the islands and seas.
- Revisit the brainstorm and the Same/Different list and use another colour to add new details that you have learned.
- Answer the questions that you wrote before the lesson.
- Trace the map of Arranmore (photocopiable page 195). Fill in the features that you remember from the lesson.
- Create a poster or brochure encouraging visitors to Arranmore. Establish the following assessment criteria in advance. Pupils can assess their own or each other's work based on the rubric below:

	Content (quality of information)	Layout	Attractiveness	Map work	Total
Marks	/5	/5	/5	/5	/20

Differentiation – More Challenging

1. Write an essay about a holiday you had on Arranmore.
2. Do a project on an Irish island of your choice.
3. Create a multimedia presentation about a famous island or group of islands anywhere in the world, e.g. Galapagos Islands, Madagascar, Iceland, Canary Islands, Hawaiian Islands, etc.

Differentiation – Less Challenging

1. Write a postcard that you would send to a friend at home while on holiday in Arranmore.
2. Complete Activity A on page 11 of the Activity Book.
3. Make a list of the places in Arranmore that you would like to visit or the activities that you would like to do.

Related Websites

http://www.arranmoreco-op.com/
Arranmore Co-op website with video clips and photographs showing the island

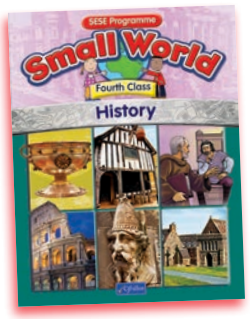
http://www.discoverireland.ie/Ireland-s-Islands
Information from Fáilte Ireland on the many islands around Ireland's coast

http://www.arainnmhor.com/Arainn_Mhor_Island/Welcome.html
Local website with information about activities, services, the lifeboat, etc. on Arranmore

Linkage

Geography Strand: Environmental Awareness and Care, **Strand Unit:** Environmental Awareness – Identify, discuss and record aspects of natural and human environments which are considered attractive or unattractive.

Integration

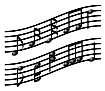


Science: Forces (floating and sinking) – Design and make a working model of a boat.

History: *Small World History* Unit 6: My Locality – This unit gives pupils the information on how to research buildings and artefacts in their local area. An old fort from 800 BC is located on Arranmore. Find out more about ancient settlements on the islands of Ireland.

Literacy: Reading from a variety of sources, e.g. maps, brochures

Numeracy: Calculating distances to and from the island; use of timetables to plan and time a journey



Music: There are many Irish sea-songs and shanties that would enhance the material in this unit, e.g. 'Baidín Fheidhlimí', 'Tá na Báid', 'Mo Cheallachín Fionn', 'Trasna na dTonnta', 'The Skye Boat Song' (Scotland).

Visual Arts: There is great scope for use of fabric and fibre to represent and interpret life on an island. A sea theme could be used to inspire a variety of other responses. There are also many paintings available on sea or island themes, which could be studied and appreciated, e.g. the artwork of Paul Henry and Jack B. Yeats.

Gaeilge: Arranmore is a Gaeltacht area. Everyday phrases for a student staying on the island could be learned.

Answers – Textbook

Page 37: A. 1. County Donegal **2.** three **3.** Atlantic Ocean **4.** Lots of tourists go to Arranmore to enjoy the island's beautiful scenery and to take part in the outdoor activities available there. **5.** People move to the mainland for work or school. **6.** Burtonport **7.** between five and 15 minutes **B. 1.** Galapagos Islands **2.** Achill Island **3.** Greenland **4.** Canary Islands

Page 39: A. 1. false **2.** true **3.** true **4.** false **5.** false **6.** true **B.** ferry – a boat that carries passengers and vehicles; accommodation – a place to stay; island – land that is completely surrounded by water; tourist – someone who visits a place for pleasure; Gaeltacht – an area where Irish is spoken daily; cliff – a high, steep area of rock usually on the coast

Answers – Activity Book

Page 9: B. Arranmore Island is located in the Atlantic Ocean, off the coast of County Donegal. It is connected to Burtonport in County Donegal by ferry. It takes the ferry between five and 15 minutes to cross to the island. Lots of tourists come to visit the island. They enjoy the beautiful scenery and take part in many outdoor activities. The island is a Gaeltacht area, where Irish is spoken daily. Much of the land is poor for farming, but there are plenty of fish in the sea and the lakes. Rare birds can be spotted on the cliffs beside the sea. You can get around the island on foot and by bicycle, car and taxi.

Unit 7: Weather and Climate

December: 1st Fortnight

Subject: Geography **Strand:** Natural Environments
Strand Unit: Weather, Climate and Atmosphere

Subject: Science **Strand:** Environmental Awareness and Care
Strand Unit: Environmental Awareness

Objectives

The child should be enabled to:

- Study weather variations during the year and their influence on plants, animals and humans.
- Begin to appreciate the importance of solar energy for the Earth.
- Develop some awareness of weather and climate patterns and their relationship with plant, animal and human life in some environments in other parts of the world.
- Collect and record weather lore from the locality.

Ref: Textbook p. 42

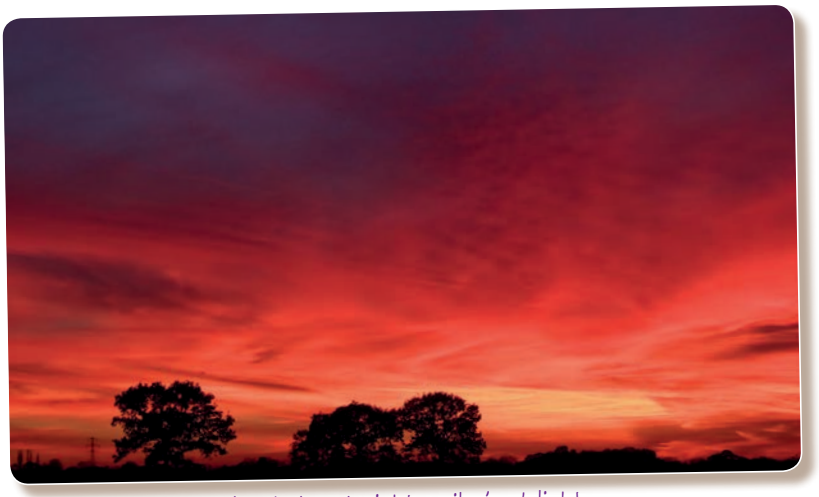
New Words

weather lore climate North Atlantic Drift meteorologist
arid tropical altitude orbit winter solstice

Lesson Kernel

The threads of this unit are as follows:

- In the past, the only way for people to predict the weather was to watch nature. Although we now have meteorologists who forecast the weather using sophisticated weather models and data, we can predict some elements of weather from nature and weather lore.



'Red sky at night, sailor's delight.
Red sky in the morning, sailors take warning.'

'Clear moon, frost soon.'

- In some cases, the behaviour of animals and birds forewarned people as to the weather, e.g. if seagulls were spotted inland, this was often a sign of stormy weather along the coast.
- A clear sky at night in winter often indicated frost, as there was no cloud cover to insulate the Earth.
- The unit gives an overview of climate types and the difference between climate and weather.
- Particular attention is paid to the North Atlantic Drift and its influence on Ireland's climate.
- Seasonal changes in weather are explored – the traditional four seasons with which we are familiar in Ireland, and the factors that influence the seasons.

Skills

- **Using pictures, maps and globes:** Developing some familiarity with, and engaging in practical use of, maps and photographs of different scales and purposes, e.g. map of ocean currents, photographs of weather phenomena, and satellite imagery
- **Questioning:** Asking questions about natural and human features and processes in the environment and questioning their interrelationships, e.g. Why have people collected weather lore? Are weather sayings accurate? How will climate change influence weather in the future?
- **Interpreting** information and offering explanations
- **Drawing conclusions** from suitable aspects of the evidence collected
- **Recording and communicating:** Presenting findings and conclusions using a variety of methods, including oral, written, pictorial, photographic, diagrammatic and graphical forms and using information and communication technologies

Working as a Geographer

In this unit, pupils will engage in practical use of photographs and maps of different scales and purposes, i.e. weather maps and satellite images.

Assessment for Learning (Finding out what the pupils know *before* the unit)

Use the concept cartoon at beginning of the unit to initiate discussion and find out what pupils know about weather and climate. (Pupils can record this in their copies.)

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the concept cartoon at the beginning of the unit and determine what pupils have now learned. Pupils might be able to draw/sketch their own cartoons for younger classes.
- PMI: Ask pupils to assess their own work and/or that of their peers using the PMI method. They should write one thing that they like about their own work (+), one element they could improve on (–), and one fact they find interesting (I). They can write this under their work and date it. This can also take the form of peer assessment if pairs swap copies and undertake the same task regarding their partner's work.

Differentiation – More Challenging

1. Look up old béaloideas stories in the library for weather proverbs.
2. Group work: Compile a list of weather proverbs in Irish and draw pictures to explain them.
3. Create a multimedia presentation on climate types.
4. Group work: Create a fact-file of international weather sayings. Use the PMI method to assess your work.
5. Investigate the role of climate type/change in natural disasters, e.g. famine, drought.
6. Research the work of Irish NGOs in developing countries.
7. Research recent natural disasters caused by weather, e.g. snow storms, monster rain, strong winds, etc.
8. Investigate the influence of climate in terms of food, clothes and travel.

Differentiation – Less Challenging

1. Make up your own weather sayings.
2. Group work: Compile a list of weather proverbs in Irish and draw pictures to explain the proverbs.
3. Create a multimedia presentation on climate types.
4. Group work: Create a fact-file of international weather sayings. Use the PMI method to assess your work.
5. Make a list of words and phrases that you might hear on the weather forecast (sunny spells, scattered showers, cold front, etc.).

Related Websites

www.met.ie	Met Éireann website, providing information regarding weather and climate
http://www.cmos.ca/weatherlore.html	Weather lore website
http://www.masterit.ie/irishproverbs/weather.htm	Irish proverbs in relation to weather
www.greenschoolsireland.org	Green Schools website
www.antaisce.ie	An Taisce website
www.askaboutireland.ie/enfo/	Enfo website
www.greenwave.ie	Greenwave project website

Linkage

Geography: Link to mapping and use of a globe and lines of longitude and latitude.

Integration

Numeracy: Keep a record of the temperatures or weather conditions for each month (or days of the week). Create graphs and charts to show the information.

Gaeilge: Old Irish weather sayings

Answers – Textbook

Page 44:

1. Weather lore is a collection of sayings that help predict and explain the weather. It has been passed from generation to generation. **2. (a)** If it is dry in the morning, it is likely to rain before night-time. **(b)** If you see a rainbow in the afternoon, it is an indication that there will be good weather. **3.** moderate temperate **4.** polar, mountainous, arid, tropical, Mediterranean, temperate **5.** North Atlantic Drift (also known as the Gulf Stream) **6.** Answers vary depending on the type of crop. Temperate/Mediterranean/tropical are probably best, as there are no major extremes in temperature, these climate types have long summers, are mild in nature and receive the rainfall that is required for crop growth. **7.** Mediterranean or tropical are probably best as the weather is favourable.

Page 46:

A. 1. 365¼ days **2.** Polar – dry, windy with snow and ice. The sun is never warm enough to melt all of the ice. Winter lasts up to six months and temperatures can be very low. Tropical – warm all year, no winter season. Receives lots of rainfall and temperatures are high. **3. Autumn** takes place in the third quarter of the year. Trees start to lose their leaves. Leaves change colour, and nuts and seeds fall to the ground. Animals prepare for hibernation. Weather becomes cooler and days shorter. **Spring** takes place at the beginning of the year. It is a time of growth and new life. Animals and plants wake up from winter hibernation. Leaves and buds begin to appear on trees, and flowers start to grow. The hours of daylight begin to increase. **4.** shortest day of the year (December 21st) **5.** June 21st (summer solstice)

B. 1. Spring is one of the first seasons of the year. **2.** Spring begins on the first day of February and ends on the last day of April. **3.** Spring is a time when animals come out of hibernation and the hours of daylight increase. **4.** Winter begins on the first day of November and ends on the last day of January. **5.** During winter, animals spend lots of time in hibernation and stay out of the cold weather. **6.** The shortest day of the year is December 21st. **7.** Remember that Santa Claus visits during winter!

C. 2. (a) igloo; made from compacted snow; most suitable for a polar climate, where it won't melt **(b)** dwelling made from wood on stilts; most suitable for a tropical climate (high temperatures and lots of rainfall) **(c)** dwelling made from clay/mud with a reed roof; most suitable for an arid climate **(d)** two-storey, detached stone house; most suitable for a temperate climate

Answers – Activity Book

Pages 12–13:

Polar – Dry and windy with lots of snow and ice. Sun is never strong enough to melt the ice and temperatures are usually below freezing. Winter lasts up to six months. Coldest temperature recorded was in Antarctica (–89° C). **Temperate** – Long summers and winters. Extremely high/low temperatures are rare. Plenty of rainfall and sunshine. **Mountainous** – One of coldest climates in the world. Windy and covered in snow for most of the year. Temperatures usually between –12° and 10° C. **Mediterranean** – Long dry summers and mild, wet winters. Usually located along the Mediterranean Sea. **Arid** – Dry weather, usually in desert areas. The Sahara Desert has an arid climate and temperatures there can reach 50° C. **Tropical** – Places close to the equator have a tropical climate. Warm/hot all year round with no winter. Lots of rainfall and high temperatures.

Page 15:

A. 1. winter **2.** autumn **3.** spring **4.** summer

Unit 8: People and Places

December: 2nd Fortnight

Subject: Geography **Strand:** Natural Environments
Strand Unit: Land, Rivers and Seas of My County

Subject: Science **Strand:** Environmental Awareness and Care
Strand Unit: Environmental Awareness

Objectives

Ref: Textbook p. 47

The child should be enabled to:

- Become familiar with the names and locations of some major natural features in the county and/or Ireland, e.g. mountains, lowlands, bogs, rivers, lakes, bays, estuaries, headlands, islands.
- Develop some familiarity with the relationship of these features with each other and with elements of the built environment such as roads, bridges, towns and cities.
- Become aware of the natural features in the locality and in a contrasting part of Ireland and their relationship to the lives of people living in these places.
- Observe and explore ways in which these features have affected the lives of plants, animals and humans.
- Investigate the ways in which these features have been used by humans and the changes that have occurred as a result.
- Become familiar with the location and names of urban areas in the county, and some of their important buildings, industries and other features.
- Develop some knowledge of the relative location of the county and neighbouring counties.
- Become familiar with the location and names of a few of the larger towns and cities in the region and in Ireland.

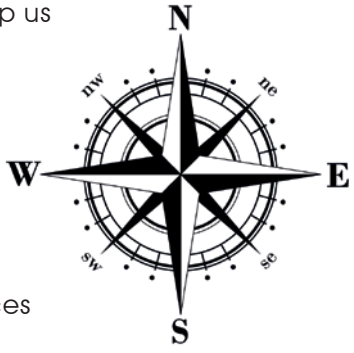
New Words

tsunami cartographer boundaries political compass rose
physical plain headland ancestral maritime county

Lesson Kernel

The threads of this unit are as follows:

- A geographer uses many skills to study a place and the people that live there.
- Places have features that belong in the natural or human environment.
- Nature and human interference can change places rapidly or slowly. Some of these changes enhance an area, but some destroy the existing natural environment.
- A geographer use a variety of photographs, satellite images and maps to find out about a place.
- Maps have a compass rose, symbols, a key/legend and scale to help us to interpret what they represent.
- A physical map of Ireland is used to find out information about the country's major natural features. A local map should be made available to study the natural features of the local area.
- A political map of Ireland shows human boundaries and features of the built environment such as towns and cities, and sometimes roads, etc. Pupils should locate their county in relation to the provinces and counties of Ireland.



- A sample study of County Offaly demonstrates the kind of information that a geographer tries to find out.
- Pupils are encouraged to become geographers and carry out and record a study of the local area. A template is available on page 16 of the Activity Book.

Skills

- **Developing** some familiarity with, and engaging in practical use of, maps and photographs of different scales and purposes
- **Developing** an understanding of, and using, some common map features and conventions
- **Making** simple maps of home, the classroom, school and immediate environment
- **Identifying** major geographical features and finding places on the globe

Working as a Geographer

In this unit, pupils learn about and experience some of the methodologies that a geographer uses to study a local place or a contrasting place elsewhere.

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Ask questions to find out if pupils can name features that can be seen in each compass direction from the classroom.
- Mark the direction of north in the classroom. Stand and play a game to establish if pupils know the compass points.
- Categorise and list the main natural and man-made features in your local area.
- Make a class concept map of the local area.
- On a blank map of Ireland (photocopiable page 94), ask pupils to colour in their own county, label as many other counties as they can as well as the main cities, and label the seas.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the concept map and use a new colour to add what has been learned about the local area.

Ask pupils to:

- List the ways in which they could find out about their own county or another place.
- Create a fact-file about County Offaly.
- Design a poster or brochure to encourage visitors to come to your county and/or County Offaly. Establish the following assessment criteria in advance. Pupils can assess their own or each other's work based on the rubric below:

	Interesting and accurate facts	Map work	Appearance and design	Creativity	Total
Marks	/5	/5	/5	/5	/20

Differentiation – More Challenging

1. Create a multimedia project on dangerous environments around the world.
2. Create a multimedia project on your local area.
3. Find out about the history of navigation and cartography.
4. Write a diary entry from an eyewitness to a major natural disaster.
5. Make a list of improvements that could be made to enhance the local area.

Differentiation – Less Challenging

1. Pair work: Complete the map-work exercises on pages 49–50 of the Textbook.
2. Collect pictures, postcards, articles, maps, etc. of your local area and present them in poster or project form.
3. Group work: Work on a project about your local area. (Note: Roles should be assigned in each group to suit the abilities and learning needs of each pupil.)
4. Collect newspaper cuttings about major natural disasters around the world. Present them in a scrapbook for the class to read.
5. Write a list of the advantages of living in your local area.

Related Websites

http://www.askaboutireland.ie/learning-zone/primary-students/3rd-+-4th-class/geography/map-work/
Practise and develop map-reading skills

www.offalytourism.com/ Official tourist website for County Offaly

www.wartgames.com/themes/geography/maps.html
Links to sites where map-reading skills can be practised

http://geography.pppst.com/mapskills.html
Links for teachers and children to materials and interactive map-reading activities

www.bbc.co.uk/scotland/education/sysm/landscapes/highlands_islands/mapskills/index_intro.shtml Interactive map-reading activities

www.enchantedlearning.com/geography/mapreading/
Printable activities on map-reading

http://mapzone.ordnancesurvey.co.uk/mapzone//
Interactive site from Ordnance Survey UK for teaching map-reading skills to children

www.ordnancesurvey.co.uk/oswebsite/education-and-research/teaching-resources/map-work.html Lesson ideas and suggestions for teaching map-reading skills from Ordnance Survey UK

Extra Ideas

- Gather and display a collection of visual sources of information on the local area, e.g. a plan of the school building and grounds, aerial photographs of local towns, satellite images, tourist maps, route maps.
- Draw maps of the classroom, school or playground.
- Go on a walk in the local area. Take photographs of the main human and natural features. Draw a simple freehand map of the area on a large poster. Place the photographs in the correct locations on the map. Add symbols and drawings to enhance the finished map. Photographs of homes in the local area could also be included, and routes taken to school could be marked out.
- Take a local bus trip or tour.
- Invite a local geographer to visit the class.
- Invite a native of County Offaly to visit your school or engage in an email project with students from a school in County Offaly.

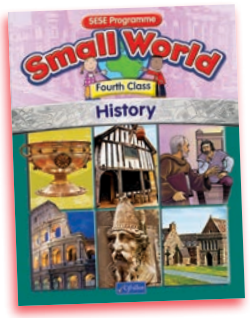
Linkage

Geography Strand: Human Environments, **Strand Unit:** County, Regional and National Centres

Geography Strand: Natural Environments, **Strand Units:** The Local Natural Environment; Land, Rivers and Seas of My County

Geography Strand: Environmental Awareness and Care, **Strand Unit:** Environmental Awareness – Caring for the locality can be addressed during the local study. Changing environments can also be explored, i.e. the impact of natural disasters and human carelessness.

Integration



History: *Small World History* Unit 1: Children of Lir and Unit 2: Tuath Dé Danann – Read stories associated with features in the local environment, e.g. myths or legends associated with a local mountain or hill, battles fought, a mill built on a local river, etc.

Literacy: Reading maps and interpreting symbols; listening to stories or poetry about the local area

Numeracy: Angles and lines related to turns and directions on a compass; exercises based on a simple map scale

Music: Learn songs associated with the local area or County Offaly.

Visual Arts: 'My local area' as a theme for artwork in a variety of media

PE: Going for a walk around the local area; orienteering exercises to teach the use of cardinal points on the compass

SPHE Strand: Myself and the Wider World, **Strand Unit:** Environmental Care

Answers – Textbook

Page 49: A. 1. (a) Cork **(b)** Kildare **(c)** Galway **(d)** Kildare **(e)** Laois **(f)** Louth **(g)** Longford **(h)** Donegal **2.** Cavan, Fermanagh, Monaghan, Tyrone, Armagh, Roscommon, Longford, Westmeath, Kildare, Carlow, Kilkenny, Offaly, Tipperary **3.** Antrim, Down, Louth, Meath, Dublin, Wicklow, Wexford **4.** Antrim, Down **5.** Kerry, Cork, Clare, Limerick **6.** six **7.** Roscommon **B. 1.** large, red circle **2.** small, red circle **3.** lines of blue and grey/brown **4.** Mullingar **5.** Dublin to Cork is longer **C. 1.** Castlebar **2.** Tullamore **3.** Kildare **4.** Tralee **5.** Athlone **6.** Ennis **7.** Portlaoise **8.** Roscommon

Page 50: A. 1. River Lee **2.** River Shannon **3.** Lough Allen, Lough Ree, Lough Derg **4.** River Bann **5.** River Moy **6.** Carrauntoohil **7.** River Liffey **8.** River Blackwater **9.** Dublin Bay **10.** Aran Islands **B. 1.** Wicklow Mountains, Blackstairs Mountains **2.** Antrim Mountains, Derryveagh Mountains, Sperrin Mountains, Blue stack Mountains, Mourne Mountains **3.** Macgillycuddy's Reeks, Mullaghareik Mountains, Slieve Mish Mountains, Caha Mountains, Derrynasaggart Mountains, Boggeragh Mountains, Galtee Mountains **4.** Donegal Bay, Gweebarra Bay, Sligo Bay **5.** Wexford Harbour 6. Dingle Bay **7.** River Lee **8.** Bluestack Mountains **9.** Ox Mountains **10.** Silvermine Mountains

Page 51: 1. Leinster **2.** Rivers Shannon and Brosna **3.** man-made waterway for transporting goods and people **4.** Slieve Bloom Mountains **5.** a county that does not touch the sea **6.** a maritime county **7.** peat (turf) **8.** three

Answers – Activity Book

Page 18: A. 1. cartographer **2.** physical map **3.** political map **4.** key, legend **5.** compass rose **6.** scale **7.** river **8.** coastline **9.** headland **10.** island

Unit 9: Rocks

January: 1st Fortnight

Subject: Science **Strand:** Materials
Strand Unit: Properties and Characteristics of Materials

Subject: Geography **Strand:** Natural Environments
Strand Unit: Rocks and Soils

Objectives

The child should be enabled to:

- Observe, collect and examine different rocks in the immediate and other environments.
- Sort and group constituent materials in samples.
- Compare and contrast materials, focusing on certain criteria, e.g. colour, texture, use, strength, hardness, size and weight.
- Begin to explore the influence of rocks and soils on animal and plant life.

Ref: Textbook p. 52

New Words

geologist resources kerbstones flagstones Earth's crust boulders

More New Words

igneous sedimentary metamorphic magma lava basalt fossil
asteroid meteorite comet atmosphere gemstone glacier

Lesson Kernel

The threads of this unit are as follows:

- Rocks are all around us – in the natural and the built environment.
- A geologist is a scientist.
- Solid rock is found naturally in the Earth's crust.
- All rocks fall into three main categories: igneous, sedimentary and metamorphic.
- Unusual rocks include gemstones and meteorites.
- Scientific testing can help us to identify and categorise rocks.

Basalt columns at the Giant's Causeway

Skills

- **Questioning:** Asking questions about natural and human features and processes in the environment and their interrelationships
- **Observing** shapes, sizes, colours and textures of rock types, and rocks used in buildings, streetscapes, etc.
- **Predicting:** Offering suggestions (hypotheses) based on observations about the likely results of an investigation, e.g. What will happen when a rock is placed in water?
- **Investigating and experimenting:** Carrying out simple investigations and collecting information about rocks from a variety of sources, e.g. photographs, books, maps, electronic and other media

- **Estimating and measuring**: Using simple instruments and equipment to collect data, and using appropriate standard units of measurement, e.g. finding the weight of a rock sample in grammes
- **Analysing:** Sorting, grouping and/or classifying data on rocks using a range of appropriate criteria, e.g. finding examples from the three categories of rock in the local environment and looking for and recognising patterns in rock samples
- **Recording and communicating:** Presenting findings on the rock investigation Record Sheet on page 21 of the Activity Book

Working as a Scientist

In this unit, pupils will work as scientists when they:

- Collect samples of rock from the environment and examine them closely.
- List items at home that are made from rock, e.g. a marble fireplace, slate hearth, granite worktop, sandstone patio, etc.
- Collect photographs of buildings in the area and sort them according to the materials used to construct them.
- Examine photographs of famous buildings and try to identify the types of rock used to construct them.
- Carry out rock investigations to test for strength, magnetism, weight, floating/sinking, and observe texture and colour.

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Ask pupils to collect a variety of rocks for display in the classroom and label all the known rocks.
- Go on a walk/fieldtrip around the neighbourhood and ask pupils to identify rocks and structures made from rock.
- Create a KWL chart on rocks.
- Draw pictures or take photographs of items around homes and the school made from rock.
- Have a class discussion about rocks and record the findings on a concept map.
- Show the class photographs of famous buildings from around the world, e.g. the pyramids, the Taj Mahal, Ancient Greek and Roman structures and old Irish buildings, and ask pupils to describe what they are made from.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the KWL chart. Use another colour to fill in the 'L' column.
- Revisit the concept map and use a new colour to add what has been learned about rocks.
- Ask pupils to compile a scrapbook on rocks and buildings in the local area, with photographs, drawings, rubbings and clippings from local newspapers/magazines/brochures.

Differentiation – More Challenging

1. Carry out a multimedia project on famous buildings from around the world. Include information on when, how and why they were built and what materials were used.
2. Look at a geological map of Ireland (e.g. www.geoschol.com/ireland.html) to find out what types of rock are most common in your local area.

Differentiation – Less Challenging

1. Prepare a slideshow of the world's most famous volcanoes.
2. Take rubbings from naturally occurring rocks, and buildings and other objects made from rock.

Related Websites

www.bbc.co.uk/schools/scienceclips/ages/7_8/rocks_soils.shtml
Interactive activities on rocks and soils

www.sciencekids.co.nz/geology.html
Video clips, lessons, worksheets and interactive activities on rocks and soils

www.sciencekids.co.nz/gamesactivities/rockssoils.html
Science games on rocks, soils and minerals

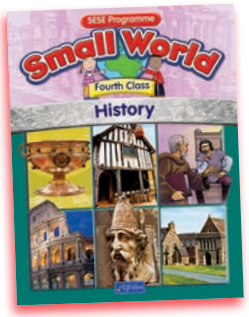
www.bbc.co.uk/schools/gcsebitesize/geography/rock_landscapes/classification_rocks_rev1.shtml Information, links and interactive games on rocks

www.kidsgeo.com/geology-for-kids/ Interesting facts on rocks and soils

Linkage: **Science Strand:** Materials, **Strand Unit:** Properties and Characteristics of Materials

Geography Strand: Human Environments, **Strand Unit:** People and other Lands – buildings and rock types from around the world

Geography Strand: Human Environments, **Strand Units:** The Local Natural Environment; Planet Earth in Space



Integration: **History:** *Small World History* Unit 3: The Greeks, Unit 5 The Romans and Unit 9: Homes and Houses – Look at buildings from ancient civilisations, e.g. the Parthenon and the Colosseum, and at cave dwellings, Norman castles and stone cottages in Ireland.

Numeracy: Recording the weight of rock samples

Visual Arts: Use rubbings from rocks to inspire creative pattern work.

Answers – Textbook

Page 54: A. 1. studies the Earth and the materials from which it is made, and finds out how resources can be used **2.** natural stone such as granite, limestone, sandstone or marble **3.** marble and granite **4.** white marble **5.** wind, rain and living things **6.** coastlines (e.g. cliffs), mountain peaks **Page 56: A.** The Earth's crust is made up of rock, which is sometimes covered by soil or water. Rocks are sorted into three different groups. The groups are called igneous, sedimentary and metamorphic. Clay and sand are made of tiny grains of rock. Rocks make useful building materials. Valuable stones are called gemstones. They are used to make jewellery. A rock that falls to Earth from space is called a meteorite. A fossil is the remains of a dead animal or plant. **B. 1.** rare, valuable stones that can be cut and polished and used to make jewellery **2.** diamonds, emeralds, garnets, rubies, sapphires **3.** limestone, sandstone **4.** quartzite, marble **5.** glacier **6.** granite, basalt **7.** Arizona **8.** 4.5 billion years old

Answers – Activity Book

Page 19: A. 1. geologist **2.** resources **3.** igneous **4.** lava **5.** sedimentary **6.** metamorphic

Page 20: Across: 2. geology **4.** core **7.** granite **8.** crust **10.** fossil **12.** boulder **13.** Crater
Down: 1. meteorite **3.** geologist **5.** Ayers **6.** lava **7.** gemstone **9.** marble **11.** igneous

Unit 10: Italy

January: 2nd Fortnight

Subject: Geography **Strand:** Human Environments **Strand Unit:** People and Other Lands

Objectives

The child should be enabled to:

- Study some aspects of the environment in Italy and the lives of people living there.
- Develop an awareness of the interdependence of the lives of people in Italy and Ireland.
- Begin to develop a sense of belonging to local, county, national, European and global communities.

Ref: Textbook p. 57

New Words

peninsula migration archaeologist gondola

Lesson Kernel

The threads of this unit are as follows:

- Italy is a boot-shaped peninsula located in Southern Europe.
- It is surrounded by water on three sides, and has many famous lakes.
- Two independent states are located within Italy: Vatican City and San Marino.
- Italy is a popular tourist destination, and its climate contrasts with that of Ireland.
- The unit opens with a child living in Pisa, Italy, detailing her everyday life. This contrasts somewhat with life in Ireland for a child in Fourth Class.
- The unit provides an overview of life in Italy, focusing on people, places, food, industry and culture.
- The main physical features in Italy and their location are also outlined.

Leaning Tower of Pisa

Skills

- **A sense of place:** Developing some awareness of the distinctive human and natural features of Italy
- **A sense of space:** Developing some awareness of the relative location of Italy
- **Engaging** in practical use of maps and globes, and developing some familiarity with common map features and conventions
- **Investigating** natural and human features and processes in Italy and their interrelationships
- **Observing, discussing and describing** natural and human features and processes in Italy and their interrelationships

Working as a Geographer

In this unit, pupils will use the Geographical Investigation Skills to find out more about Italy and the features that contribute to its uniqueness as a country. Pupils will learn about Italy through the following:

- Exploring industries and customs and how they contrast with those in Ireland
- Exploring its physical geography and using maps
- Investigating aspects of Italian culture/traditions that have spread throughout the world
- Looking at the influence of the Romans on Europe

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Ask pupils to name the countries that they know on a blank map of Europe (photocopiable page 90). Can they find Italy? Can they name any of its neighbours?
- Introduce the term 'peninsula'. Can pupils find other nations that are peninsulas? Can they locate any peninsulas in Ireland?
- Create a concept map of Italy. What do pupils know about Italy (e.g. football teams, food, holidays, etc.)?
- Ask pupils to create a KWL chart on Italy in their copies.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to:

- Complete the Venn diagram activity on page 24 (A) of the Activity Book.
- Return to the blank map of Europe (photocopiable page 90) and label Italy and any other countries that they know as a result of the lesson.
- Return to the KWL chart in their copies and use another colour to fill in the 'L' column.
- Using the information in the unit, design and make a tourist brochure to attract visitors to Italy. (Use the photocopiable template on page 196 in advance to outline the assessment criteria. Pupils can then assess their own or each other's work by ticking the boxes.)

Differentiation – More Challenging

1. Use a blank map of Italy (photocopiable page 197) to label its islands and the seas that surround Italy. Look up some Roman myths and legends that are linked to these locations.
2. Pair work: Using a blank map of Europe (photocopiable page 90) each, play 'find the mystery place'. Think of a European country and give directions to your partner using compass points, e.g. 'I'm thinking of a country that lies northwest of Italy. It is separated from Italy by the Alps.' Each pupil should label the correct country on his/her map and then compare. (This can also be carried out as a whole-class activity.)
3. Group work: Design an Italian menu and cook an Italian dish for your class. (Adult help required.)
4. Carry out further study about some of Italy's famous artists and inventors, e.g. Leonardo da Vinci, Michelangelo, and/or famous landmarks and places, e.g. Venice, Mount Vesuvius.
5. Do a project on Italy's two independent states: Vatican City and San Marino.

Mona Lisa

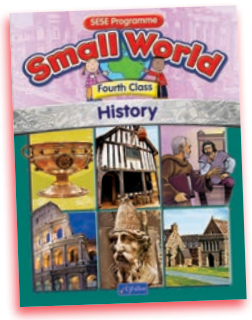
Differentiation – Less Challenging

1. Complete Activity B on page 22 and Activities A and B on page 25 of the Activity Book.
2. Pair work: Use a globe to help you to find and label the countries of Europe on a blank map (photocopiable page 90).
3. Group work: Design an Italian menu and cook an Italian dish for your class. (Adult help required.)
4. Use card or modelling clay to create models of some famous Italian landmarks, e.g. the Leaning Tower of Pisa or the Colosseum. Use the 'two stars and a wish' method to assess your work.

Related Websites

www.italia.it/en/home.html	Official Italian Tourism website
www.bbc.co.uk/history/forkids/	History of Italy for children
www.scoilnet.ie/themepage_italy2.shtm	Information about Italy

Linkage: **Geography Strand:** Environmental Awareness and Care, **Strand Unit:** Environmental Awareness



Integration: **Science:** Science and technology – Italian inventors

History: *Small World History* Unit 5: The Romans

Literacy: Read Roman myths and legends.

Numeracy: Use airline/train timetables to calculate train journeys to and from major cities/countries.

Visual Arts: Looking and Responding – Investigate the work of famous Italian artists and sculptors, the Sistine Chapel, and Milan's fashion industry. Construction – Create masks for *Carnevale*.

Answers – Textbook

Page 59: A. 1. a large area of land, joined to the mainland and surrounded by water on three sides **2.** Slovenia, Austria, Switzerland, France **3.** Italy has a Mediterranean climate, however, this may vary depending on the area. The further south you travel, the warmer the climate becomes. The further north you travel, the colder climate becomes. **4.** Ireland has a temperate climate. This means that Ireland receives much more rainfall than Italy and less sunshine. **5.** We know that the Roman Empire was very powerful, as by 100 AD, it stretched from Britain to the Middle East and North Africa.

Page 61: A. 1. Mount Vesuvius erupted, destroying the nearby city of Pompeii. **2.** Pompeii was buried very quickly under a thick layer of lava and ash, which helped to preserve the city and the bodies of people. **3.** Farming in Italy involves the production of foods such as olives, figs and grapes, which grow well in hot, dry conditions. **4.** Venice is built on islands and there are no roads. The boats travel on canals.

Answers – Activity Book

Page 22: A. 1. migration **2.** archaeologist **3.** peninsula **4.** gondola **B.** From bottom left, clockwise: Mediterranean Sea; Sicily; Sardinia; Apennines; Rome; France; Alps; Switzerland; Venice; Austria; Slovenia; Croatia; Adriatic Sea **C. Page 25: B. 1.** Portugal, Spain, France and Italy **2.** Mediterranean Sea (Tyrrhenian Sea would also be correct.) **3.** Sicily **4.** Venice

Unit 11: The Story of Firsts

February: 1st Fortnight

Subject: Science **Strand:** Environmental Awareness and Care **Strand Unit:** Science and the Environment

Subject: Geography **Strand:** Environmental Awareness and Care **Strand Unit:** Environmental Awareness

Ref: Textbook p. 64

Objectives

The child should be enabled to:

- Begin to explore and appreciate the application of science and technology in familiar contexts.
- Identify some ways in which science and technology contribute positively to society.

New Words

ancestors flint abacus quern
vellum hieroglyphs diagnostic imaging

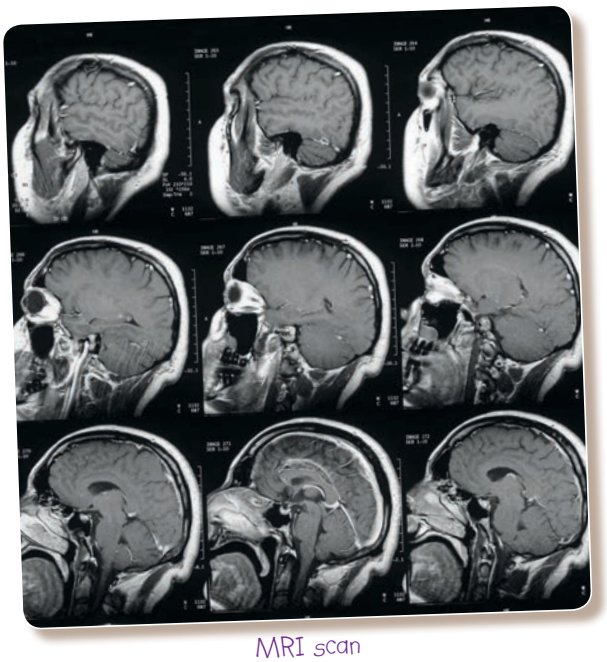
Lesson Kernel

The threads of this unit are as follows:

- Humans have always been inventing new technologies. This can be traced back to the Stone Age, when people began to make cooking utensils from bones, invented tools and lit the first fires.
- Technology has made great strides since humans lit the first fires. A few recent firsts are explored: the first human heart transplant, the first mobile phone, the first face transplant, and diagnostic imaging technology – scans such as X-ray, ultrasound, CT and MRI that enable doctors to see inside our bodies.
- For the pupil in today's classroom, science and technology offer endless possibilities.

Skills

- **Asking questions** about animals, plants, objects and events in the immediate environment and their interrelationships, e.g. How did early humans create fire? What did they use? How did people cook? What was the local area like back then?
- **Identifying** problems to be solved
- **Drawing conclusions** and interpreting information



MRI scan

Working as a Scientist

In this unit, pupils work as scientists when they record and present findings and conclusions using a variety of methods: oral and written accounts, charts, graphs, diagrams, and presentations using information and communication technologies.

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Brainstorm the theme of science and technology to establish what pupils already know. Refer to some recent, familiar firsts, e.g. games console, smart phone, MP3 player, electronic tablet, e-reader, IWB, etc. Establish if pupils are aware of roughly when these items were invented. Record the results of the brainstorm.
- Pick one of the items mentioned and look at why humans 'needed' this to be invented, e.g. 'Did we need a Nintendo DS? Why was it invented?'

Assessment of Learning (Finding out what the pupils have learned)

Revisit the brainstorm and find out from pupils what they now know about inventions and why people work in the field of science and technology. Use another colour to record what has been learned.

Differentiation – More Challenging

1. Group work: Working in groups of three, read through the unit and decide upon the six most important inventions. Use a pyramid-ranking diagram (photocopiable page 198), to place these inventions in order of importance. The most important one will be at the top of the pyramid, followed by the next two and finally the three at the bottom of the pyramid. The group should agree on the order and be able to explain its decisions.
2. Group work: Working in groups of three, choose a reader, a writer and a presenter. Draw a timeline on a piece of paper. Pick your top 10 inventions and place them in chronological order on the timeline. The reader should pick out three interesting pieces of information about each invention, the writer should write about/sketch each invention, and the presenter should present the information to the class.

3. Write five questions you would ask while interviewing a parent/grandparent on how life has changed since s/he was younger. Think about items that children use now, which were not available in the past. Present your questions to the class.
4. Carry out further study in the area of science and technology and create a project to present to the class.

Differentiation – Less Challenging

1. What would I like to invent? Imagine a gadget that performs a job that you do not like doing and which has not already been invented. What would it be? (And NO, it cannot be a homework machine!)
2. A scientist has just invented something wonderful and your job is to sell it. Design a poster or website page to draw attention to how wonderful the invention is (e.g. a new fabric that does not get dirty, a football that will never burst, a telephone that does not need to be recharged, a pen that needs only to be refilled with water, a painless and immediate tooth straightener).

Related Websites

http://www.archaeology.ie/media/archeologyie/PDFS/NMS%20Farmers%20Journal1.pdf
Information for teachers regarding Ireland's first farmers and the Céide Fields, County Mayo

http://www.askaboutireland.ie/learning-zone/primary-students/3rd-+-4th-class/history/the-history-of-food-and-f/the-stone-age/irelands-first-farm-anima/
Information about Ireland's first farm animals

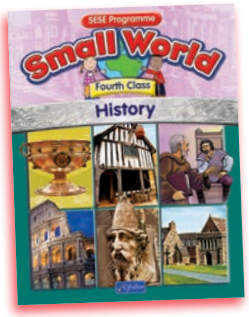
http://www.askaboutireland.ie/learning-zone/primary-students/3rd-+-4th-class/history/the-history-of-food-and-f/the-stone-age/the-new-stone-age/
Information about Ireland's first farmers

www.thinkquest.org/ Information written for children by children

Linkage

Geography Strand: Human Environments, **Strand Unit:** People at Work

Integration



History: *Small World History* Unit 5: The Romans – Most ancient civilisations have firsts that the teacher can focus on, e.g. concrete and aqueducts invented the Ancient Romans.

Numeracy: Placing inventions on a timeline

Visual Arts: Drawing pictures in the style of Stone Age cave paintings

Answers – Textbook

Page 66: 1. Stone Age people **2.** Africa **3.** They used knives made from flint and wood to cut and harvest crops. **4.** as people travelled **5.** to make movement easier – they did not have to push, pull and carry everything by hand **6.** They added spokes to make it lighter and easier to move. **7.** hieroglyphs **8.** Early Christian monks; vellum from animal skin

Page 68: A. 1. 1967 **2.** Professor Maurice Nelligan **3.** the Sahara Desert **4.** 1983; nearly $4000 **5.** 2010 **6.** They help doctors to see inside a person's body without operating. They produce images and help doctors see if there are any problems. **B. 1.** various answers, including: make and take calls, send and receive text messages, access the internet, upload images and files to the internet, access email, purchase and download apps, take photographs and videos, listen to the radio and MP3 tracks, access cloud computing, satellite navigation, programme TV, etc. **2.** Mesopotamia is often considered the birthplace of modern civilisation as many early inventions took place there, e.g. first farmers, first wheel, writing **C. (a)** Iraq (Mesopotamia) **(b)** France **(c)** Tanzania **(d)** Iraq (Mesopotamia) **(e)** Egypt **(f)** South Africa

Answers – Activity Book

Page 26: B. Children will have various answers, however, they should include some of the following: **1.** presence of electricity; tiled floor and wall; cooker hood to draw away steam; electrical appliances, e.g. cooker, kettle, toaster, fridge to keep products cool/fresh; running water; modern cooking utensils, e.g. saucepans, knives, forks **2.** animals cooked whole on a spit over a fire; no electricity; flame torch providing light; several people needed to prepare a meal; unhygienic environment with animals present; no running water; fuel needed for fire in oven to cook food

Unit 12: Rivers and Seas

February: 2nd Fortnight

Subject: Geography **Strand:** Natural Environments
Strand Unit: The Local Natural Environment

Subject: Science **Strand:** Living Things
Strand Unit: Plants and Animals

Objectives

The child should be enabled to:

- Become familiar with the names and locations of some major natural features in the county.
- Develop some familiarity with the relationship of these features with each other and with elements of the built environment such as roads, bridges, towns and cities.

Ref: Textbook p. 69

New Words

water vapour evaporation condensation
precipitation source tributary mouth

More New Words

erode arch headland stack breakwaters groynes marram grass

Lesson Kernel

The threads of this unit are as follows:

Willow

- The water cycle: Heat from the sun causes water in seas, rivers and lakes to evaporate into water vapour. This condenses in the sky and falls back to the ground as rain, hail, sleet or snow.
- A river has three courses: The upper course is steep and the river flows very quickly. In the middle course, the river gets wider and flows around bends called meanders. In the lower course, the river flows slowly and meets the sea at its mouth.
- The River Shannon is the longest river in Ireland and flows into numerous lakes. Its source is the Cuilcagh Mountains in County Cavan. It flows into the Atlantic Ocean at its estuary in Limerick. Included in the unit is a myth about how the River Shannon got its name.
- Sometimes a dam is built across a river and the water turns turbines to create hydroelectricity. Ardnacrusha Power Plant is on the River Shannon.
- Algae, willow trees, kingfishers, Daubenton's bats, mayflies, herons and brown trout are examples of river wildlife in Ireland.
- The moon causes tides.
- Global warming is causing rising sea levels, which lead to flooding. We can help to prevent this by recycling and keeping the planet clean.
- Coastal features, including cliffs and beaches, are explored.
- We try to protect our land from the sea by building breakwaters and groynes, and planting marram grass.

Skills

- **A sense of place:** Exploring and becoming familiar with some of the distinctive human and natural features of the locality, county, country and world
- **A sense of space:** Developing an understanding of the relative location and size of major natural and human features
- **Using pictures, maps and globes:** Engaging in practical use of maps and photographs of different scales with different purposes, developing an understanding of some common map features and conventions, identifying major geographical features, and finding places on the globe

Working as a Geographer

In this unit, pupils will use geographical investigation skills when they observe, discuss and describe natural and human features and processes in the environment, and their interrelationships.

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Brainstorm all the things pupils currently know about rivers and seas. Create a concept map of the findings.
- Ask pupils to make a list of things they would like to find out about rivers and seas. This list should be in question form, e.g. 'Where do rivers begin?'
- Ask pupils to talk about a time they visited the sea or a river.
- Show pupils a blank map of Ireland with rivers included but not labelled (photocopiable page 199). How many rivers can they name?
- Show pupils a blank map of the world. How many seas/oceans can they name?

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the concept map and use a new colour to add what has been learned about rivers and seas.
- Answer the questions pupils compiled before the unit.
- Conduct a table quiz based on the information in the unit (page 188).
- Revisit the blank map of Ireland (photocopiable page 199) and test pupils on the names of the rivers.
- Revisit the blank map of the world and test pupils on the names of the seas/oceans.

Differentiation – More Challenging

1. Imagine you were on a boat trip on the River Shannon. Write a brief account of your trip mentioning all the towns through which you passed.
2. Use the internet or the library to find out about other examples of river wildlife in Ireland.
3. Write a story set at sea or on a river.
4. Find out about the fish in Irish rivers/seas. Make a poster/booklet to show your findings.
5. Imagine you are a raindrop. Write about your journey through the water cycle. This could include a trip down a river, explaining its three courses.
6. Take a trip to a local river or sea and take photographs. These images could be used to create a project or slideshow afterwards.
7. Use the internet or the library to find out about salmon. Write an interview with Sinéad the Salmon.
8. Write the legend, 'The Death of Sionnan', in your own words.

Differentiation – Less Challenging

1. Use the internet or the library to find out about salmon. Draw a picture and write five sentences about salmon.
2. Make a poster of the water cycle.
3. Play the 'River Explorer' game: http://kids.nationalgeographic.com/kids/games/actiongames/river-explorer/.

Related Websites

http://geography.mrdonn.org/rivers.html
Links to websites featuring slideshows, games and activities on rivers

www.enchantedlearning.com/geography/rivers/activities.shtml
River quiz and blank world map featuring rivers to be labelled

http://marinebio.org/marinebio/games/
Links to websites featuring marine biology videos and games

www.bbc.co.uk/nature/blueplanet/games.shtml Flash games about the ocean

www.roundgames.com/game/Mountain,+Seas+And+Rivers+Of+Europe
Game about mountains, rivers and seas of Europe

Linkage: **Geography Strand:** Natural Environments, **Strand Unit:** Weather, Climate and Atmosphere **Geography Strand:** Natural Environments, **Strand Unit:** People and Other Lands – people living along the banks of a major river, e.g. the River Nile, Egypt

Integration: **Literacy:** Poetry – 'A River's Journey' by Angela Yardy: www.angelaspoems.webeden.co.uk/#/a-rivers-journey/4541107395; 'The River' by Valerie Bloom: www.poetryarchive.org/childrensarchive/singlePoem.do?poemId=2807; 'The Rippling Rivers of Ireland': http://stoliverscarlingford.scoilnet.ie/blog/2011/02/24/the-rippling-rivers-of-ireland **Numeracy:** Computation and graph work about the longest rivers in the world – www.socialstudiesforkids.com/articles/geography/longestriverstable.htm (list of the 25 longest rivers) **Music:** Lyrics of famous songs about rivers – www.poemhunter.com/songs/river/ **Visual Arts:** Under the sea crafts – www.daniellesplace.com/html/under_the_sea.html; ocean crafts – www.enchantedlearning.com/crafts/ocean/.

Answers – Textbook

Page 70: 3. Rivers Inny, Suck, Brosna **4.** Lough Allen, Lough Ree, Lough Derg **5.** Carrick-on-Shannon, Lanesboro, Athlone, Banagher, Portumna, Killaloe **Page 73: A. 1.** kingfisher, heron **2.** wind **3.** the moon **4.** marram grass **5.** global warming caused by pollution **B. 1.** Which is the longest river in the world? **2.** What is the length of the River Shannon? **3.** For how long can a brown trout live in a lake? **4.** various, e.g. Which tree's roots help to stop soil on the river bank from being washed into the river? **5.** Where is the source of the River Shannon? **6.** Which insects are eaten by the Daubenton's bat? **C. 1.** Wicklow Mountains **2.** Wicklow Mountains **3.** Slieve Bloom Mountains **4.** Silvermine Mountains **5.** Cuilcagh Mountains **6.** Ox Mountains **D. 1.** Cork **2.** Donegal **3.** Donegal **4.** Mayo/Sligo **5.** Clare **6.** Mayo **E.** to protect our stocks, so that they won't run out

Answers – Activity Book

Page 27: A. 1. false **2.** true **3.** true **4.** false **5.** true **B.** From top right, clockwise: Bann; Boyne; Liffey; Slaney; Barrow; Nore; Suir; Blackwater; Lee; Brosna; Shannon; Moy
Page 28: A. Countries: 1. Canada **2.** United States of America **3.** Brazil **4.** Egypt **5.** Australia **6.** Japan **Mountain ranges: 7.** Rocky Mountains **8.** Andes Mountains **9.** Himalaya Mountains **10.** Ural Mountains **Oceans: 11.** Atlantic **12.** Indian **13.** Pacific **Rivers: 14.** Volga **15.** Nile **16.** Amazon **17.** St. Lawrence **B. 1.** heron **2.** shrimp/worm/mussel **3.** stonefish larva, small fish **4.** heron/seal **5.** worm, mussel

Unit 13: Japan

March: 1st Fortnight

Subject: Geography **Strand:** Human Environments **Strand Unit:** People and Other Lands

Objectives

The child should be enabled to:

- Study some aspects of the environment and lives of people in one location in another part of the world.
- Develop an awareness of the interdependence of these people and the people in Ireland.
- Begin to develop a sense of belonging to local, county, national, European and global communities.

Ref: Textbook p. 78

New Words

dormant tectonic plates paddy field *sake* *sushi* *bento* box
tatami mat *kimono* *manga* *sumo* *mawashi* ritual

Lesson Kernel

Mount Fuji is a dormant volcano.

The threads of this unit are as follows:

- Japan is made up of more than 6800 islands. The country sits on four tectonic plates, and it experiences around 1500 earthquakes each year.
- Over three-quarters of the land is mountainous, including many volcanoes – both active and dormant.
- The slopes of the mountains and hills are cut into terraces to create more flat space for farming. Rice is the main crop grown. It is grown in flooded fields called paddy fields.
- The Japanese diet is very healthy, as it contains little fat. Noodles, rice and seafood are the main components of the diet. *Sushi*, *tempura*, *miso* soup and *bento* boxes are typical Japanese dishes.
- Tokyo, the capital of Japan, has a population of around 13 million. The Emperor lives there.
- Long ago, Japanese houses were made of wood with paper walls and sliding doors. Today, many Japanese people live in apartments.
- Japanese writing has three scripts (like having three alphabets). It is written in columns and read from right to left. Books are read from back to front.
- *Sumo* wrestling is the national sport. Two wrestlers wearing *mawashi* (belly bands) try to force each other out of the ring or to the ground.

Skills

- **A sense of place:** Developing some awareness of the distinctive human and natural features of Japan
- **A sense of space:** Developing some awareness of the relative location of Japan
- **Engaging** in practical use of maps and globes, and developing some familiarity with common map features and conventions
- **Investigating** natural and human features and processes in Japan and their interrelationships
- **Observing, discussing and describing** natural and human features and processes in Japan and their interrelationships

Working as a Geographer

In this unit, pupils will read maps and learn how people in Japan interact with the environment.

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Ask pupils to point out Japan on a globe or map of the world.
- Brainstorm all the things pupils currently know about Japan.
- Show pupils a blank map of Japan (photocopiable page 200) and ask them to label some major features like cities, seas, neighbouring countries, etc.
- Ask each pupil to draw a line down the centre of his/her copy page and create two columns for 'Same' and 'Different'. Pupils should write the ways in which they think Japan will be the same or different from their locality.
- Ask pupils to make a list of things they would like to know about Japan. This list should be in question form, e.g. 'What types of food do Japanese people eat?'

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the brainstorm and use a new colour to add what has been learned about Japan.
- Conduct a table quiz based on the information in the unit (page 188).
- Ask pupils to mark and label the major cities, seas and neighbouring countries on a blank map of Japan (photocopiable page 200).
- Ask pupils to answer the questions they compiled before the lesson.
- Ask pupils to write assessment questions for their classmates based on the information in the unit.
- Ask pupils to return to the Same/Different list and use another colour to add new details they have learned.
- Ask pupils to create a poster or brochure encouraging people to visit Japan. Establish the following assessment criteria in advance. Pupils can assess their own or each other's work based on the rubric below:

	Content – quality of information about Japan	Layout	Attractiveness	Map work	Total
Marks	/5	/5	/5	/5	/20

Differentiation – More Challenging

1. Write a story set in Japan.
2. Use the internet to find out more information about some of the aspects of this unit, e.g. Japanese food. Findings could be presented to the class in project form.
3. Design a crossword or word search based on Japan.
4. Write diary entries for an imaginary trip to Japan.
5. Cook some Japanese dishes with help from an adult: http://web-japan.org/kidsweb/cook/index.html.
6. Learn how to draw *manga* characters: www.drawinghowtodraw.com/drawing-lessons/manga-anime-lessons/howtodraw-children-boys-girls.html.
7. Learn how to count in Japanese: www.youtube.com/watch?v=D3won-7W3Js&feature=player_embedded.
8. Read *manga* comics: www.mangaforkids.com/preview.php.

Differentiation – Less Challenging

1. Write a postcard that you would send home while on holiday in Japan.
2. Write a list of the places in Japan you would like to visit or the activities that you would like to do.
3. Design a tourist brochure encouraging people to visit Japan.
4. Try some *origami*: www.origami-fun.com/origami-for-kids.html.
5. Colour a picture of traditional Japanese costumes (photocopiable page 201).

Related Websites

http://web-japan.org/kidsweb/ Games, quizzes, stories and information about Japan

www.activityvillage.co.uk/japan_for_kids.htm
Links to printable colouring pages, crafts, games and information about Japanese culture

http://library.thinkquest.org/CR0212302/japan.html
A Japanese child called Nate talks about life in Tokyo

Linkage

Geography: Unit 6: A Visit to Arranmore Island – Read this unit and look at the differences between island life in Ireland and in Japan.

Integration

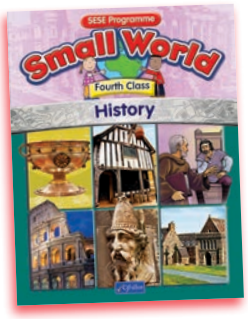
History: *Small World History* Unit 12: Princess Hase of Japan

Literacy: Read Japanese legends – http://web-japan.org/kidsweb/folk/index.html.

Music: Find out about Japanese traditional music –

http://web-japan.org/kidsweb/virtual/koto/koto01.html.

Visual Arts: Japanese crafts – www.enchantedlearning.com/crafts/japan/



Answers – Textbook

Page 80: A. The four main islands of Japan are Hokkaido, Honshu, Shikoku and Kyushu. Mount Fuji is the highest mountain in the country. It is also a dormant volcano. Because Japan sits on tectonic plates, it gets around 1500 earthquakes every year. In 2011, the Tohoku Earthquake caused a giant wave called a *tsunami* to wash over part of the country, killing thousands of people.

Page 82: A. 1. a walled field for growing rice under water **2.** raw fish and rice rolled inside a piece of seaweed **3.** Tokyo **4.** soft straw mats used to cover floors **5.** *geta* **6.** Buddhism and *Shinto*

B. 1. *mawashi* **2.** *hashi* **3.** *kimono* **4.** *yen* **5.** *bento*

Answers – Activity Book

Page 29: A. From left to right: *manga*; *tsunami*; *kimono*; *sumo* **B.** From top right, clockwise: Sea of Japan; Hokkaido; Sapporo; Honshu; Pacific Ocean; Tokyo; Mount Fuji; Philippine Sea; Shikoku; Kyushu; Mount Aso; Hiroshima; Kyoto

Unit 14: Magnetism

March: 2nd Fortnight

Subject: Science **Strand:** Energy and Forces **Strand Unit:** Magnetism and Electricity

Objectives

Ref: Textbook p. 83

The child should be enabled to:

- Learn that magnets can push or pull magnetic materials.
- Explore magnetic poles and investigate how these attract and repel each other.
- Explore the relationship between magnets and compasses.
- Examine and classify objects and materials as magnetic or non-magnetic.
- Investigate the ability of magnets to attract certain materials through other materials.

New Words

magnetic field magnetic poles repel electromagnet
maglev magnetite alnico lodestones

Lesson Kernel

The threads of this unit are as follows:

- All magnets have a north and a south pole. Opposite poles attract each other. Poles that are the same repel each other.
- The area around a magnet, where its magnetism can be felt, is called its magnetic field.
- The Earth is a giant magnet with a North and a South Pole. Some animals use the Earth's magnetic field to find their way.
- Some materials are attracted to magnets and magnets work through some materials and not others.
- Magnets are used in many electronic items.
- They are also used to control aeroplane wings and roller-coasters.
- Surgeons and puppeteers sometime use magnets in their work.
- Paper money is printed with magnetic ink.
- A maglev train floats on air using magnets. It is the world's fastest land transport system.
- Electromagnets can be switched on or off. Scrapyards use electromagnets to lift cars.
- A compass contains a magnetised arrow or needle, which always points north.

A shark can detect the magnetic field of its prey.

Skills

- **Investigating and experimenting:** Pupils will design, plan and carry out simple investigations and identify one or two obvious variables relevant to the investigations. They should also realise that an experiment is unfair if relevant variables are not controlled.
- **Observing and describing** processes during investigations
- **Predicting** and offering suggestions based on observations about the likely results of investigations

- **Questioning:** Pupils should be encouraged to ask questions about magnetism and to think about its role in the world. During investigations and Design and Make activities, they should ask questions to identify problems and draw conclusions.
- **Analysing:** Pupils will sort and group objects into magnetic and non-magnetic.
- **Exploring:** As part of the Design and Make activities, pupils will explore a range of everyday objects and how they work.
- **Planning:** As part of the Design and Make activities, pupils will recognise a need to adapt or change an object; work collaboratively to create a design proposal; communicate and evaluate the design plan using sketches.
- **Making:** As part of the Design and Make activities, pupils will develop craft-handling skills and techniques; use appropriate tools and a range of materials.
- **Evaluating:** As part of the Design and Make activities, pupils will recognise that modifications to the plan may have to be made throughout the task; evaluate the effectiveness of the new product and suggest modifications to the task; evaluate the work of peers and propose positive modifications.

Working as a Scientist

In this unit, pupils will investigate the following to develop a hands-on knowledge of magnetism:

- The Magnetic Field of a Magnet (Textbook page 83)
- Which Materials Are Attracted to Magnets? (Textbook page 85)
- Which Materials Will Magnets Work Through? (Textbook page 85)

Pupils will design and make:

- A Magnetic-powered Car and Track (Textbook page 86)
- A Magnet (Textbook page 86)
- A Compass (Textbook page 87)

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Brainstorm all the things pupils currently know about magnetism. Create a concept map of the findings.
- Ask pupils to make a list of things they would like to know about magnetism. They should do this by writing questions, e.g. 'What are magnets used for?'
- Make a list of places/situations in which magnets may be used.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the brainstorm and use a new colour to add what has been learned about magnetism.
- Conduct a table quiz based on the information in the unit (page 188).
- Establish the assessment criteria for a successful Design and Make activity in advance. For example, a good magnetic-powered car and track is one that allows the car to move easily and stay on the track, is strong/durable and nicely decorated. Marks can be allocated as follows, so that each group's design can be assessed:

	Car moves easily	Car stays on track	Strength/durability	Decoration	Total
Marks	/5	/5	/5	/5	/20

- Ask pupils to answer the questions they compiled before the lesson.
- Ask pupils to write assessment questions for their classmates based on the information in the unit.

Differentiation – More Challenging

1. Make a treasure map with compass directions to find the treasure.
2. Design and make a magnetic travel board game.
3. Design and make a fridge magnet.

Differentiation – Less Challenging

1. Draw a compass rose.
2. Play 'herd the sheep' magnetism game: www.youtube.com/watch?v=Az0LzYmSaCs.
3. Fly a paper kite using a magnet: http://kids.nationalgeographic.com/kids/activities/funscience/magnet/.
4. Learn a magnetism magic trick: http://www.ehow.com/info_8474209_cool-easy-magnetic-magic-tricks.html.
5. Play an interactive magnetism game: www.sciencekids.co.nz/gamesactivities/magnetssprings.html.

Related Websites

www.wartgames.com/themes/geography/compass-directions.html
Compass games, activities and quiz

http://science.pppst.com/magnets.html
Magnetism PowerPoint presentations for teachers, plus magnetism-related links for children

www.neok12.com/Magnetism.htm Educational magnetism videos

www.kids-science-experiments.com/cat_magnetic.html Magnetism experiments

Linkage: **Science Strand:** Energy and Forces, **Strand Unit:** Forces

Integration: **Numeracy:** Compass/co-ordinates
Music: Magnet song – www.youtube.com/watch?v=G-nkIECIBWM

Visual Arts: Make a magnetic boat – www.simplekidscrafts.com/video/scientific-kids-crafts-how-to-make-a-magnetic-boat.

Answers – Textbook

Page 84: The Earth is like a big magnet. Birds have tiny magnets in their bodies that help them when they are migrating. Hornets use magnetic material to help them to build symmetrical nests. A shark can detect the magnetic field of its prey. Paper money is printed with magnetic ink so that machines can recognise it.

Page 87: A. 1. its magnetic field **2.** poles (north and south) **3.** a place called Magnesia in Turkey, where a shepherd discovered a magnetic rock **4.** north **5.** the Ancient Chinese **B.** (various answers) **1.** Can you name a roller-coaster that is stopped at the end by a magnet? **2.** What is the name of the Maglev train in China? **3.** What is a mixture of iron, aluminium and nickel called? **4.** What does 'lodestone' mean?

Answers – Activity Book

Page 31: A. Across: 4. lodestones **5.** electromagnet **Down: 1.** magnetite **2.** poles **3.** field

Unit 15: Forces

April: 1st Fortnight

Subject: Science **Strand:** Energy and Forces **Strand Unit:** Forces

Objectives

The child should be enabled to:

- Explore how objects may be moved, e.g. by pushing, pulling, twisting and stretching, and using machines such as rollers, wheels and pulleys.
- Explore how some moving objects may be slowed down.
- Explore the effects of friction on movement through experimenting with toys and other objects on a variety of surfaces.
- Explore how levers may be used to help lift objects.

Ref: Textbook p. 88

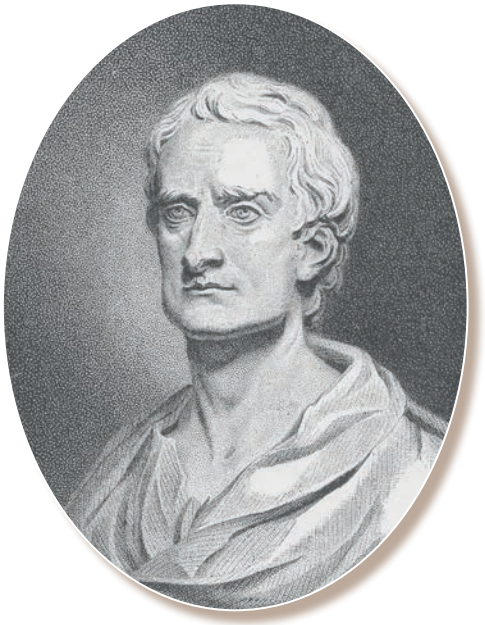
New Words

engineer device lever pulley newtons
force meter axle inertia friction ramp fulcrum

Lesson Kernel

The threads of this unit are as follows:

- Wheels, pulleys and levers are simple machines. They help us to do things like lifting a heavy weight or hammering a nail into a hard surface, which might be too difficult for human strength alone.
- Sir Isaac Newton came up with three main ideas about movement, which are known as Newton's laws. Newton's laws state:
  - When an object is still it does not want to move, and when an object is moving it does not want to stop. This is called inertia.
  - Heavy objects need more push (force) than lighter objects to be moved the same distance.
  - When you push or pull part of an object in one direction, you also push or pull another part in the opposite direction. (For every action there is an equal and opposite reaction.)



Sir Isaac Newton

- Rollers and wheels are simple machines that help us to move large or heavy objects more easily. Wheels fixed to axles work more efficiently than simple rollers.
- A force meter or spring balance measures the amount of force in newtons. A weight of 100 grammes allowed to hang freely will exert a force of 1 newton. (The force at work in this case is the invisible force of gravity pulling the weight downwards.)
- A lever is a simple machine that involves moving a load around a balance point (fulcrum) using a force.
- A pulley is a simple machine that helps you to multiply the force your body can supply to lift or pull heavy objects. It uses a wheel system to reduce the amount of effort (force) required.
- Many simple machines were invented and used by great civilisations, e.g. the Ancient Egyptians and Greeks, and the Normans.

Skills

- **Investigating and experimenting:** Pupils will design, plan and carry out simple investigations and identify one or two obvious variables relevant to the investigations. They should also realise that an experiment is unfair if relevant variables are not controlled.
- **Observing and describing** processes during investigations
- **Predicting** and offering suggestions based on observations about the likely results of investigations
- **Questioning:** Pupils should be encouraged to ask questions about forces and to think about their role in the world. During investigations and the Design and Make activity, they should ask questions to identify problems and draw conclusions.
- **Exploring:** As part of the investigations, pupils will explore a range of everyday objects and how they work.
- **Planning:** As part of the investigations, pupils will recognise a need to adapt or change an object; work collaboratively to create a design proposal; communicate and evaluate the design plan.
- **Making:** As part of the investigations, pupils will develop craft-handling skills and techniques; use appropriate tools and a range of materials.
- **Evaluating:** As part of the investigations, pupils will recognise that modifications to the plan may have to be made throughout the task; evaluate the effectiveness of the new product and suggest modifications to the task; evaluate the work of peers and propose positive modifications.
- **Estimating and measuring:** Using a force meter to measure force in newtons and relating this to measurement of weight

Working as a Scientist

In this unit, pupils will investigate the following to develop a hands-on knowledge of forces:

- Ramps and Friction (Textbook page 90)
- What Is a Fulcrum? (Textbook page 91)

Pupils will design and make: A Catapult Shooter (Textbook page 91).

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Use the concept cartoon at the beginning of the unit to stimulate discussion in pairs or groups. Ask: 'How can the caveman move the large boulder without the use of machinery?' Pupils should draw and/or describe their ideas before reading the rest of the unit.
- Give groups or pairs a toy car with wheels. Ask: 'How many ways can you make the car move?' Ideas will usually include push, pull, blow/air, float/water power, put it on a slope/gravity, etc. Pupils can test their ideas and draw/write the results in their copies. Record the findings on a class brainstorm or concept map.
- Brainstorm all the words that pupils associate with force.
- Go on a 'push and pull' walk around the school. Ask pupils to record all the pushes and pulls that they see in two columns.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the brainstorm and use another colour to add new words associated with force.
- See Design and Make: A Sail Car (Textbook page 15). Use the concepts learned in the unit to design and make a vehicle with wheels that allow movement on land and a sail to avail of the force of moving air. Marks can be allocated as follows, so that each group's design can be assessed:

	Wheels – ease of movement	Sail – strength and function	Distance travelled	Overall appearance and design	Total
Marks	/5	/5	/5	/5	/20

Differentiation – More Challenging

1. **(a)** Each pair or group gets a toy car. Ask pupils: 'How many ways can the car be moved?'

   (b) Each pair or group gets a magnet and a ball bearing, a piece of modelling clay/sticky tack. Ask pupils: 'Can you use magnetic force to make the car move forwards and backwards?' (The ball bearing should be attached to the car with the modelling clay/sticky tack. Pupils will discover that reversing the poles of the magnet will make the car move forwards or backwards.)

2. **(a)** Investigate how the force of air can make the toy car move. Add a sail to the toy car made from a straw and piece of paper. Stick the sail onto the car with a lump of modelling clay/sticky tack. Blow. Ask pupils: 'Does the car move faster or slower with the sail attached?'

   (b) Investigate different types of card or paper to make the best sail. Ask pupils: 'What is the best shape for the sail?'

   (c) Test each group's sail fairly by using a hairdryer. Ask pupils: 'Why is blowing not a fair test?'

3. Use a number of different pairs of runners to design a test to find out which have the best grip on a variety of surfaces. Can you measure accurately using a measuring tape to see how far the runners slip on a variety of surfaces? How can you keep the test fair? Fill in an Investigation Record Sheet and Fair Test Record Sheet (Activity Book photocopiable pages 44–45).

4. Find out about Sir Isaac Newton's discovery of gravity. From your research, design a simple demonstration to explain gravity to your classmates.

Differentiation – Less Challenging

1. Use a toy water gun to investigate how air or water can be used as a force to push objects.

2. Investigate a variety of objects in the classroom to see if they float or sink in water. Fill in an Investigation Record Sheet (Activity Book photocopiable page 44). Present your findings to the class.

Related Websites

www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml
Interactive games based on forces in action

http://classroom.jc-schools.net/sci-units/force.htm
Links to websites dedicated to the topic of forces

www.engineeringinteract.org/resources.htm
Links to websites with information and interactive activities on forces

http://teachertech.rice.edu/Participants/louviere/Newton/
Simple animated explanation of Newton's laws of motion

www.primaryscience.ie/activities_simple_search.php?page=3&type=design_make
Activity page that includes a lever activity on making a dog that sticks out its tongue when you wag its tail

www.topmarks.co.uk/Interactive.aspx?cat=67
Educational website with links to IWB resources and websites on forces

www.edheads.org/activities/simple-machines/frame_loader.htm
Interactive website about simple machines

www.sycd.co.uk/primary/mr_zippy/index.htm
Interactive game exploring the link between surface and friction

Extra Ideas

- Sci-Spy DVD (distributed to all schools by the NCTE): Watch the video clips in the forces section on this DVD.
- Visit a playground and observe forces at work.

Linkage: **Science Strand:** Materials, **Strand Unit:** Properties and Characteristics of Materials

Integration:
Geography Strand: Natural Environments, **Strand Unit:** Weather, Climate and Atmosphere
Geography Strand: Human Environments, **Strand Unit:** Transport and Communications
History: Ancient Egyptians; Greek mathematicians and scientists; invention of the wheel
Literacy: Language and vocabulary development
Numeracy: Measurement – weight, distance; 3D shapes
Visual Arts: Construction
PE: Importance of surface and friction for athletes, sportswear, gyms, etc.

Answers – Textbook

Page 90: 1. (a) wheel, lever, pulley **(b)** They help us to do things that might be too difficult for human strength alone. **2. (a)** force meter/spring balance **(b)** newtons **3.** a famous scientist, who came up with ideas about movement **4.** a rod that allows a wheel to turn **5.** They developed a roller system using logs.

Page 92: A. 1. designs bridges and roads **2.** cylinder **3.** Rollers constantly have to be placed in front of each other in order to move a load. Wheels on an axle can be fixed to the object that has to be moved. **4.** Heavy objects need to be pushed harder than lighter objects to be moved over the same distance. *or* When an object is still, it does not want to move and when an object is moving, it does not want to stop. This is called inertia. *or* When you push or pull one part of a lever, you also push or pull the other part in the opposite direction. **5.** When an object is still, it does not want to move and when an object is moving, it does not want to stop. **6.** Rough and uneven surfaces apply an invisible force called friction, which slows down a moving object. **7.** lever and wheels **8.** rollers **9.** to build catapult shooters **10.** hammer, door handle, hinge, trolley **11.** fulcrum **12.** a Greek scientist, engineer and scientist, who invented many machines including the pulley, and also explaineed how the lever worked
B. Movement is caused by applying a force (a push or a pull). Human beings are very clever! We have invented simple machines to help us to lift heavy weights and to move large objects. A lever and wheels are examples of simple machines. Heavy objects need to be pushed harder than lighter objects to be moved over the same distance. If you want to stop a moving object, you have to apply force. Friction slows down a moving object.

Answers – Activity Book

Page 32: A. engineer – a person who designs and makes structures and machines; simple machine – examples are wheels, levers and pulleys; pulley – a simple machine with a wheel and a rope for lifting heavy goods; ramp – a sloping surface; lever – a simple machine that works like a seesaw **B.** From left to right: aircraft engineer; agricultural engineer; electrical engineer; chemical engineer **C. 1.** agricultural engineer **2.** chemical engineer **3.** electrical engineer **4.** aircraft engineer

Page 33: A. The photograph on the left shows a force meter. A force meter is also known as a spring balance. It can be used to measure the amount of force that it takes to pull a heavy box. One side measures weight in grammes (g) and the other side measures force in newtons (N). If you hang a 100 g weight from a force meter, you will read that it exerts a force of 1 newton. **B.** From left to right: 1 N; 2 N; 5 N; 10 N

C. 1. push **2.** friction **3.** pull **4.** push/wind **5.** car, bicycle

Unit 16: Energy

April: 2nd Fortnight

Subject: Science **Strand:** Environmental Awareness and Care **Strand Unit:** Environmental Awareness

Subject: Geography **Strand:** Environmental Awareness and Care **Strand Unit:** Environmental Awareness

Objectives

The child should be enabled to:

- Recognise and investigate human activities, which may have positive or adverse effects on local and wider environments.
- Become aware of the Earth's renewable and non-renewable resources.
- Come to appreciate the need to conserve the Earth's resources.

Ref: Textbook p. 93

New Words

renewable non-renewable fossil fuel refinery turbine hydropower greenhouse gas

Lesson Kernel

The threads of this unit are as follows:

- We require energy in order to heat our homes, produce electricity and, essentially, to live. Non-renewable energy comes from natural sources that are limited in supply and cannot be created once they are depleted, e.g. peat, oil, natural gas and coal. Renewable energy comes from natural sources that are endless in supply, e.g. wind, solar and wave energy.
- A lot of our energy is created from fossil fuels, which are non-renewable. Carbon dioxide is released into the air when fossil fuels are burned. It becomes trapped in the Earth's atmosphere and causes the temperature to rise. Our overreliance on non-renewable forms of energy has had a negative impact on the Earth's climate.
- Due to weather extremes occurring around the world, many scientists believe that we are experiencing global warming, which is causing climate change. Carbon dioxide is responsible for most global warming. The process of climate change is often called the greenhouse effect and carbon dioxide is known as a greenhouse gas.
- Some greenhouse gases stay in the atmosphere for a short time, whereas others stay in the atmosphere for thousands of years. It is important that children gain an understanding of this effect, and of what they can do on a practical level to reduce the problem for future generations.

Skills

- **A sense of place:** Developing some awareness of the distinctive human and natural features in Ireland and other parts of the world, e.g. the locations of Ireland's main bogs and natural gas fields
- **Asking questions** about natural and human features and processes in the environment and their interrelationships, e.g. What effect has peat cutting on our bogs? How does oil exploration affect our environment?

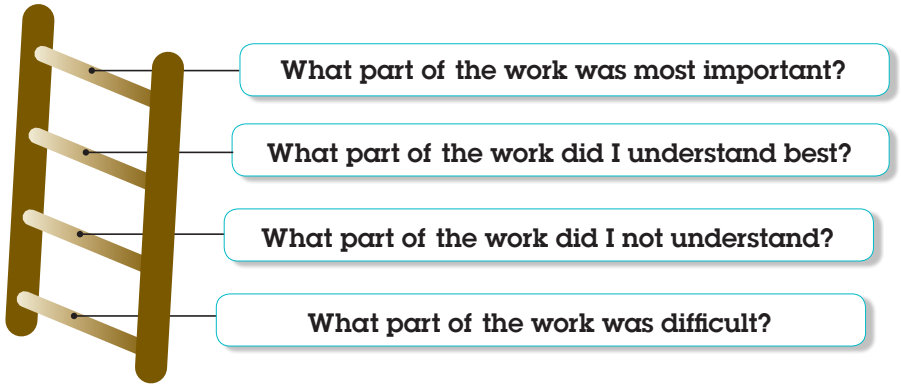
- **Recognising patterns** and relationships in the environment – seasonal patterns in weather observations, e.g. What impact will climate change have on our weather? How will this impact on plant, animal and human life? What can I do about it?
- **Interpreting** information and offering explanations
- **Drawing conclusions** from suitable aspects of the evidence collected
- **Recording and presenting** findings and conclusions using a variety of methods: oral, written, pictorial, photographic, diagrammatic and graphical forms, and using information and communication technologies

Working as a Scientist

In co-operative learning groups, pupils can 'work as an engineer' and create a model windmill/water wheel. Follow the steps on one of the following worksheets:

- Sustainable Energy Authority of Ireland (windmill, water wheel and other activities – more challenging): www.seai.ie/Schools/Primary_Schools/Resources_Available/Lessons_Plan/Renewable_Energy_Lesson_Plan.pdf
- Discover Primary Science and Maths (windmill – less challenging): www.primaryscience.ie/media/pdfs/col/sci_at_home_make_windmill.pdf

Pupils should use the ladder method of self-assessment to evaluate their work as follows:



Assessment for Learning (Finding out what the pupils know *before* the unit)

- Provide a visual stimulus, e.g. a lump of coal/sod of turf to initiate discussion. Ask pupils to tell 'the story of turf'. Where does it come from? Create a concept map of the findings.
- Use different types of question (refer to Bloom's Taxonomy, pages 14–16) to find out what pupils already know about sources of energy. This can be linked to a KWL chart.

Assessment of Learning (Finding out what the pupils have learned)

Ask pupils to design a brochure/poster to tackle an environmental issue. They should create their own rubric to assess their work. Use the template below as a starting point. Pupils can score their performance 0–3.

What I think about my _____			
	1	2	3
Plan			
Design			
Materials			
Appearance			

Differentiation – More Challenging

1. Whole class project: Pupils could chronicle the weather over a two/three-year period to see if there are any major seasonal variations.
2. Write a proposal to a local representative on an environmental issue in your local area.
3. Write a poem about an environmental issue you are interested in.
4. Become involved in, or ask your teacher to join, the Green Schools Programme. Check out: www.greenschoolsireland.org/.
5. Calculate your carbon footprint: www.cooltheworld.com/kidscarboncalculator.php.
6. Whole class activity: Make an environmental promise, e.g. to turn off lights when not needed, to turn off the TV at night, to watch less TV, to shower instead of taking a bath, to walk to school. Monitor this over a period of time and then calculate your carbon footprint.
7. Carry out a study on the greenhouse effect and rising sea levels in the Arctic and Antarctic. Check out: www.southpolestation.com/env/env1.html.
8. Make a list of everyday products that come from oil (petroleum), e.g. Vaseline, ink, etc.

Differentiation – Less Challenging

1. Apart from body energy, list the number of ways you use energy in a day (e.g. alarm clock, watch battery, toaster, lighter switch, TV, PC, mobile phone, etc.).
2. How many devices or machines can you list that contain a battery (e.g. toys, games console, mouse, keyboard, laptop, car, torch, hearing aid, radio, remote control, etc.)?
3. Design a badge that will encourage others to make an environmental promise.
4. List the things we can do without help from electricity, but which might be more difficult (e.g. boil a kettle using fire, make light with a candle, mix the ingredients for a cake by hand instead of with a blender, hand-wash clothes, dry clothes on a line, dry hair naturally, use a sweeping brush instead of a vacuum cleaner, toast bread over the embers of a fire, etc.).

Related Websites

www.met.ie Met Éireann website, providing information on climate change

www.seai.ie/
Sustainable Energy Authority of Ireland, providing useful lessons and teacher resources

www.primaryscience.ie Useful resources for Design and Make in relation to energy

www.eeuantaisce.org/ Environmental education from An Taisce

http://www.askaboutireland.ie/enfo/ Enfo, environmental agency

www.greenwave.ie Climate change and its effects on nature

www.epa.gov/climatechange/kids/index.html
Very useful website on climate change and its impact on the human and natural world

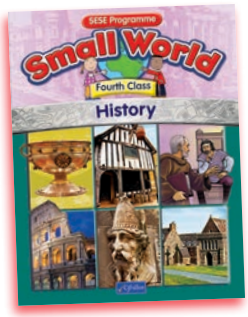
http://climatekids.nasa.gov/ Very useful website on climate change

Linkage

Science Strand: Energy and Forces, **Strand Unit:** Forces – Learn more about wind and wave power, and the force of water (hydroelectric dams).

Geography Strand: Natural Environments, **Strand Unit:** Weather and Climate

Integration



History: *Small World History* Unit 10: The Vikings and Unit 11: The Saga of Leif Erikson – Find out about the Viking settlements in Greenland that were established in the tenth century.

Literacy: Write each of the new words in a sentence. Look up a thesaurus for synonyms.

Answers – Textbook

Page 95: 1. Renewable energy sources can be used again and again. They are also known as clean/green energy sources, e.g. wind, wave, solar energy. Non-renewable energy sources will eventually run out, as when they are used up, we cannot make more of them, e.g. coal, oil, gas, peat. **2. (a)** Wind energy – used to make electricity from the wind. The wind turns the turbine in order to create power. **(b)** Natural gas – invisible and weighs less than air. It is pumped from the ground and goes to a refinery and is then piped to businesses and houses. Natural gas and oil are often found in the same location. **(c)** Coal – found below the Earth's surface, looks like hard, black rock. It is mined from the Earth and burned in power plants to create electricity and in homes to provide heat. **3.** fossil fuels **4.** oil **5.** calculators, road signs, some toy cars, some houses **6.** Kinsale Gas Field, County Cork and the Corrib Gas Field, County Mayo

Page 97: A. 1. the greenhouse effect **2.** They cause heat from the sun to get trapped in the Earth's atmosphere, as glass causes heat to get trapped in a greenhouse. **3.** They cause the Earth's temperature to rise, which is causing ice at the Arctic and Antarctic to melt and sea levels to rise. **4.** carbon dioxide **5.** Turn off water when we do not need it. Walk or cycle to school instead of taking the car/bus. Recycle waste when possible and avoid purchasing items with plastic containers. Switch off lights when they are not needed. **6.** (1) It is believed that a huge meteorite crashed into the Earth about 65 million years ago. It created a giant cloud of ash and smoke that blocked light from the sun and left the Earth in darkness for years. (2) At one stage Greenland used to be green. Viking warriors built two farming settlements there. Now it is covered in ice. (3) In 1815, dust from a volcano in Indonesia blocked out the sun. Because of this, many crops could not grow throughout the world and people starved. (4) We know from fossil evidence that the Earth was covered in ice at one stage.

Answers – Activity Book

Page 36: A. The greenhouse effect causes global warming. Heat gets trapped in the Earth's atmosphere by greenhouse gases. Carbon dioxide is the greenhouse gas that is responsible for most of global warming. Carbon dioxide is produced when we burn fossil fuels. We burn fossil fuels to heat our homes and to make electricity. Global warming is causing the Earth's temperature to rise.

C. 1. (a) Cork; Munster **(b)** Clare, Kerry, Limerick, Tipperary, Waterford **2. (a)** Mayo; Connacht **(b)** Galway, Leitrim, Roscommon, Sligo

Unit 17: The Sun

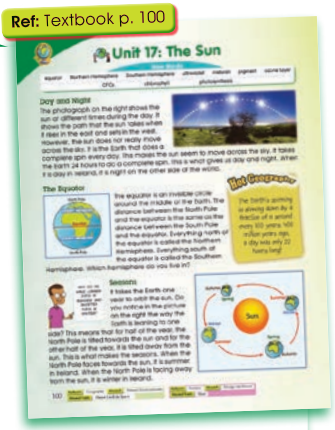
May: 1st Fortnight

Subject: Geography **Strand:** Natural Environments
Strand Unit: Planet Earth in Space

Subject: Science **Strand:** Energy and Forces
Strand Unit: Heat

Objectives

Ref: Textbook p. 100



The child should be enabled to:

- Observe, describe and record the positions of the sun when rising and setting and the changing lengths of day and night during the seasons.
- Investigate shadows and sunlight.
- Understand the importance of sunlight for plants and animals.
- Begin to understand the influence of the sun on weather and atmospheric conditions.
- Become aware of the dangers of sunlight for skin and eyesight.

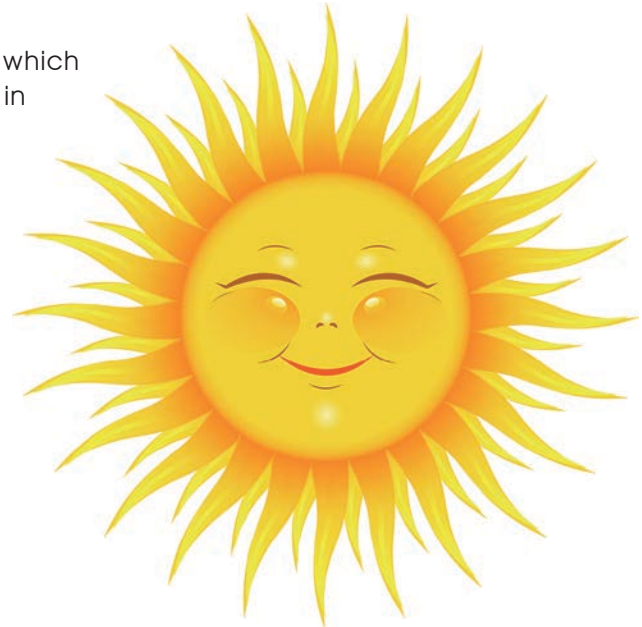
New Words

equator Northern Hemisphere Southern Hemisphere ultraviolet
melanin pigment ozone layer CFCs chlorophyll photosynthesis

Lesson Kernel

The threads of this unit are as follows:

- It takes the Earth 24 hours to do a complete spin. This is what gives us day and night.
- Seasons are caused by the tilt of the Earth. During our summer, the Northern Hemisphere leans towards the sun, giving us more light and heat. During our winter, the Northern Hemisphere leans away from the sun.
- The sun creates wind by heating the air. When warm and cold air meet, the hot air rises, and the cold air rushes in to take its place. The effect is wind. The sun creates rain by heating water, which evaporates into clouds. When this water vapour condenses, it falls to the Earth as rain, hail, sleet or snow.
- When sunlight cannot pass through an object, a shadow is created. This is how a sundial works.
- Sunlight contains harmful ultraviolet (UV) rays, which can damage skin and eyes. We can stay safe in the sun by wearing sunglasses, a hat, clothes that cover up our skin, and sunscreen. We should also avoid sitting in the sunshine in the middle of the day when the sun is hottest. The ozone layer protects us from the sun's harmful UV rays. CFC gases can damage the ozone layer.
- Plants turn sunshine into food. This process is called photosynthesis.
- People and animals need the sun. It gives us light and heat, and helps our bodies to make vitamin D.



Skills

- **A sense of place:** Exploring and becoming familiar with some of the distinctive human and natural features of the universe
- **A sense of space:** Developing an understanding of the relative location and size of major natural features
- **Using pictures, maps and globes:** Engaging in practical use of globes

Working as a Geographer

In this unit, pupils will carry out the following activities to develop an awareness of the changing position of the sun in the sky, and to appreciate the importance of sunlight for plants. Pupils will design and make:

- A Sundial (Textbook page 102)
- A Grass Head (Textbook page 104)

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Show pupils a blank diagram of the Solar System (photocopiable page 202) and ask them to point out the Earth and any other planets they know.
- Ask pupils to draw a picture of the sun. Brainstorm the words or phrases that come to mind about the sun and write them around the picture.
- Ask pupils to make a list of things they would like to find out about the sun. This list should be in question form, e.g. 'How old is the sun?'
- Ask pupils to make a list of answers to the following question: 'What use is the sun?'

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the brainstorm and use another colour to add what has been learned.
- Ask pupils to answer the questions they compiled before the unit.
- Pupils should be able to add more answers to the question posed prior to the lesson.
- Ask pupils to write their own assessment questions based on the unit. Questions may then be answered by their peers.
- Conduct a table quiz based on the information in this unit (page 190).

Differentiation – More Challenging

1. Design a poster about staying safe in the sun.
2. Write a science-fiction story about a visit to the sun.
3. Find out more about how the solstices influenced the building of Newgrange and present your findings to the class.
4. Find out about human sundials: http://www.sunclocks.com/.
5. Use the internet to find out more information about some of the aspects of this unit, e.g. the ozone layer, CFCs, photosynthesis. Your findings could be presented to the class in project form.

Differentiation – Less Challenging

1. Draw a picture of the sun and write some facts around the edge, or in the rays.
2. Stand in the yard and use chalk to trace around your shadow at different times of the day.
3. Write a poem about the sun.
4. Draw a diagram of the water cycle.
5. Learn how to make shadow puppets: http://video.about.com/familycrafts/How-to-Make-Shadow-Puppets.htm.

Related Websites

www.kidsastronomy.com/our_sun.htm Information about the sun

http://seasons.pppst.com/reasons.html
PowerPoint presentaions about the seasons, plus links to related pages

www.newgrange.com/ Information about Newgrange

www.woodlands-junior.kent.sch.uk/Homework/swater.html Information on the water cycle

http://pbskids.org/sid/shadowshow.html Interactive activity about shadows

www.epa.gov/climatechange/kids/ Website about climate change

Linkage: **Science Strand:** Energy and Forces, **Strand Unit:** Light

Integration: **History:** *Small World History* Unit 4: The Celts – Read about the importance of the sun to the Celts and how they celebrated it at different times of the year.
Literacy: Poetry – 'What Is the Sun' by Wes Magee; creative writing – Write a science fiction story: http://learnenglishkids.britishcouncil.org/en/make-your-own/story-maker.
Numeracy: Computations and graph/chart work relating to varying day/night lengths in winter and summer **Visual Arts:** Make a sun catcher: www.artistshelpingchildren.org/suncatcherscraftsideasprojectskids.html. **Music:** Learn the 'Sun Song': www.learninggamesforkids.com/science_songs/educational_videos_sun_song.html.

Answers – Textbook

Page 104: A. The sun rises in the east and sets in the west. It takes the Earth 24 hours to do a complete spin. This is what makes day and night. It takes the Earth 365¼ days, or a year, to orbit the sun. The invisible line halfway between the North Pole and the South Pole is called the equator. Everything north of this line is in the Northern Hemisphere and everything south of this line is in the Southern Hemisphere. Ireland is in the Northern Hemisphere. When the North Pole faces towards the sun, it is summer in Ireland. In winter, the North Pole faces away from the sun giving us shorter days and longer nights. The shortest day of the year is December 21st.

Page 104: A. 1. 26 hours **2.** ultraviolet (UV) **3.** They block UV rays. **4.** It uses shadows to tell the time. **5.** CFCs **6.** vitamin D **7.** chlorophyll **B. 1.** an invisible circle around the Earth, everything north of which is in the Northern Hemisphere and everything south of which is in the Southern Hemisphere **2.** the shortest day of the year; December 21st **3.** harmful rays in sunlight; can damage skin and eyes **4.** brown pigment that skin produces to protect itself from UV rays **5.** process in which a plant turns sunshine into food, using a green pigment in its leaves called chlorophyll **6.** a layer in the atmosphere that shields the Earth from most of the sun's UV rays

C 1. melanin **2.** ultraviolet **3.** ozone layer **4.** photosynthesis **5.** extinction **6.** hemisphere

Answers – Activity Book

Page 37: A. Northern Hemisphere – the part of the Earth that is north of the equator; Southern Hemisphere – the part of the Earth that is south of the equator; equator – an invisible circle around the middle of the Earth; ultraviolet rays – dangerous invisible rays in sunlight; melanin – a brown pigment in your skin; ozone layer – this shields the Earth from the sun's ultraviolet (UV) rays; CFCs – gases sometimes found in fridges that damage the ozone layer; chlorophyll – a green pigment found in leaves; photosynthesis – the process in which plants turn sunlight into food **B.** various, e.g. **Tropical:** Brazil, Tanzania, Madagascar; **Arid:** Mexico, Egypt; Saudi Arabia; **Temperate:** USA, Ireland, France; **Mediterranean:** Portugal, Spain, Italy; **Polar:** Greenland, Iceland, Russian Federation

Unit 18: Materials and Change

May: 2nd Fortnight

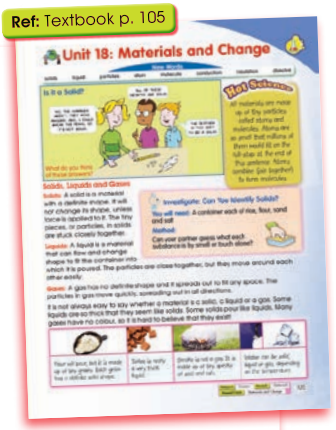
Subject: Science **Strand:** Materials **Strand Unit:** Materials and Change

Objectives

The child should be enabled to:

- Explore the effects of heating and cooling on a range of liquids, solids and gases.
- Experiment to establish which materials are conductors of heat and which are insulators.
- Investigate how materials may be changed by mixing.
- Investigate the characteristics of different materials when wet and dry.
- Examine the changes that take place in materials when physical forces are applied.
- Explore some simple ways in which materials may be separated.

Ref: Textbook p. 105



New Words

solids liquid particles atom molecule conduction insulation dissolve

Lesson Kernel

The threads of this unit are as follows:

- All materials are made up of atoms and molecules. Materials are in a solid, liquid or gas state, depending on how the atoms or molecules are arranged. Each state has its own distinct properties.
- Heat and force can change a material. Some changes are reversible; other changes are irreversible.
- Some materials conduct heat; other materials are insulators of heat.
- A material can change when mixed with another material. Some materials dissolve in water, e.g. salt. Others are suspended in water, e.g. soil particles. Some materials will not stay mixed, e.g. oil and water. Sieving, evaporation and filtering are methods used to separate mixtures. Magnetism and static electricity can also be used to separate mixtures.

Skills

- **Questioning:** Pupils are encouraged to ask questions about materials in the immediate environment and pose questions that will identify problems to be solved, e.g. How do birds stay warm in winter? Why does snow stay longer on the roofs of some houses than others? Why does ice-cream melt?
- **Observing and describing** the natural state of materials in the environment, i.e. solid, liquid or gas, and observe the effects of heating, applying force and mixing on a variety of substances
- **Investigating and experimenting:** Collecting information and data from a variety of sources, including observations in the environment, classroom observations and experiments, photographs, books, maps and information and communication technologies
- **Measuring:** Using a thermometer to measure heat and comparing results

- **Analysing:** Sorting and grouping data during investigations, looking for patterns and interpreting results
- **Recognising patterns**, interpreting information and offering explanations
- **Recording and communicating** findings and conclusions using a variety of methods, e.g. recording an investigation with cream on the Record Sheet on page 39 of the Activity Book

Working as a Scientist

In this unit, pupils will investigate the following to develop a hands-on knowledge of materials:

- Can You Identify Solids? (Textbook page 105)
- How Does Cream Change When a Force Is Applied? (Textbook page 106)
- Which Material Will Keep Your Drink Hot? (Textbook page 107)
- What Happens When Metal Comes Into Contact with Liquid Materials? (Textbook page 108)
- What Happens When You Mix Vinegar and Baking Soda? (Textbook page 108)

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Use the concept cartoons in the Textbook (pages 105–106) to initiate discussion about materials. Pupils should choose which statements they agree with and explain why.
- Compile a list of solids, liquids and gases that are known to the class.
- Group work: Group pupils in mixed ability groups and assign roles according to each pupil's ability and interest. Give each group four mixtures in plastic bowls or cups: salt and water; rice and flour; metal paper clips and dry pasta; oil and water. Ask groups to discuss the ways the mixtures could be separated and then record their ideas in written or picture format and present them to the class.

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the concept cartoons. Question the pupils again and observe their ideas and participation.
- Give each group some water, a magnet, a sieve, a coffee filter paper, a plastic spoon and plate/bowl. Ask groups to try the separation of the mixtures, as listed above. Each group can self-assess their attempts and make an oral presentation of their findings to the class.
- Ask pupils to design an investigation to find out what would happen if you put a coat on a snowman. Use ice-pops or ice cubes to simulate the snowman during the investigation. Ask pupils: 'What will you use? How will you keep the test fair? Can you predict the results?' Plans and findings can be recorded in the two Investigation Sheets and the Fair Test Record Sheet in the Activity Book (photocopiable pages 43–45).

Differentiation – More Challenging

1. Find out more about the ways in which animals keep warm or cool.
2. Fill in the Investigation Sheet in your Activity Book (photocopiable page 43) before carrying out an investigation.
3. Fill in the Investigation Record Sheet in your Activity Book (photocopiable page 44) after you have carried out an investigation.
4. Write a list of common foodstuffs and the mixtures from which they are made.
5. Write a recipe for lemonade or buns.
6. Write a diary entry about a day in the life of a person living in a cold place – e.g Alaska during winter.

Differentiation – Less Challenging

1. Record the steps/stages of an investigation using annotated drawings or digital photographs. Make an oral presentation of results to the class.

2. Collect labels from food containers showing the mixtures that make up the food.
3. Design a poster called 'Keeping Warm'. Use magazines and newspapers to find pictures of the following: clothes that people normally wear to keep warm, clothes worn in extremely cold parts of the world, pictures of animals who try to keep warm, methods for heating/insulating a home, methods of keeping food warm, etc. Stick pictures that appeal to you onto your poster.

Related Websites

www.bbc.co.uk/schools/ks2bitesize/science/materials/
Interactive games about materials

www.bbc.co.uk/schools/teachers/ks2_lessonplans/science/characteristics_of_materials.shtml
Links, worksheets and lesson plans on materials

www.bbc.co.uk/schools/scienceclips/ages/7_8/characteristics_materials.shtml
Interactive experiment to test the properties and characteristics of materials

www.channel4learning.com/apps26/learning/microsites/E/essentials/science/material/index.jsp Links, worksheets and lesson plans on materials

www.museumnetworkuk.org/materials/index.html
Interactive game to explore materials used in the artefacts in a museum

www.sciencekids.co.nz/gamesactivities/materialproperties.html
Games on the properties of materials

www.topmarks.co.uk/Interactive.aspx?cat=70 IWB activities on materials

www.strangematterexhibit.com/index.html
Interactive activities, links, lessons and printables on materials

Linkage: **Science Strand:** Living Things, **Strand Unit:** Plants and Animals – how animals stay warm **Science Strand:** Materials, **Strand Unit:** Properties and Characteristics of Materials **Science Strand:** Energy and Forces, **Strand Unit:** Heat

Integration: **Geography Strand:** Environmental Awareness and Care, **Strand Unit:** Environmental Awareness – lagging jackets and insulation to save energy; oil spill (pollution)
Numeracy: Measuring temperature; introduction to directed numbers
SPHE: Myself and the Wider World – caring for the environment

Answers – Textbook

Page 106: A. 1. solid – ice, liquid – water, gas – water vapour/steam **2.** An atom is a tiny particle. Atoms join together to make molecules. All materials are made up of atoms and molecules. **3.** no **4.** by applying a force to it **5.** heating/cooling, squeezing, stretching, mashing, hitting with a hammer **6.** elastic **7.** liquid **B. 1.** can **2.** cannot **3.** cannot **4.** can **5.** cannot **6.** cannot **Page 109: A. 1.** metal **2.** plastic **3.** If there is no snow on your roof after a snowfall, then your house is losing heat through the roof. **4. (a)** soil, air, seawater **(b)** ketchup, ice-cream, cornflakes and milk, etc. **5.** salt **6.** to filter out the pollution from the air they breathe

Answers – Activity Book

Page 38: B. All materials are made up of tiny particles called atoms and molecules. Materials may be solid, liquid or gas. A solid is a material with a definite shape. The particles in a solid are stuck closely together. Anything that you can take hold of is a solid. The particles in a liquid can move around each other easily. A liquid can flow. It changes shape to fit the container into which it is poured. The particles in gas have no definite shape. They move quickly, spreading out in all directions. **C. 1.** tea cosy, coaster, saucepan handle, oven mitt, Thermos flask **2.** radiator, saucepan, bottle-warmer, cooker/hob **Page 39: B. 1.** sieve **2.** evaporation **3.** sieve **4.** magnet **5.** sieve **6.** filter **7.** sieve **8.** magnet **9.** magnet **10.** sieve

Unit 19: Light

June: 1st Fortnight

Subject: Science **Strand:** Energy and Forces
Strand Unit: Light

Subject: Geography **Strand:** Natural Environments
Strand Unit: Planet Earth in Space

Objectives

Ref: Textbook p. 110

The child should be enabled to:

- Learn that light is a form of energy.
- Recognise that light comes from various natural and artificial forces.
- Learn that light can be broken up into different colours.
- Investigate the relationship between light and materials.
- Investigate how mirrors and other shiny surfaces are good reflectors of light.
- Recognise that the sun gives us heat and light, without which, people and animals could not survive.
- Become aware of the dangers of looking directly at the sun.

New Words

rays opaque transparent translucent periscope convex concave

More New Words

lens spectrum prism bioluminescence

Lesson Kernel

The threads of this unit are as follows:

- The speed of light is one of the fastest things in the universe. It travels at 300,000 km per second! Light travels in straight lines.
- Opaque items block light and cast a shadow. Transparent items allow light to pass through them. Translucent items allow some light to pass through them.
- We can see things because light reflects off them. Some things, like mirrors, reflect so much light that you can see yourself in them. Mirrors can be concave or convex.
- A lens is a curved piece of glass that bends light to make objects appear larger or smaller.
- Light looks white in colour, but is actually made up of the seven colours of the rainbow. A prism can be used to separate white light into seven colours.
- The sun gives us light and heat. Plants, animals and people need the sun.

Skills

- **Investigating and experimenting:** Pupils will design, plan and carry out simple investigations and identify one or two obvious variables relevant to the investigations. They should also realise that an experiment is unfair if relevant variables are not controlled.
- **Observing and describing** processes during investigations
- **Predicting** and offering suggestions based on observations about the likely results of investigations
- **Questioning:** Pupils should be encouraged to ask questions about light and to think about its role in the world. During the investigations and Design and Make activity, they should ask questions to identify problems and draw conclusions.
- **Analysing:** Pupils will sort and group objects into opaque, transparent and translucent.
- **Exploring:** As part of the investigations and Design and Make activity, pupils will explore a range of everyday objects and how they work.
- **Planning:** As part of the investigations and Design and Make activity, pupils will recognise a need to adapt or change an object; work collaboratively to create a design proposal; communicate and evaluate the design plan using sketches.
- **Making:** As part of the investigations and Design and Make activity, pupils will develop craft-handling skills and techniques; use appropriate tools and a range of materials.
- **Evaluating:** As part of the investigations and Design and Make activity pupils will recognise that modifications to the plan may have to be made throughout the task; evaluate the effectiveness of the new product and suggest modifications to the task; evaluate the work of peers and propose positive modifications.

Working as a Scientist

In this unit, pupils will investigate the following to develop a hands-on knowledge of light:

- Are Objects Opaque, Transparent or Translucent? (Textbook page 110)
- How Do Concave and Convex Mirrors Work? (Textbook page 111)
- How Does a Prism Work? Textbook page 113)

Pupils will design and make:

- A Water-drop Magnifier (Textbook page 112)

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Brainstorm all the things pupils currently know about light. Create a concept map of the findings.
- Ask pupils to make a list of things they would like to know about light. This list should be in question form, e.g. 'What colour is light?'
- Ask pupils to make a list of answers to the following question: 'What use is light?'

Assessment of Learning (Finding out what the pupils have learned)

- Revisit the brainstorm and use a new colour to add what has been learned.
- Pupils should be able to add more answers to the question posed prior to the lesson.
- Ask pupils to answer the questions they compiled before the unit.
- Ask pupils to draw a picture of an animal, a plant and a person and write about how light affects each, beneath the pictures.
- Ask pupils to colour a rainbow (Activity Book page 40). Assess their knowledge by checking their choice and ordering of colours.
- Ask pupils to write their own assessment questions based on the unit. Questions may then be answered by their peers.
- Conduct a table quiz based on the information in this unit (page 191).

Differentiation – More Challenging

1. Pair work: Write a message in mirror writing and give it to your partner to read.
2. The speed of light is one of the fastest things we know of. Find out the speeds of other things, e.g. that of sound, a jet, a Formula 1 car, a cheetah, a greyhound. Show results on a table, graph or chart.
3. Design and make your own periscope: www.topspysecrets.com/how-to-build-a-periscope.html.

Differentiation – Less Challenging

1. Draw a picture of the sun and write some facts about light around the edge.
2. Find out what happens when you mix coloured light: https://www.ontariosciencecentre.ca/ScienceNow/Games/MixingColours/.

Related Websites

www.sciencekids.co.nz/light.html Light-related games, videos, facts and lessons

www.kids-science-experiments.com/cat_reflectinglight.html
Experiments about reflecting light

www.atozteacherstuff.com/Themes/Shadows___Light/
Experiments about shadows and light

www.bbc.co.uk/schools/scienceclips/ages/7_8/light_shadows.shtml
Interactive activity about shadows

http://science.pppst.com/lightoptics.html PowerPoint slideshows about light

http://science.k12flash.com/light.html Light-related presentations and games

Linkage: **Geography Strand:** Natural Environments, **Strand Unit:** The Sun

Integration: **Literacy:** Poetry (weather rhymes) and weather lore **Numeracy:** Speed of light – speed (km/h) **Visual Arts:** Painting a rainbow **Music:** Songs – 'Somewhere over the Rainbow', 'I Can Sing a Rainbow' (www.youtube.com/watch?v=nRTdq0VsLGQ)

Answers – Textbook

Page 112: A. It takes eight minutes for light to travel 150 million km from the sun to Earth. Light always travels in straight lines, but it can be reflected around corners, using a mirror. When submarines are under water, they use a periscope to look above the water. Concave mirrors bend inwards like a cave, while convex mirrors bend the opposite way. **B.** The word AMBULANCE is written in mirror writing on the front of ambulances so that drivers can read it in their rear-view mirrors. **Page 114: A. 1.** red, orange, yellow, green, blue, indigo, violet **2.** a prism **4.** eye **B.** various, e.g. **1.** What is the name of the light that the male firefly makes using chemicals? **2.** What do scientists call the position of the Earth in relation to the sun? **3.** What spiky animal hibernates during winter in Ireland? **4.** What underwater vessels use periscopes to see above the water? **5.** What kind of mirror is bent inwards like a cave? **6.** How long did it take the light to travel from the sun to your window?

Answers – Activity Book

Page 40: A. 1. periscope **2.** concave **3.** convex **4.** prism **5.** spectrum **6.** opaque **7.** transparent **8.** translucent

Unit 20: The Living Body

June: 2nd Fortnight

Subject: Science **Strand:** Living Things **Strand Unit:** Human Life

Objectives

The child should be enabled to:

- Become aware of, and investigate, breathing.
- Become aware of the names and structure of some of the body's major external and internal organs.

Ref: Textbook p. 115

New Words

microscopic cells keratin dermis epidermis fibres

More New Words

respiratory system windpipe bronchi bronchioles
alveoli diaphragm arteries valves

Fast Facts for the Teacher

- Journey of inhaled air through the respiratory system: nose/mouth → windpipe → bronchus (there are two bronchi – one joining each lung) → lung → bronchioles (the bronchus divides into these smaller tubes) → alveoli (groups of 'bubbles' at the end of each bronchiole) → oxygen enters the bloodstream
- Breathing in: Air is inhaled; rib cage expands as muscles contact; diaphragm moves down
- Breathing out: Air is exhaled; rib cage gets smaller as rib muscles relax; diaphragm moves up
- Journey of oxygenated blood through the body: lungs → left-hand side of heart → arteries → cells throughout the body
- Journey of (deoxygenated) blood carrying carbon dioxide: cells throughout the body → veins → right-hand side of heart → lungs

Lesson Kernel

The threads of this unit are as follows:

- The skin is the body's largest organ. It protects the body from germs and infection. It also helps control the body's temperature. Skin is divided into different layers – each having a particular function.
- Our bodies depend on oxygen to live. The respiratory system delivers it to the body.
- The main parts of your respiratory system are your two lungs. They are located in your chest behind your rib cage. The air you inhale travels to your lungs, where oxygen is removed from the air and transferred to the blood. At the same time, carbon dioxide is passed from the blood to the lungs and then exhaled. Oxygen provides your body's cells with energy. Without this transfer of gases, your cells would die.
- Some animals do not have lungs. Fish breathe with their gills, which take oxygen from the water. Earthworms breathe through their skin.

- Whales have lungs. The blowhole of a whale acts like a nose.
- The heart is the strongest muscle in your body. It is about the size of a clenched fist and is located in the middle of your chest, to the left of the breastbone between the lungs. Your heart beats at least once every second throughout your whole life. Your heartbeat is the constant squeezing of the heart muscle to pump blood around your body. Each time your heart beats, the left-hand side pushes the blood inside it out into the arteries. Arteries are blood vessels that carry blood away from the heart. This blood carries oxygen, which it delivers to all of your cells. The right-hand side receives blood that has already delivered all of its oxygen and pumps it to the lungs to collect more.

Blowhole

Skills

- **Interpreting** information and offering explanations
- **Drawing conclusions** from suitable aspects of the evidence collected
- **Recording and communicating:** Presenting findings and conclusions using a variety of methods including oral, written, pictorial, photographic, diagrammatic and graphical forms and ICT.

Working as a Scientist

In this unit, pupils will work as scientists when they undertake the following activities:

- Explore the Four Types of Fingerprints (Activity C on Textbook page 116)
- Design and Make: A Stethoscope (Textbook page 119)

Assessment for Learning (Finding out what the pupils know *before* the unit)

- Using a model torso of the human body, ask pupils to name different parts and/or their function.
- Play a game of 'What am I?' e.g. 'I am the largest organ in the body and spread out smoothly in front of you', 'I am the strongest pump known to humans'.
- Annotated drawing: On a diagram of the upper body (photocopiable page 203), ask pupils to label as many parts as they can and to write any relevant facts they know around the diagram.

Assessment of Learning (Finding out what the pupils have learned)

- Return to the diagram of the upper body. Pupils can add additional information they have learned in a different colour.
- Use the photocopiable template on page 196 in advance of the Design and Make activity (Textbook page 119) to outline the assessment criteria. Pupils can then assess their own or each other's stethoscope/s by ticking the boxes.
- Ask pupils to use a pyramid-ranking diagram (photocopiable page 198) to place facts they have learned about the skin/heart/lungs in order of importance.

Differentiation – More Challenging

1. Group work: Undertake a class project focusing on the effects of overexposure to the sun on the skin.
2. Use a model torso to draw and provide information on different parts of the body.
3. Design and make a working model of the lungs.
4. Group work: Investigate the effects of smoking on the lungs.

Differentiation – Less Challenging

1. Use the internet to find out about the effects of smoking on the lungs. Design a poster to warn people about the dangers of smoking.
2. Use a model torso to draw and label parts of the human body.

Related Websites

www.kidshealth.org Information for teachers and children focusing on the human body

www.askaboutireland.ie/learning-zone/primary-students/3rd-+-4th-class/science/bones-bodies-and-movement/all-about-you/ Information about the human body

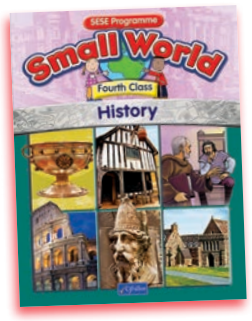
http://kids.nationalgeographic.com/kids/games/puzzlesquizzes/quizyournoodle-the-heart/ Interactive game focusing on the heart

http://science.nationalgeographic.com/science/health-and-human-body/human-body/ Information for teachers regarding the human body

Linkage

Science Strand: Living Things, **Strand Unit:** Plants and Animals

Integration



History: *Small World History* Unit 10: Caring For the Sick

Literacy: Read *Frankenstein* by Mary Shelley (Usborne Children's Books have published an abridged version) – the story of how Victor Frankenstein brought a human-like creature to life!

Visual Arts: Make a collage of class fingerprints with each child's print enlarged, or each child's 'painting' of his/her own fingerprints. A different colour could be used for each finger.

Answers – Textbook

Page 116: A. 1. to protect our bodies **2.** The skin is a living organ. Although the surface (epidermis) is made up of dead cells, just under the surface there are living cells that continuously fill with keratin and move up. The skin also contains blood vessels, sweat glands and touch sensors. **3.** The epidermis is the top layer of the skin and is made up of dead cells. The dermis is below the epidermis, is thicker than the epidermis, is made up of fibres and contains blood vessels, sweat glands and touch sensors.

Page 119: A. 1. Your body forces you to take a breath, because you cannot survive for long without breathing. **2.** Your lungs are located in your chest, behind your rib cage. When you breathe in, oxygen passes into your body in the lungs. When you breathe out, your lungs blow out unnecessary carbon dioxide. **3.** Oxygen helps you to take energy from the food that you eat. You can then send power to all of your organs, such as your lungs and heart. **4.** carbon dioxide **6.** about the size of a clenched fist

Notes on Double-page Spreads

Aerial Photograph & Map of Ballina, County Mayo – Textbook page 4

Background information from Geography Guidelines

The use and construction of maps is one of the most distinctive of all geographical skills. Maps enable us to record and present information about places and spatial relationships. They can also help us to understand more about environments – both those in which we live, and those of which we have no direct experience. Yet maps are not solely related to the study of geography. Maps and plans are encountered constantly in everyday life and the ability to interpret and use them efficiently is an essential skill. Access to a wide range of maps is necessary, therefore, in the middle and senior classes. Some of these maps – e.g. those of small areas in the locality, or those of an historic site visited by pupils – may need to be prepared by the teacher, but most will be commercially available.

Activities

Look at the aerial photograph on page 4.

1. Make a list of all the things you can see, e.g. houses, river, bridge, church, sports field, car park.
2. List the colours you can see, e.g. green grass, blue river, grey rooftops.
3. Make a list of the natural and human (man-made) features you can see in the photograph.
4. Is this a nice place to live? Why/why not?
5. How is this place the same/different from where you live?
6. Look for roads on the photograph. Are they all the same?
7. Find the railway track. Ballina is in County Mayo. **(a)** Look up an Irish Rail map to find out where a train on this railway track would be going. **(b)** If you were on board a train, what would you see out the window as the train passed by this area?
8. The map shows the River Moy. Follow it with your finger from the bottom of the photograph to the top. Where does the river go? Is it a small or large river? Look at the map of the physical features of Ireland on page 41. Where does the River Moy begin? Where does it flow into the sea? What is the name of this sea?
9. How many bridges are in the photograph. Are they all the same? How are they different from each other?
10. There is a weir across the river also. Can you find it? What is a weir? Why do you think there is a weir on this river?
11. How many churches can you see in the photograph? Are they all the same? Make a sketch in your copy of two of them.

12. List the different types of building that you can see, e.g. house, apartments, church, farmhouse.
13. Can you see a variety of houses (detached, semi-detached, terraced, bungalow)? In which house in the photograph would you most like to live? Explain why.
14. Is Ballina a quiet or busy town? Give reasons for your answer.
15. Can you find a crane in the photograph? Why do you think it is there?
16. Before looking at page 5, draw your own map of Ballina. Make up your own symbols to represent features on the map. What could you use to represent the church, bridge, etc?

Look at the map on page 5.

1. Make a list of the colours you see and the features they represent, e.g. blue represents water and green represents land.
2. Make a list of the symbols and what they represent.
3. Make a list of the natural and human (man-made) features you can see on the map
4. **(a)** What information does the map give you that you cannot see on the photograph?
   (b) What information does the photograph give you that you cannot see on the map?
5. The map shows more than one school. List the names of the schools. Are they primary or secondary schools?
6. What facilities/amenities are there for the people who live in the area?
7. Tumble Jungle is an indoor play centre for children. What other facilities can you see for active children?
8. Make a list of the places you would like to visit if you were staying in Ballina.
9. List the streets that are named after famous Irish people. (Background information: In 1798, French soldiers arrived in Killala near Ballina to fight against the English.)
10. Many streets in towns, villages and cities in Ireland are named after historical figures. Can you think of any near where you live?
11. How did Abbey Street and Convent Hill get their names?
12. **(a)** What number is on the Sligo Road? What number is on the Killala Road?
    (b) Find out what the letters 'R' and 'N' stand for on Irish roads.
13. What do you think happens in Market Square?
14. What does the Fisheries Board do? Is this a good location for the Fisheries Board?
15. How would visitors without cars get to Ballina? Where would they arrive? Where could they stay?
16. Play 'find the mystery place': Give directions to the class to get from a starting point to a mystery feature. Use buildings, 'left turn', 'right turn', 'forward' and street names, etc. to guide your classmates. For example: Start at the fire station. Turn left and walk past the library. At the next junction, turn left. Walk forward past Market Square. Keep walking until you get to the river. Cross the bridge. What old building do you see on the left? Answer: Augustinian Abbey.
17. Saint Patrick is said to have baptised many people at a location in Ballina in 441 AD. Can you find the location on the map? What symbol is used to represent historical features? What is a dolmen?
18. Name some places where the people of Ballina might work, e.g. the post office, fire station, hospital, etc.
19. Use the scale on the map to calculate approximate distances from one place to another. For example: How far is it from the hospital to the cinema? How far is it from the town hall to the court house? How far is it from the train station to the nearest hotel? How far is it from the hospital to the nearest post office?
20. Killala is north of Ballina. Point to north on the map. Where is south, east and west? Play a directions game with your classmates. For example: What school is north of the cinema? Which sport can you play south of Saint Muradach's College?

Extension Activities

1. Find a 3D image of Ballina on Google Earth: www.google.com/earth.
2. Look a map of Ballina on Google Maps: https://maps.google.ie. Use the earth and satellite views to get an alternative look at Ballina. What can you see in these views that the map or photograph in the book cannot tell you?
3. Use the street view on Google Maps to take a virtual walk around Ballina.
4. Use a route planner or road/rail map of Ireland to find out how you would get to Ballina from your school.
5. Show Ballina on a political map of Ireland. Show Ballina on a physical map of Ireland.
6. Use the internet to search for photographs of Ballina. Match the photographs to places on the map.
7. Make a tourist brochure encouraging people to visit Ballina.
8. Pretend you spent a weekend in Ballina. Write a letter to your friend telling him/her about the things you did.
9. Design a postcard from Ballina.
10. Draw a freehand map of your own area using symbols to show the interesting features.
11. Compare a map of your own area with the map of Ballina. How are they the same? How are they different?
12. Make a 'map' of some toys. Place them on a piece of paper and draw around the outlines. Ask your friends to guess which toy each is.
13. Take a walk around your school and neighbourhood. Take photographs or sketch pictures of signs, signposts and symbols that are used, e.g. fire exit, no smoking, wheelchair access, school crossing.
14. Use a compass to map directions from your classroom. Draw a compass rose in the centre of a page and draw pictures or use symbols to represent the places that lie north, south, east and west of your classroom.
15. Create maps of your classroom and school and devise a standardised set of symbols for both.
16. Draw a large plan of your school/classroom. Take and print photographs of the main features in each direction and stick them in appropriate places around the map.

Extra Ideas

1. Make bingo cards with a variety of common map symbols and play a game of bingo.
2. Look at the crest of Ballina. Can you guess what the symbols mean? Use the information from the map and aerial photograph of Ballina to design an alternative crest. (Background information: http://resources.teachnet.ie/vmcmahon/history/crests.htm.)
3. Use a compass to establish the direction of north in your classroom. Based on the template that follows, ask each pupil to draw a map showing the location of his/her desk and use symbols to show features in the room. Gather all of the completed maps and hand them out in random order. Ask pupils: Can you guess whose desk is shown on each map?

Crest of Ballina

Template for Mapping the Classroom

Draw things farthest away.

Draw things closest to you.

Your desk

Map key:

Mammals of Ireland – Textbook page 16

This spread focuses on Irish mammals and might be looked at in conjunction with Unit 3: Animals. The information offered is not comprehensive, but aims to draw the child's attention and capture his/her interest, by presenting interesting and lesser-known facts. Further information on any of the animals may be found online at:

www.conserveireland.com/

www.noticenature.ie/kids_area.html

www.rte.ie/radio/mooneygoeswild/factsheets/mammals/

http://mammals.biodiversityireland.ie/

www.irelandswildlife.com/

www.animalcorner.co.uk/

www.mammal.org.uk/

How to Best Use this Spread

Read through the pages with your pupils and invite comments from them about their knowledge and experience of Irish wildlife. They will probably offer information that surprises you. Other facts that may be of interest are as follows:

Rabbit (coinín)

Male: buck
Female: doe
Young: kitten
Home: warren, burrow
Food: herbivorous – mainly grass and leaves
Lifespan: six years

Irish hare (giorria)

Male: buck
Female: doe
Young: leveret
Home: form
Food: herbivorous – mainly grass, heather and herbs
Lifespan: nine years

Badger (broc)

Male: boar
Female: sow
Young: cub
Home: sett
Food: omnivorous – mainly earthworms, mice, beetles, snails and slugs
Lifespan: 10 years

Pine marten (cat crainn) ('Marten' is an old German name for a weasel.)

Male: male
Female: female
Young: kit
Home: It does not build its own nest. It looks for abandoned squirrel nests or tree hollows.
Food: mainly carnivorous – small mammals, birds and insects, plus some fruit and berries in autumn
Lifespan: six years

Otter (dobharchú/ madra uisce)

Male: boar
Female: sow
Young: cub
Home: holt
Food: carnivorous – fish and amphibians
Lifespan: 10 years

Stoat (easóg)

Male: jack
Female: jill
Young: kit
Home: den
Food: carnivorous – mainly rabbits and hens
Lifespan: two years

House mouse (luch)

Male: buck
Female: doe
Young: pinkie
Home: nest
Food: omnivorous – mainly plant matter
Lifespan: two years

Rat (francach)

Male: buck
Female: doe
Young: pinkie
Home: nest
Food: omnivorous scavenger – grain and meat; must have water regularly
Lifespan: two years

Bank vole

Male: male
Female: female
Young: pup
Home: burrow
Food: omnivorous – small plants, nuts, dead animals
Lifespan: one year

Hedgehog (gráinneog)

Male: boar
Female: sow
Young: piglet
Home: nest (hibernates in a hibernaculum)
Food: omnivorous – mainly slugs, snails, insects, frogs and worms
Lifespan: four years

Pygmy shrew (dallóg fhraoigh)

Male: male
Female: female
Young: pup
Home: nest
Food: insectivorous – insects, woodlice and beetles
Lifespan: one year

Red squirrel (iora rua)

Male: buck
Female: doe
Young: kit
Home: drey
Food: herbivorous – nuts
Lifespan: four years

Irish Trees – Textbook page 28

This spread focuses on trees (mostly native Irish trees) and might be looked at in conjunction with Unit 5: Trees. The information offered is not comprehensive but aims to draw the child's attention to some interesting facts. Further information on any of the trees may be found online at:

www.treecouncil.ie/

www.gardenplansireland.com/forum/about702.html

www.coillte.ie

How to Best Use this Spread

Read through the pages with your pupils and invite comments from them about their knowledge of trees, e.g. trees they can identify, trees of which they have heard but cannot identify, leaf types, fruit and nuts and so on. Ask why we grow trees, how long it might take a tree to grow, are there local forests, do they know the difference between hardwood and softwood, deciduous and evergreen.

Lemon trees

Importance of Trees

Trees are important for a large number of reasons:

- They provide us with oxygen. They take carbon dioxide from the air during photosynthesis and 'exhale' oxygen.
- They provide us with food, e.g. apples, pears, oranges, lemons, nuts.
- They provide food and shelter for huge numbers of creatures, from tiny insects to birds and mammals that nest within them.
- They provide timber for building, making furniture, burning, etc.
- They are aesthetically pleasing and they act as windbreakers, providing shade and muffling urban noise.

Cherry tree

Activities

1. Find a new interesting fact about any tree.
2. Name trees that do not grow or are uncommon in Ireland (citrus, eucalyptus, etc.).
3. Name trees that have lovely flowers (cherry, fruit trees, horse chestnut, etc.).
4. How many creatures can you think of that depend on trees?
5. How many things can you think of that are made of wood?
6. Conduct a tree hunt to find and identify trees in the locality. Find the tallest tree, the tree with the biggest girth, a tree covered in ivy, a bird's nest in a tree. Many local park attendants are happy to conduct a short tour of the park with children.
7. Take bark rubbings.
8. Celebrate national tree week (usually in March).
9. Find local customs associated with trees, e.g. pinning coins to the bark, lone trees left alive in fields for the fairies, etc.
10. Paper is made from wood. Encourage pupils to reduce, reuse and recycle paper to help save the planet.

The Solar System – Textbook page 98

Quick Facts on the Solar System

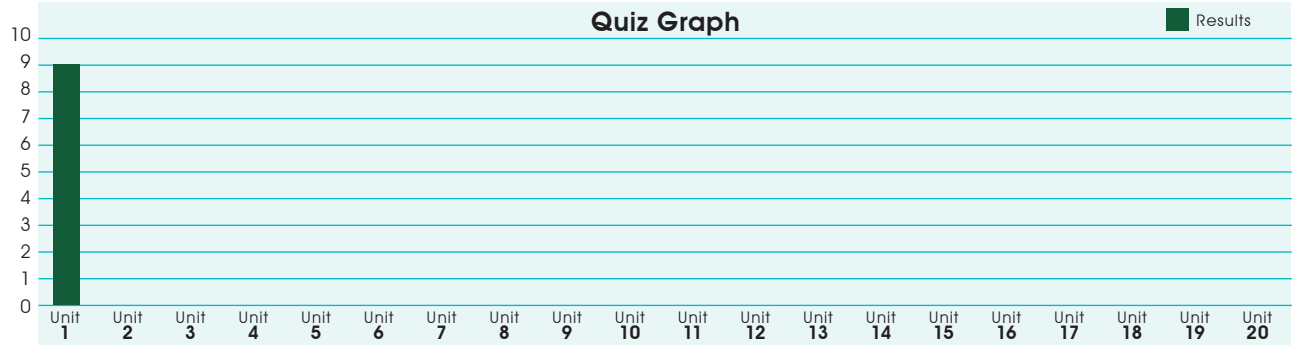
	Mercury	Venus	Earth	Mars	Jupiter
Size	Smallest planet in the Solar System	A little smaller than Earth	Larger than Mercury, Venus and Mars	Smaller than Earth	Largest planet in the Solar System – equal to 318 Earths!
Surface	Rocky surface with lots of craters	Has continents, mountains and craters	Solid, rocky surface	Solid, dusty, red surface	A gas giant – no solid surface
Location	Nearest planet to the sun – 58 million km from the sun	108 miillion km from the sun	150 million km from the sun	230 million km from the sun	777 million km from the sun
Temperature	400° C on the sunny side; 200° C on the dark side	Hottest planet – 460° C	Average of 7° C	–82° C in winter; –5° C in summer	–153° C
Atmosphere	Tiny amounts of hydrogen and helium	Made of carbon dioxide and toxic gases	It is breathable, with 21% oxygen	Mostly carbon dioxide and very thin	Hydrogen, helium and methane gases
Moons	None	None	One	Two	16
Year	88 Earth days to orbit the sun	262 Earth days to orbit the sun	365¼ days to orbit the sun	1 Earth year, 320 Earth days to orbit the sun	11.9 Earth years to orbit the sun
Rotation through day and night	59 Earth days to rotate fully	242 Earth years to rotate fully	24 hours to rotate fully	24 hours, 39 minutes to rotate fully	Nine hours, 55 minutes to rotate fully
Possibility of life	No	No	Yes	No	No
Interesting fact	Airless and rocky with lots of craters like Earth's moon	Brightest planet in the sky	Only planet with liquid water	Olympus Mons is the largest volcano in the Solar System	Storm spot is three times larger than Earth

	Saturn	Uranus	Neptune	Pluto dwarf planet/ planetoid
Size	Second largest planet in the Solar System	Several times larger than Earth	Third largest planet in the Solar System	Smaller than Earth's moon
Surface	A gas giant of hydrogen and helium	A giant gas ball of hydrogen and helium; also called an ice giant	A gas and ice giant	A frozen gas surface that evaporates to form an atmosphere when it is close to the sun
Location	1426 million km from the sun	2869 million km from the sun	2871 million km from the sun	7380 million km from the sun
Temperature	–185° C	–214° C	–218° C	–233° C
Atmosphere	Hydrogen, helium and methane gases	Hydrogen, helium and methane gases	Hydrogen, helium and methane gases	Carbon monoxide, methane and nitrogen gases
Moons	62	27	13	3
Year	29½ Earth years to orbit the sun	84 Earth years to orbit the sun	165 Earth years to orbit the sun	249 Earth years to orbit the sun
Rotation through day and night	10 hours	19 hours	17.9 hours	Six Earth days, nine hours
Possibility of life	No	No	No	No
Interesting fact/s	It has huge hurricanes and a giant storm spot. Its rings are made of ice, dust and rock.	It has 11 rings.	It was named after the Roman god of the sea. It has a giant storm spot like Saturn.	Since 2006, has been classified as a 'dwarf planet' or 'planetoid'.

Quiz Questions on Units

(Correct answers are shown in red.)

Encourage each pupil to create and maintain a graph of his/her quiz results.



Unit 1: Nature Is Powerful

1. **What did King Canute want to prove to his courtiers and noblemen?**
   (a) How powerful he was
   (b) That they were fools
   (c) That nature was more powerful than him
2. **Long ago, people in Ireland built houses on lakes called…**
   (a) moats.
   (b) crannógs.
   (c) reservoirs.
3. **What is 'settling' in a reservoir?**
   (a) When water passes through a mesh to remove dirt
   (b) When dirt sinks to the bottom of the water
   (c) When the water passes through sand to be cleaned
4. **Which of these chemicals is NOT added to your water?**
   (a) Sulphur
   (b) Chlorine
   (c) Fluoride
5. **What comes from a quarry?**
   (a) Wood
   (b) Stone and sand
   (c) Water
6. **If 'cill' or 'kil' appears in a place-name, it means…**
   (a) river.
   (b) church.
   (c) forest.
7. **If 'dún' appears in a place-name, it means…**
   (a) valley.
   (b) fort.
   (c) mountain.
8. **If 'cnoc' or 'knock' appears in a place-name, it means…**
   (a) forest.
   (b) mountain.
   (c) river.
9. **Australia was once called…**
   (a) New Holland.
   (b) Gold Coast.
   (c) Ceylon.
10. **Dublin in Texas changes its name for one week every year to…**
    (a) Coca-Cola.
    (b) Dr Pepper.
    (c) Sprite.

Unit 2: Getting Around

1. **Most accidents happen on Irish roads…**
   (a) in the morning.
   (b) around midday.
   (c) in the evening.
2. **Which of these is NOT a canal in Ireland?**
   (a) Suez Canal
   (b) Royal Canal
   (c) Grand Canal
3. **Who wrote the book, *Around the World in Eighty Days?***
   (a) Charles Dickens
   (b) Jules Verne
   (c) Robert Louis Stevenson
4. **Which of these words means sending goods to another country?**
   (a) Import
   (b) Export
   (c) Migrate
5. **Which of these goods does Ireland import?**
   (a) Milk
   (b) Bananas
   (c) Guinness
6. **How long does it take a ferry to sail from Ireland to France?**
   (a) Approximately one hour
   (b) Approximately one day
   (c) Approximately one week
7. **Which of these is a three-wheeled car used in Asia?**
   (a) Felucca
   (b) Tuk-tuk
   (c) Segway
8. **Which of these is a sailboat often found on the River Nile?**
   (a) Felucca
   (b) Tuk-tuk
   (c) Segway
9. **Which of these is the slowest?**
   (a) Snowmobile
   (b) Segway
   (c) Aeroplane
10. **What breed of dog is used to pull sleds in Norway and Canada?**
    (a) Saint Bernard
    (b) Husky
    (c) Labrador

Unit 3: Animals

1. **The smallest animal in the world is the...**
   (a) mayfly.
   (b) fairyfly.
   (c) shrew.
2. **What is the biggest mammal in the world?**
   (a) Blue whale
   (b) African elephant
   (c) Red deer
3. **What animal is sometimes called the 'earth pig'?**
   (a) Hedgehog
   (b) Spiny anteater
   (c) Aardvark
4. **Which is FALSE?**
   (a) Mammals rear their young on milk.
   (b) Mammals have cold blood.
   (c) Mammals are usually covered in hair or fur.
5. **Which of these is NOT a marsupial?**
   (a) Dingo
   (b) Koala
   (c) Possum
6. **Which is FALSE?**
   (a) When forests were cut down for farmland, Irish wolves hunted farm animals.
   (b) Irish wolves became extinct because they ran out of food.
   (c) Irish wolves became extinct because they were killed by farmers.
7. **What are nocturnal animals?**
   (a) Animals that come out at night to feed
   (b) Animals that have a pouch to carry their babies
   (c) Animals that lay eggs
8. **What is a female deer called?**
   (a) Doe
   (b) Buck
   (c) Fawn
9. **What do you call a group of squirrels?**
   (a) Skulk
   (b) Scurry
   (c) School
10. **Which of these is NOT a type of bat found in Ireland?**
    (a) Pygmy
    (b) Pipistrelle
    (c) Horseshoe

Unit 4: People at Work

1. **Which of these jobs was more common long ago than nowadays?**
   (a) Blacksmith
   (b) Soccer player
   (c) Hairdresser
2. **John is a good storyteller and can speak many languages. Which of these jobs would suit him best?**
   (a) Chef
   (b) Solicitor
   (c) Tour guide
3. **Which of these people provides goods?**
   (a) Teacher
   (b) Baker
   (c) Nurse
4. **Which of these people provides a service?**
   (a) Vet
   (b) Butcher
   (c) Greengrocer
5. **Which of these is a raw material?**
   (a) Cotton
   (b) Paper
   (c) Butter
6. **Which of these people probably uses a computer the most?**
   (a) Accountant
   (b) Butcher
   (c) Electrician
7. **Which of these people probably uses a telephone the most?**
   (a) Writer
   (b) Secretary
   (c) Fisherman
8. **What job does a PQ do?**
   (a) Quench fires in the Australian bush
   (b) Quarry for sand and stone
   (c) Queue for tickets or other items
9. **What does a brain signal decoder do?**
   (a) Helps you become more intelligent
   (b) Reads your mind
   (c) Helps you to relax
10. **Which of these might wear a hair net and gloves at work?**
    (a) Someone who works on a boat
    (b) Someone who works in a school
    (c) Someone who works in a kitchen

Unit 5: Trees

1. **The oldest tree in the world is a Norway spruce. How old is it?**
   (a) 500 years
   (b) 9550 years
   (c) 500,000 years
2. **What type of tree loses its leaves in the autumn?**
   (a) Deciduous trees
   (b) Evergreen trees
   (c) Softwood trees
3. **Which of these is an evergreen tree?**
   (a) Oak
   (b) Holly
   (c) Sycamore
4. **What gas do trees release?**
   (a) Helium
   (b) Carbon dioxide
   (c) Oxygen
5. **What plant produces a poisonous chemical called digitalis?**
   (a) Celandine
   (b) Foxglove
   (c) Bluebell
6. **Ivy flowers in the...**
   (a) spring.
   (b) summer.
   (c) winter.
7. **Which of these counties has the Irish word for 'oak' in its name?**
   (a) Carlow
   (b) Kildare
   (c) Wicklow
8. **Catkins are the flowers from the...**
   (a) oak tree.
   (b) holly tree.
   (c) ash tree.
9. **Which is FALSE?**
   (a) Glencullen has the Irish word for 'holly' in its name.
   (b) Male holly trees produce berries.
   (c) There is an old belief that if a holly tree has lots of berries, the winter will be very cold.
10. **What is unique about the Albizia falcate tree?**
    (a) It is the oldest tree in the world.
    (b) It is the fastest-growing tree in the world.
    (c) It is the tallest tree in the world.

Unit 6: A Visit to Arranmore Island

1. **Arranmore Island is in County...**
   (a) Donegal.
   (b) Galway.
   (c) Clare.

2. **The population of Arranmore is...**
   (a) approximately 500.
   (b) approximately 5000.
   (c) approximately 50,000.

3. **What is the largest island in the world?**
   (a) Iceland
   (b) Greenland
   (c) Australia

4. **What record does Bishop Rock hold?**
   (a) It is the only island in the world with just one lighthouse.
   (b) It is the smallest island in the world.
   (c) It is the only island in the world that nobody lives on.

5. **The largest island in Ireland is...**
   (a) Achill Island.
   (b) Ireland's Eye.
   (c) Inisheer.

6. **How far is Arranmore from the mainland?**
   (a) 5 km
   (b) 10 km
   (c) 15 km

7. **During which season does the population of Arranmore double?**
   (a) Spring
   (b) Summer
   (c) Autumn

8. **Which is TRUE?**
   (a) In 1996, the population of the island was 600.
   (b) Leabgarrow is the name of the island's tallest mountain.
   (c) The land on the island is mostly good for farming.

9. **When the roof of an arch collapses into the sea, it becomes a...**
   (a) cave.
   (b) sea stack.
   (c) cliff.

10. **Which of these is a freshwater fish?**
    (a) Trout
    (b) Cod
    (c) Plaice

Unit 7: Weather and Climate

1. **Complete this old saying: 'Clear moon...'**
   (a) frost soon.
   (b) rain soon.
   (c) sun soon.

2. **If you see seagulls flying inland, it usually means the weather will be...**
   (a) fine.
   (b) stormy.
   (c) cold.

3. **What do you call somebody who studies the weather?**
   (a) Palaeontologist
   (b) Meteorologist
   (c) Astrologist

4. **What is the North Atlantic Drift?**
   (a) A cold wind from the Atlantic Ocean
   (b) A warm ocean current in the Atlantic Ocean
   (c) Warm air blowing in from the Atlantic Ocean

5. **What type of climate does Iceland have?**
   (a) Polar
   (b) Temperate
   (c) Arid

6. **What type of climate does Egypt have?**
   (a) Polar
   (b) Temperate
   (c) Arid

7. **Places close to the equator have...**
   (a) a tropical climate.
   (b) a polar climate.
   (c) a temperate climate.

8. **August is in which season?**
   (a) Spring
   (b) Summer
   (c) Autumn

9. **The shortest day of the year is...**
   (a) December 21st.
   (b) June 21st.
   (c) March 21st.

10. **How long does it take the Earth to travel around the sun?**
    (a) 365 days
    (b) 365¼ days
    (c) 365½ days

Unit 8: People and Places

1. **A person who makes maps is called a...**
   (a) iconographer.
   (b) lexicographer.
   (c) cartographer.

2. **A map that shows towns, cities and counties is called...**
   (a) a climate map.
   (b) a physical map.
   (c) a political map.

3. **A map that shows mountains, rivers and lakes is called...**
   (a) a climate map.
   (b) a physical map.
   (c) a political map.

4. **A city or town is usually marked on a map with a...**
   (a) circle.
   (b) square.
   (c) triangle.

5. **What does a triangle on a map represent?**
   (a) A mountain peak
   (b) A lighthouse
   (c) A headland

6. **What is the highest mountain in Ireland?**
   (a) Lugnaquilla
   (b) Carrauntoohil
   (c) Mount Everest

7. **What is the longest river in Ireland?**
   (a) The River Liffey
   (b) The River Shannon
   (c) The River Nile

8. **Most of Ireland's islands are on the...**
   (a) east coast.
   (b) west coast.
   (c) north coast.

9. **Which of these is a maritime county?**
   (a) County Antrim
   (b) County Offaly
   (c) County Westmeath

10. **County Offaly is sometimes called...**
    (a) King's County.
    (b) Queen's County.
    (c) the Garden of Ireland.

Unit 9: Rocks

1. **The dome of the Taj Mahal in India is made from…**
   (a) limestone.
   (b) marble.
   (c) sandstone.
2. **What do you call somebody who studies rocks?**
   (a) Geologist
   (b) Archaeologist
   (b) Meteorologist
3. **The deepest mines on Earth are…**
   (a) 4 km underground.
   (b) 40 km underground.
   (c) 400 km underground.
4. **What is another name for fire rocks?**
   (a) Igneous rocks
   (b) Sedimentary rocks
   (c) Metamorphic rocks
5. **What type of rocks are granite and basalt?**
   (a) Igneous rocks
   (b) Sedimentary rocks
   (c) Metamorphic rocks
6. **Sitting rocks are also called…**
   (a) igneous rocks.
   (b) sedimentary rocks.
   (c) metamorphic rocks.
7. **What type of rocks are marble and quartzite?**
   (a) Igneous rocks
   (b) Sedimentary rocks
   (c) Metamorphic rocks
8. **What do you call a rock from space that hits the Earth?**
   (a) Meteor
   (b) Meteorite
   (c) Comet
9. **Melted rock below the surface of the Earth is called…**
   (a) magma.
   (b) lava.
   (c) basalt.
10. **What rock was used to build the walls of the Great Pyramid of Giza?**
    (a) Limestone
    (b) Basalt
    (c) Marble

Unit 10: Italy

1. **Which one of these islands is NOT part of Italy?**
   (a) Corsica
   (b) Sardinia
   (c) Sicily
2. **What is a *gondola*?**
   (a) A dessert
   (b) A boat
   (c) A musical instrument
3. **Which of these countries does NOT border Italy?**
   (a) Spain
   (b) Switzerland
   (c) France
4. **Which of these seas does NOT surround Italy?**
   (a) Black Sea
   (b) Mediterranean Sea
   (c) Ionian Sea
5. **The Po is…**
   (a) the currency of Italy.
   (b) the highest mountain in Italy.
   (c) the longest river in Italy.
6. **What mountain range stretches from the north of Italy to the south?**
   (a) Alps
   (b) Apennine Mountains
   (c) Mount Vesuvius
7. **Who painted the *Mona Lisa*?**
   (a) Leonardo da Vinci
   (b) Michaelangelo
   (c) Vincent van Gogh
8. **Armani is an Italian…**
   (a) composer.
   (b) fashion designer.
   (c) sports car.
9. ***Prosciutto* is…**
   (a) thin slices of raw beef or fish.
   (b) an uncooked ham.
   (c) a famous Italian soup.
10. **Which Italian city was built on seven hills?**
    (a) Venice
    (b) Rome
    (c) Pisa

Unit 11: The Story of Firsts

1. **What stone did Stone Age people use to make axe-heads?**
   (a) Flint
   (b) Granite
   (c) Sandstone
2. **The first farmers invented a tool called a quern. What was it for?**
   (a) Harvesting crops
   (b) Ploughing the ground
   (c) Grinding grain into flour
3. **Which is FALSE?**
   (a) The wheel was invented in Northern Europe during the Stone Age.
   (b) The first wheel was made by the Sumerians nearly 6000 years ago.
   (c) The Ancient Egyptians improved the wheel by putting spokes in it.
4. **Who invented the first writing?**
   (a) The Sumerians
   (b) The Ancient Egyptians
   (c) The Ancient Greeks
5. **Early Christian monks wrote on…**
   (a) vellum.
   (b) papyrus.
   (c) clay tablets.
6. **Who printed the first book in 1440 AD?**
   (a) Louis Washkansky
   (b) Christiaan Barnard
   (c) Johannes Gutenberg
7. **Why is Lascaux in France famous?**
   (a) It has some of the oldest cave paintings in the world.
   (b) The first human heart transplant took place there.
   (c) The first mobile phone was invented there.
8. **The first human heart transplant took place in…**
   (a) 1767.
   (b) 1867.
   (c) 1967.
9. **What company made the first mobile phone in 1973?**
   (a) Motorola
   (b) Nokia
   (c) Apple
10. **We think the first farmers lived in…**
    (a) Iraq.
    (b) South Africa.
    (c) Egypt.

Unit 12: Rivers and Seas

1. **Which of these words means rain, sleet or snow?**
   (a) Evaporation
   (b) Condensation
   (c) Precipitation
2. **A river flows fastest in…**
   (a) the upper course.
   (b) the middle course.
   (c) the lower course.
3. **A bend in a river is called…**
   (a) a meander.
   (b) a source.
   (c) a mouth.
4. **The longest river in the world is…**
   (a) the River Amazon.
   (b) the River Nile.
   (c) the River Shannon.
5. **The River Shannon's source is in…**
   (a) County Clare.
   (b) County Limerick.
   (c) County Cavan.
6. **What is made at the Ardnacrusha Power Plant?**
   (a) Water
   (b) Electricity
   (c) Fish
7. **What tree, found on riverbanks, is sometimes used to make baskets?**
   (a) Marram
   (b) Willow
   (c) Algae
8. **Which is FALSE?**
   (a) The moon causes tides.
   (b) When the sea is close to the shore, it is called high tide.
   (c) When the sea is close to the shore, it is called low tide.
9. **What plant helps to prevent beaches from being washed away?**
   (a) Marram grass
   (b) Willow
   (c) Algae
10. **The smallest stones on a beach are always…**
    (a) closest to the sea.
    (b) furthest away from the sea.
    (c) blown away by the wind.

Unit 13: Japan

1. **Which one of these islands is not part of Japan?**
   (a) Honshu
   (b) Fiji
   (c) Hokkaido
2. **A flooded field in which rice is grown is called…**
   (a) a paddy field.
   (b) a *hashi* field.
   (c) a soya field.
3. **Japanese chopsticks are called…**
   (a) *bento*.
   (b) *hashi*.
   (c) *tempura*.
4. **Which is FALSE?**
   (a) Tokyo is one of the most populated cities in the world.
   (b) Tokyo used to be called Kyoto.
   (c) The emperor of Japan lives in Tokyo.
5. **The walls inside a traditional Japanese house are made from…**
   (a) stone.
   (b) wood.
   (c) paper.
6. **Which of these are traditional wooden clogs?**
   (a) *Geta*
   (b) *Furoshiki*
   (c) *Happi*
7. **What is *manga*?**
   (a) Japanese comic
   (b) Japanese style of animation
   (c) Japanese martial art
8. **The national sport of Japan is…**
   (a) *Judo*.
   (b) *Karate*.
   (c) *Sumo*.
9. **What is the currency of Japan?**
   (a) Yen
   (b) Ken
   (c) Zen
10. **Japan's highest mountain is…**
    (a) Mount Kyushu.
    (b) Mount Fuji.
    (c) Mount Shikoku.

Unit 14: Magnetism

1. **Which is TRUE?**
   (a) The north poles of two magnets are attracted to one another.
   (b) The south poles of two magnets are attracted to one another.
   (c) The north pole of a magnet is attracted to the south pole of another magnet.
2. **A surgeon might use a magnet when operating on…**
   (a) an eye.
   (b) a finger.
   (c) a toe.
3. **A magnet that can be switched on and off is called…**
   (a) a permanent magnet.
   (b) a temporary magnet.
   (c) an electromagnet.
4. **Magnetic levitation is known as…**
   (a) maglev.
   (b) levmag.
   (c) maglevation.
5. **Which is FALSE?**
   (a) The Shanghai Transrapid is a maglev train.
   (b) Maglev trains are cheap to build.
   (c) Maglev trains are very fast.
6. **A mixture of iron, aluminium and nickel is called…**
   (a) nicoal.
   (b) alnico.
   (c) ironic.
7. **Who made the first compasses?**
   (a) The Egyptians
   (b) The Chinese
   (c) The Romans
8. **A compass needle always points…**
   (a) north.
   (b) south.
   (c) east.
9. **Who discovered magnetite?**
   (a) The Ancient Greeks
   (b) The Ancient Romans
   (c) The Ancient Egyptians
10. **Magnetic ink is used on…**
    (a) books.
    (b) newspapers.
    (c) money.

Unit 15: Forces

1. **What type of engineer designs roads and bridges?**
   (a) Civil engineer
   (b) Software engineer
   (c) Aerospace engineer

2. **Which of these machines is NOT used in a suitcase?**
   (a) Wheels
   (b) Lever
   (c) Pulley

3. **Force is measured in…**
   (a) grammes.
   (b) newtons.
   (c) decibels.

4. **What system did the Ancient Egyptians use to move large rocks?**
   (a) Rollers
   (b) Pulleys
   (c) Levers

5. **What was invented to improve on the roller?**
   (a) The wheel
   (b) The lever
   (c) The pulley

6. **What does friction do to a moving object?**
   (a) It slows it down.
   (b) It speeds it up.
   (c) It spins it around.

7. **Which of these jobs is done to reduce friction?**
   (a) Polishing the floor of a bowling lane
   (b) Putting grit on icy roads
   (c) Putting new tyres on a car

8. **What does a lever need to work properly?**
   (a) A pulley
   (b) A wheel
   (c) A fulcrum

9. **Who invented the pulley?**
   (a) Isaac Newton
   (b) Archimedes
   (c) Albert Einstein

10. **Which of these is NOT a lever?**
    (a) A stapler
    (b) A pencil sharpener
    (c) A pair of scissors

Unit 16: Energy

1. **Which of these is a non-renewable source of energy?**
   (a) Wind
   (b) Peat
   (c) Waves

2. **What happens in a refinery?**
   (a) Oil is turned into petrol and diesel.
   (b) Peat is turned into briquettes.
   (c) Water is used to make electricity.

3. **Which is FALSE? Natural gas is…**
   (a) invisible.
   (b) a renewable source of energy.
   (c) lighter than air.

4. **Solar energy is used to run…**
   (a) aeroplanes.
   (b) calculators.
   (c) submarines.

5. **Which of these energy sources is the most environmentally friendly?**
   (a) Coal
   (b) Wind
   (c) Oil

6. **Which is FALSE?**
   (a) Carbon dioxide is a greenhouse gas.
   (b) Climate change may have killed the dinosaurs.
   (c) Too much greenhouse gases are good for the planet.

7. **How has climate change affected Greenland?**
   (a) It used to be green and now is covered in ice.
   (b) It used to be covered in ice and now is green.
   (c) It is now an ideal place for farming.

8. **How much water do most people use when brushing their teeth?**
   (a) 5 litres
   (b) 10 litres
   (c) 15 litres

9. **The Earth's climate is…**
   (a) getting warmer.
   (b) getting colder.
   (c) staying the same.

10. **Which of these is NOT made from oil?**
    (a) Vaseline
    (b) Briquette
    (c) Credit card

Unit 17: The Sun

1. **The sun sets in the...**
   (a) south.
   (b) east.
   (c) west.

2. **How long does it take the sun to do a complete spin?**
   (a) 24 hours
   (b) 365 days
   (c) 365¼ days

3. **Ireland is...**
   (a) in the Northern Hemisphere.
   (b) in the Southern Hemisphere.
   (c) on the equator.

4. **We have seasons, because the Earth...**
   (a) is spinning.
   (b) is tilted.
   (c) has a North and South Pole.

5. **Which is TRUE?**
   (a) Hot air is lighter than cold air.
   (b) Hot air is heavier than cold air.
   (c) Hot and cold air are the same weight.

6. **At what time of the day will your shadow on the ground be shortest?**
   (a) Morning
   (b) Midday
   (c) Afternoon

7. **The brown pigment in skin is called...**
   (a) chlorophyll.
   (b) UV.
   (c) melanin.

8. **Why do we need the ozone layer?**
   (a) To keep the planet warm
   (b) To protect the planet from the sun's UV rays
   (c) To help us to breathe

9. **The sun helps your body to make...**
   (a) vitamin B.
   (b) vitamin C.
   (c) vitamin D.

10. **Plants turn sunshine into food by a process called...**
    (a) photosynthesis.
    (b) chlorophyll.
    (c) melanin.

Unit 18: Materials and Change

1. **Atoms that join together are called...**
   (a) particles.
   (b) solids.
   (c) molecules.

2. **Which is TRUE?**
   (a) Smoke is a gas.
   (b) Toffee is a liquid.
   (c) Flour is a liquid.

3. **What is a conductor of heat?**
   (a) A material that allows heat to pass easily through it.
   (b) A material that stops heat from passing easily through it.
   (c) A material that melts when heated.

4. **What is an insulator of heat?**
   (a) A material that allows heat to pass easily through it.
   (b) A material that stops heat from passing easily through it.
   (c) A material that melts when heated.

5. **During snowy weather, a roof with no snow on it is a sign that...**
   (a) nobody lives in the house.
   (b) the house is well insulated.
   (c) the house is not well insulated.

6. **Which of these dissolves easily in water?**
   (a) Sand
   (b) Salt
   (c) Rock

7. **Which of these substances will NOT mix with water?**
   (a) Milk
   (b) Oil
   (c) Salt

8. **What is the saltiest sea in the world?**
   (a) Red Sea
   (b) Black Sea
   (c) Dead Sea

9. **Which of these can be used for separating mixtures?**
   (a) Colander/sieve
   (b) Blender
   (c) Grater

10. **Which sea creature uses its teeth to separate food from water?**
    (a) Dolphin
    (b) Great white shark
    (c) Humpback whale

Unit 19: Light

1. **How long does it take light to travel from the sun to Earth?**
   (a) Eight seconds
   (b) Eight minutes
   (c) Eight hours

2. **Transparent objects…**
   (a) block light.
   (b) allow light to pass through.
   (c) allow some light to pass through.

3. **Translucent objects…**
   (a) block light.
   (b) allow light to pass through.
   (c) allow some light to pass through.

4. **Opaque objects…**
   (a) block light.
   (b) allow light to pass through.
   (c) allow some light to pass through.

5. **How do sailors in submarines see above water?**
   (a) Using cat's eyes
   (b) Using a periscope
   (c) Using a telescope

6. **Which of these is NOT a type of mirror?**
   (a) Concave
   (b) Convex
   (c) Prism

7. **Which of these is TRUE?**
   (a) A lens reflects light.
   (b) A lens bends light.
   (c) A lens separates the colours in white light.

8. **What is bioluminescence?**
   (a) The scientific study of light
   (b) The way plants turn sunlight into food
   (c) The ability of some animals to make light

9. **Which of these planets is in the 'Goldilocks Zone'?**
   (a) Mercury
   (b) Venus
   (c) Earth

10. **How many colours are in a rainbow?**
    (a) Six
    (b) Seven
    (c) Eight

Unit 20: The Living Body

1. **Where in the human body would you find keratin?**
   (a) In your bones
   (b) In your skin
   (c) In your blood

2. **What is the largest organ in the human body?**
   (a) Lungs
   (b) Skin
   (c) Heart

3. **The outer layer of skin is called the…**
   (a) epidermis.
   (b) dermis.
   (c) glands.

4. **Which is FALSE?**
   (a) Your skin sweats to cool you down.
   (b) You get goose bumps when you are too hot.
   (c) The skin you can see on your body is actually dead.

5. **The parts of your body that help you to breathe are known as…**
   (a) the respiratory system.
   (b) the nervous system.
   (c) the digestive system.

6. **Where in your body would you find bronchi?**
   (a) In your heart
   (b) In your lungs
   (c) In your blood

7. **Which of these can hold their breath the longest?**
   (a) A newborn baby
   (b) Tom Sietas
   (c) A whale

8. **What does your diaphragm do?**
   (a) It helps you to breathe.
   (b) It protects your heart.
   (c) It pumps blood around your body.

9. **How many pumps does your heart have?**
   (a) One
   (b) Two
   (c) Eight

10. **Which one of these creatures has lungs?**
    (a) Whale
    (b) Earthworm
    (c) Salmon

Traffic Survey A: Vehicle Types

Name: _____ Date: _____ Class: _____

You will need: a timer or stopwatch, paper, pencil or pen

Method:

1. Choose a road or street on which to observe the traffic that passes by.
2. Decide for how long you are going to observe the traffic. The length of time you spend observing should depend on how busy the road is. If you decide to observe for three minutes, set a timer for three minutes and then count the types of vehicle that pass by.
3. Fill in the Record Sheet of Vehicles below. For example:

Vehicle:	Car	SUV	Van	Lorry	Bicycle	Motorcycle	Emergency vehicle	Bus	Digger	Other/s Tractor Caravan
Count:	15	4	2	1	1	0	0	1	0	1 0

Record Sheet of Vehicles

Vehicle:	Car	SUV	Van	Lorry	Bicycle	Motorcycle	Emergency vehicle	Bus	Digger	Other/s
Count:										

Questions:

1. Did any emergency vehicles pass by? Why do you think that was? (Hint: Is there a hospital, Garda station or fire station nearby?)

_____

_____

2. Did any lorries pass by? Why do you think that was? (Hint: Is there a shopping centre, supermarket or port nearby? Or, is it a residential area?)

_____

_____

3. Did any diggers pass by? Why do you think that was? (Hint: Are there any roadworks or building sites in the area?)

_____

_____

4. Estimate the speed of the fastest vehicle you saw. _____
5. Estimate the speed of the slowest vehicle you saw. _____
6. What is the speed limit at the site? _____

Traffic Survey B: Cars

Name: _____ Date: _____ Class: _____

You will need: a timer or stopwatch, paper, pencil or pen

Method:

1. Choose a road or street on which to observe the traffic that passes by.
2. Decide for how long you are going to observe the traffic. The length of time you spend observing should depend on how busy the road is. If you decide to observe for three minutes, set a timer for three minutes and then count the colours of the cars that pass by.
3. Fill in the Record Sheet of Colours below. For example:

Colour:	Red	Blue	Black	Grey	White	Green	Maroon	Yellow	Silver	Other/s Gold	Pink
Count:	8	4	6	3	1	1	1	0	3	1	0

Record Sheet of Vehicles

Colour:	Red	Blue	Black	Grey	White	Green	Maroon	Yellow	Silver	Other/s
Count:										

Extra Idea

Conduct your own traffic survey. For example, you could count the makes of cars (e.g. Ford, Peugeot) that pass by, or the years of registration.

- Write suitable headings on the Record Sheet below.
- Remember to decide for how long you are going to observe the traffic and to set a timer.

Record Sheet of _____

Count:										

Traffic Survey C: Traffic Lights

Name: _____ Date: _____ Class: _____

Note: You will need a stopwatch.

1. Observe the traffic light sequence. Use a stopwatch to time how long the signal stays red/amber/green.

_____

_____

2. Does each road at a junction receive the same amount of green light time?

_____

Why not? _____

_____

3. During the observation period, did any vehicle fail to obey the traffic signal?

_____

_____

4. **(a)** Are there pedestrian lights?

(b) How long after pressing the button to cross before the green man lights up?

5. **(a)** For how long does the green man remain lit up?

(b) Would this be long enough for an elderly person to cross the road?

6. **(a)** Does a signal sound when the green man lights up?

(b) Who might benefit from this sound?

7. Are there special paving slabs at the crossing to help wheelchairs to get a grip?

8. Is there another way to cross the road safely at or near to the site? (Example: pedestrian bridge)

9. Is there a school traffic warden on duty at or near the lights?

10. If the lights were broken, how difficult would it be to cross the road safely?

11. Might the traffic timing sequence change at a different time of the day? *(Tip: Consider heavy traffic heading into town in the morning and out of town in the evening.)*

_____

_____

_____

_____

_____

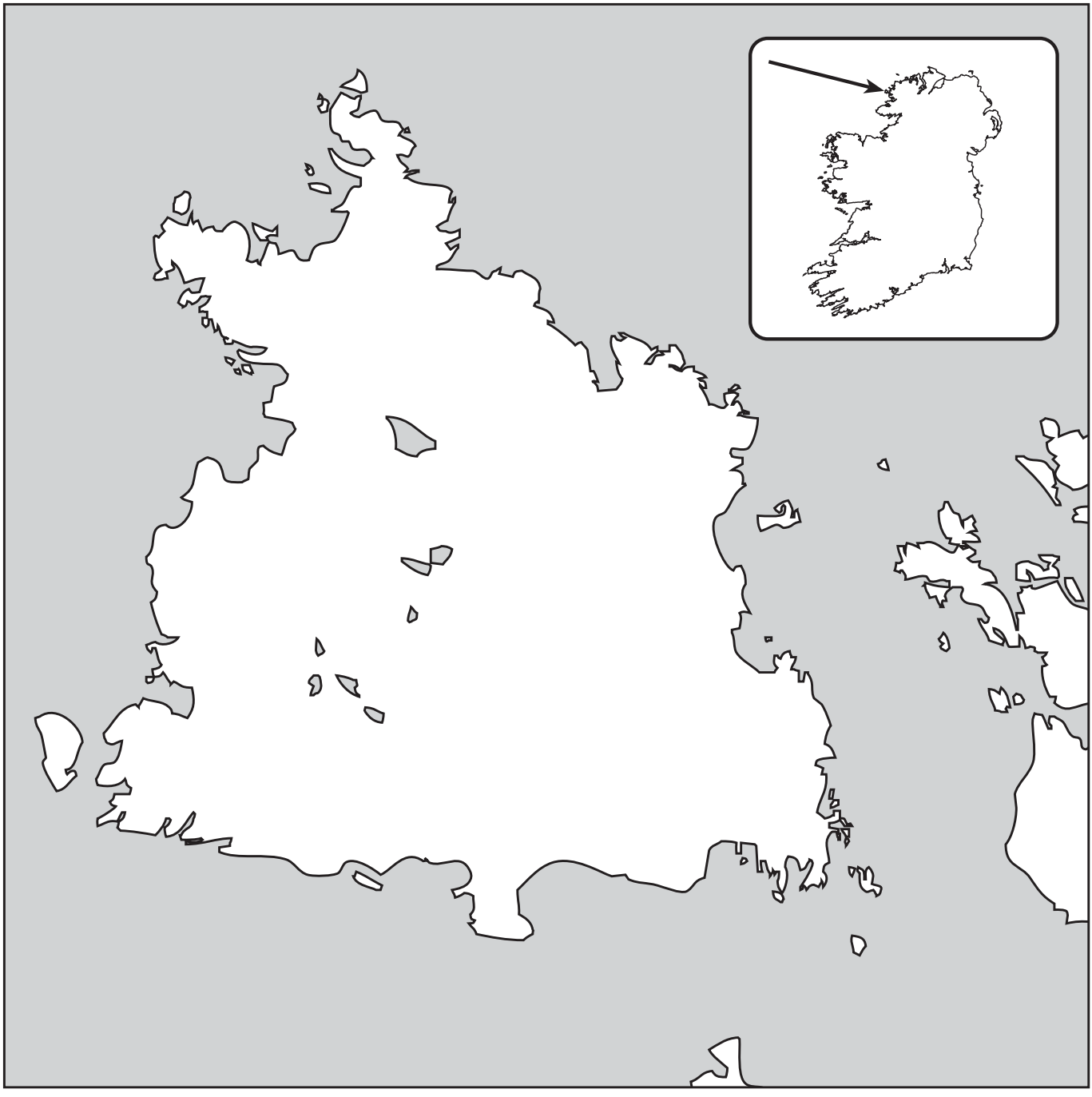
_____

Hot Science

Traffic light timing sequences are sometimes controlled electronically. They can be changed during the day in order to suit the flow of heavy traffic in one direction or the other.

Map of Arranmore Island

Name: Date: Class:



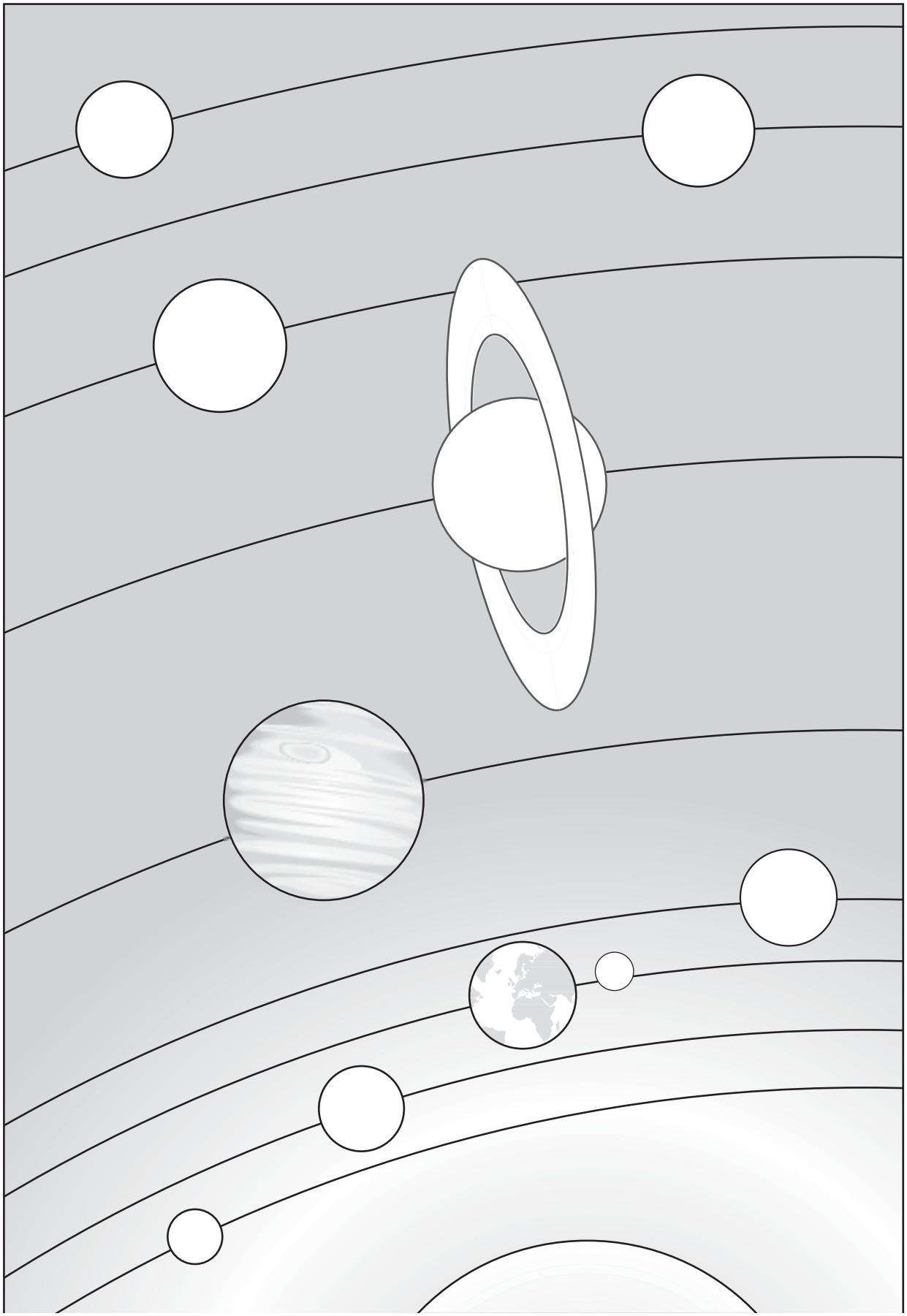
What I Think About My Work

Name: Date: Class:

What I Think About My Work			
	1	2	3
Plan	I did not make out a plan for my _____ . ☐	I made out a plan for my _____ with a few details. ☐	I made out a plan for my _____ with a lot of details. ☐
Design	I did not show the important parts of my design. ☐	I showed some of the important parts of my design. ☐	I showed a lot of the important parts of my design. ☐
Information/ Materials	The _____ that I used was/ were not very suitable. ☐	Some of the _____ that I used was/ were suitable. ☐	A lot of the _____ that I used was/ were suitable. ☐
Appearance	My _____ looks okay. ☐	My _____ looks good. ☐	My _____ looks great. ☐

Map of Italy

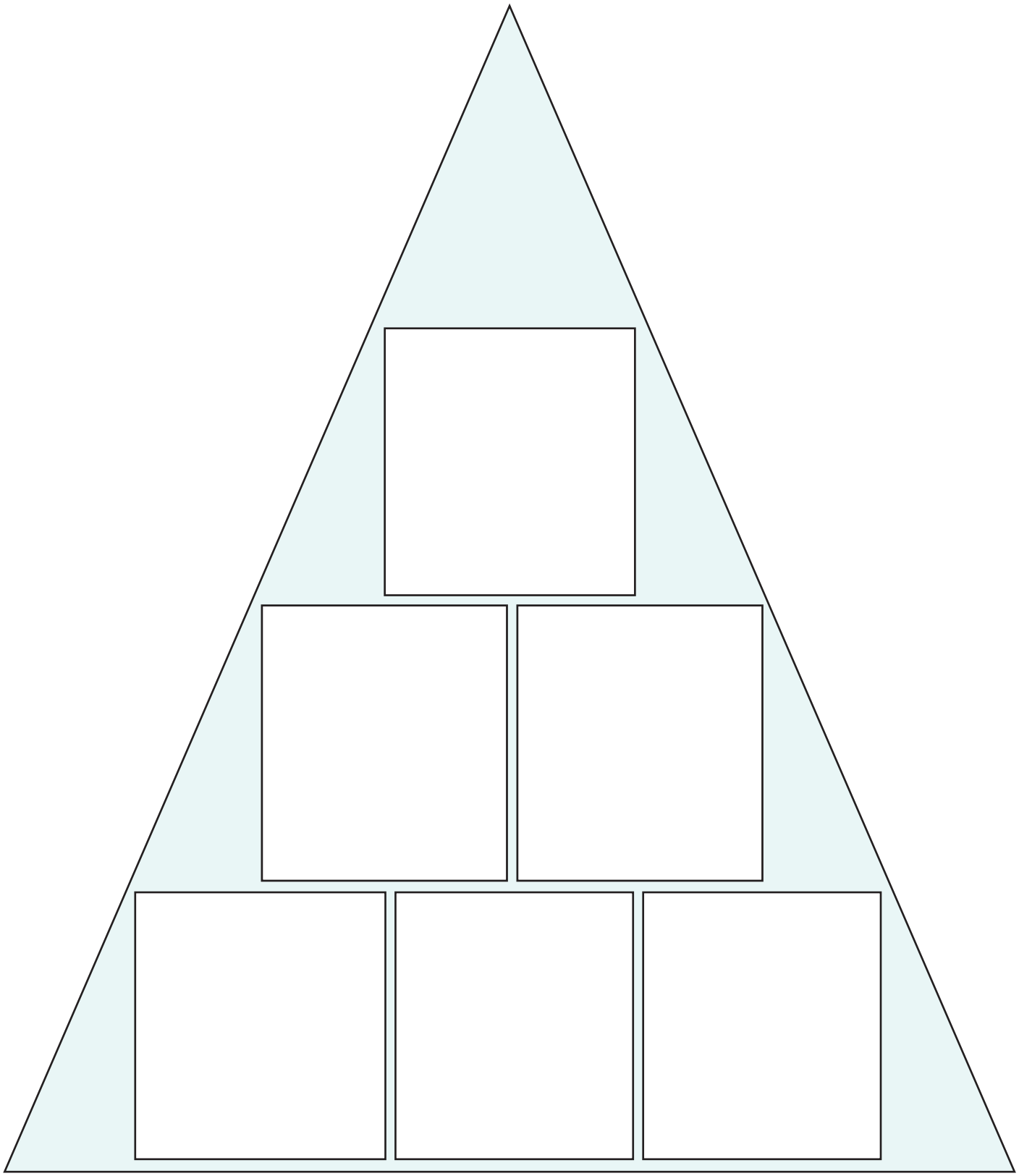
Name: Date: Class:



Pyramid-ranking Diagram

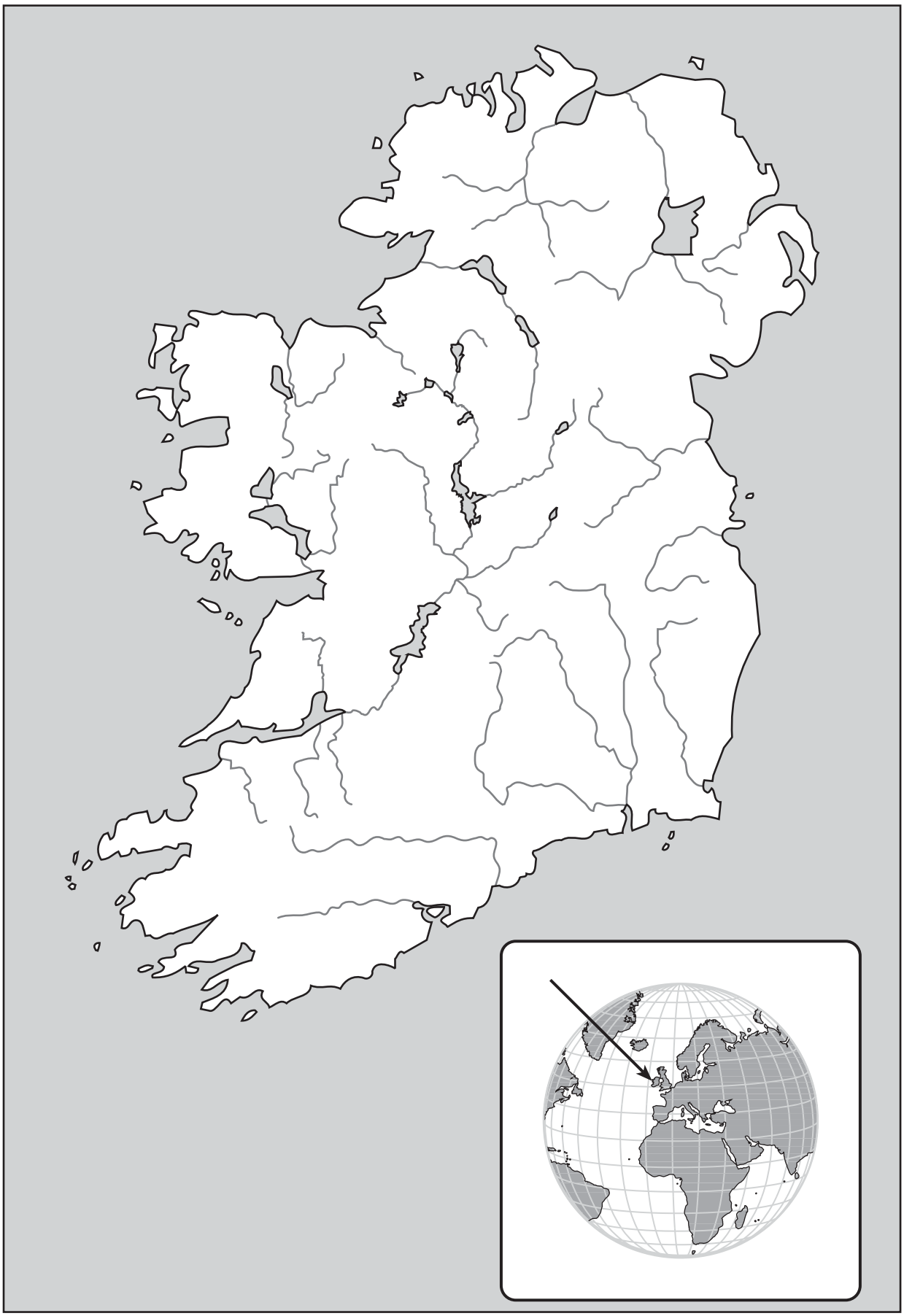
Name: Date: Class:

Topic:



Map of Ireland's Rivers

Name: Date: Class:



Map of Japan

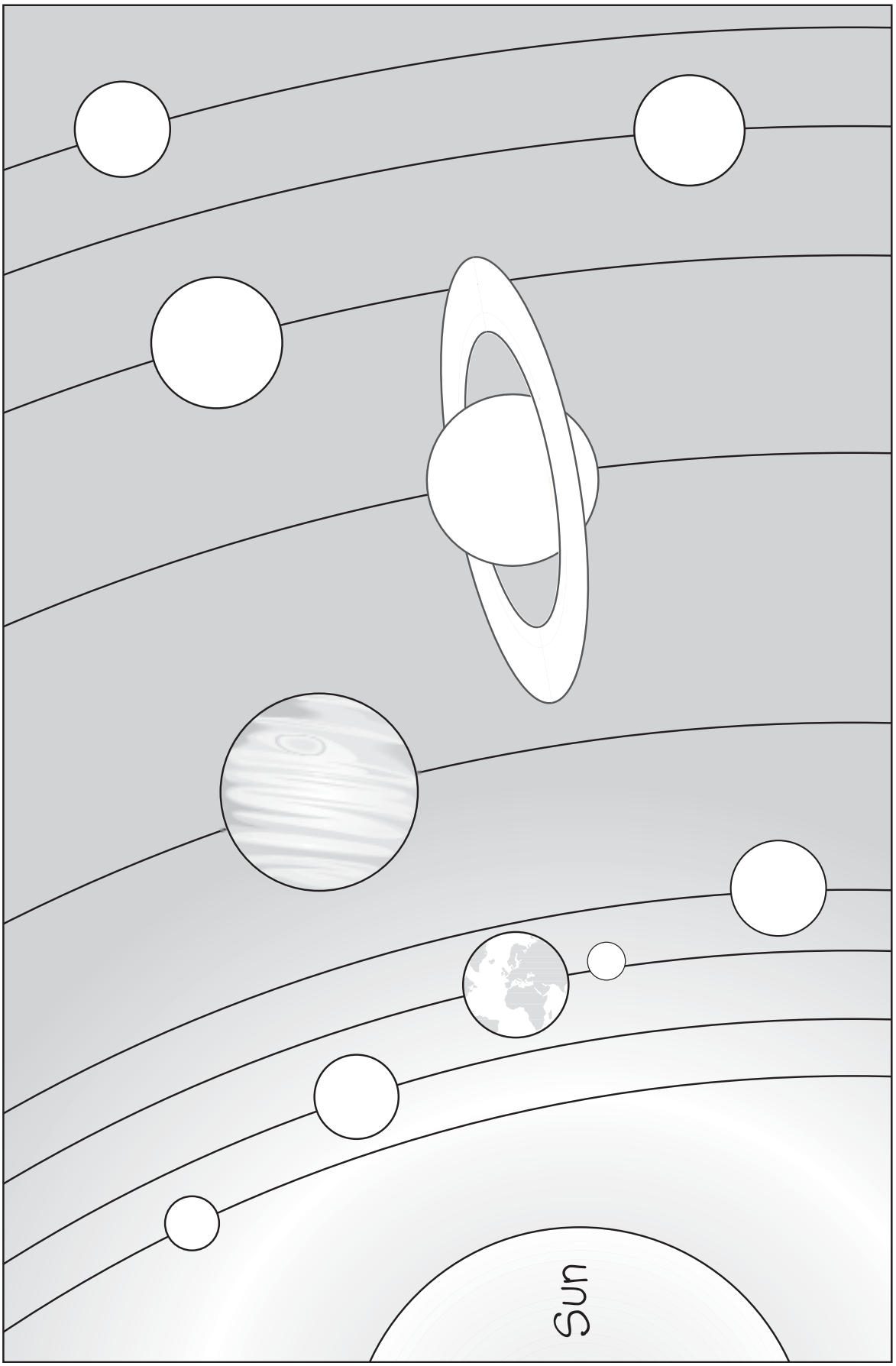
Name: Date: Class:

Colour the Traditional Japanese Costumes

Name: Date: Class:

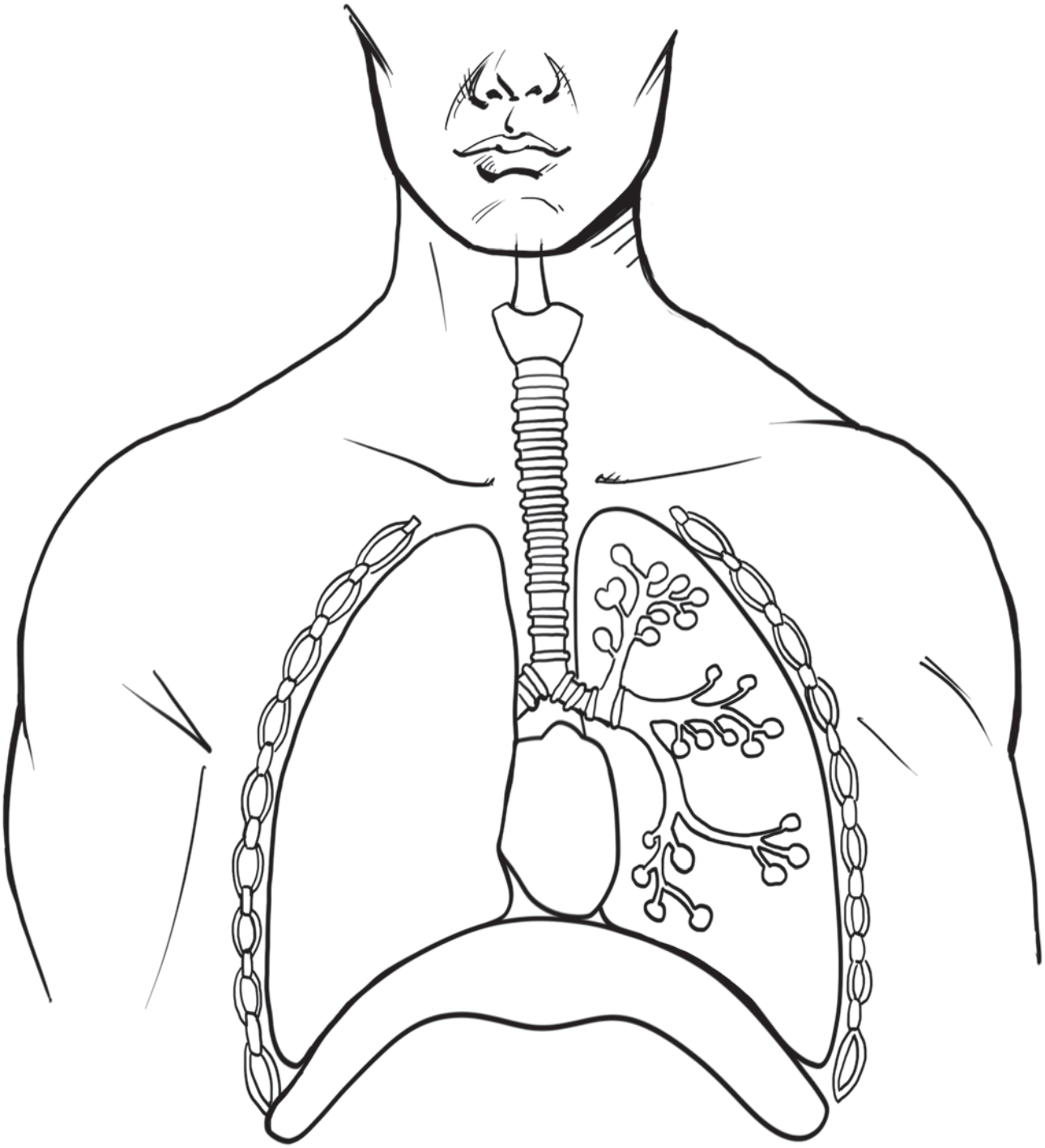
The Solar System

Name: Date: Class:



Label the Organs of the Upper Body

Name: Date: Class:



Integrated Themes

Through the use of integrated themes, a number of different aspects of the curricula can be addressed in an integrated, cross-curricular approach. This approach requires careful planning in order to avoid superficial treatment of a wide range of content.

Geography

Unit 2: Getting Around

Strand: Human Environments

Strands Units: People Living and Working in the Local Area, People Living and Working in a Contrasting Part of Ireland

- Become aware of forms of transport and transport routes in the locality and in a contrasting part of Ireland.
- Become familiar with the communication methods available.
- Investigate the work of people involved in transport and communications.

Unit 6: A Visit to Arranmore Island

Explore how to get to Arranmore Island, County Donegal.

Unit 8: People and Places

Investigate road, rail and canal transport in County Offaly.

Sample Integrated Theme: Transport Through Time

History

Strand: Early People and Ancient Societies

Unit 3: The Greeks
Unit 4: The Celts

Sailors and adventurers

Unit 5: The Romans

Road building

Unit 14: Life in Ireland in the Eighteenth Century
Unit 16: Life in Ireland in the Nineteenth Century

Transport in the eighteenth and nineteenth centuries

Unit 19: Amelia Earhart

The story of aviation

Also consider including:

Strand: Continuity and Change Over Time

- Study aspects of social, artistic, technological and scientific developments over long periods, i.e. transport.
- Identify items of change and continuity in the line of development for transport.
- Identify some of the factors that have caused or prevented change.
- Refer to or use appropriate timelines.

Science

Unit 11: The Story of Firsts

Read about the first wheel.

Unit 15: Forces

- Explore how objects may be moved – push/pull, rollers/wheels, lever, and pulley.
- Explore how some moving objects may be slowed down – friction (brakes).
- Explore the effects of friction on movement through experimenting with toys and objects on various surfaces, e.g. toy cars on ramps.

Unit 16: Energy

Strand: Environmental Awareness and Care

- Become aware of the importance of the Earth's renewable and non-renewable resources.
- Recognise how the actions of people may impact on environments, e.g. construction of buildings, roads and bridges.
- Come to appreciate the need to conserve resources.

Also consider including:

Identify some of the ways in which science and technology contribute positively to society, e.g. transport, buildings, bridges, roads.

Visual Arts

- Construction: Make model boats, cars, aeroplanes, etc.
- Design a new form of transport. Make sketches/drawings and models.
- Study traffic signs and road markings. Make sketches, drawings and rubbings.
- Make a large transportation mural.
- Make a papier mâché hot-air balloon.

Numeracy

- Data: Conduct transport surveys, e.g. how we travel to school, the types of vehicle that pass the school, etc. Use a tally and graph results.
- Measures – distance, timetables

Literacy

- Read old car advertisements and make your own advertisement for a car of the future.
- Read transport maps and timetables.
- Read novels, stories, myths and legends based on transport themes, e.g, *The Railway Children, Around the World in Eighty Days,* 'Icarus and Daedalus'.
- Read and research for a project based on the theme of great transport inventors, e.g. Leonardo da Vinci, Isaac Newton, Carl Benz, the Wright Brothers, Henry Ford, etc.
- Write safety rules for a variety of transport types.
- Imaginative writing: Write an adventure involving a hot-air balloon flight, a mission to the moon, being shipwrecked, etc.
- Read and write poetry based on a transport theme.
- Vocabulary: Create word searches, anagrams, puzzles, etc. based on a transport theme.

Drama

- One pupil should mime a person using a mode of transport, e.g. cycling a bicycle, riding a horse. Other pupils can join in when they recognise it.
- Pass a paper plate around in circle. Each pupil should improvise a form of transport and talk about his/her journey.
- Still images in groups, e.g. in a stagecoach, on the *Titanic*, in a space shuttle, etc.
- Hot seat a train driver, stunt pilot, rally driver, etc.

Music

- Sing fun songs based on transport themes, e.g. 'Grease Lightning', 'Those Magnificent Men in Their Flying Machines', 'Chitty Chitty Bang Bang'.
- Listen to: 'William Tell Overture' (Rossini's *William Tell*); 'First Movement of Spring' (Vivaldi's *Four Seasons*); *London Transport Suite* (Sidney Torch), etc.
- Listen to traffic and city sounds, and sounds from a railway station. Use percussion instruments and body sounds to compose a soundtrack.

SPHE

Myself: Safety and Protection – road safety

PE

Movement: Use sequences and dance to represent a variety of transport modes, animal movements, etc.

Geography

Unit 12: Rivers and Seas

- Learn about the water cycle.
- Conduct a study of a water habitat in the locality.
- Explore ponds, streams, rivers and seas as habitats for plants and animals.
- Explore the lifecycles and food chains/webs of animals that live near or in water.
- Explore plants growing in different areas of the habitat.
- Investigate and examine how aquatic animals and plants have adapted to their environments.
- Explore threats to water habitats.

Unit 1: Nature Is Powerful

Collecting and using water – reservoirs and water supply

Unit 2: Getting Around

- Canals
- Transport of goods by sea

Unit 6: A Visit to Arranmore Island

Life on an island

Unit 7: Weather and Climate

- Evaporation and condensation, rain, clouds, etc.
- Influence of the sea on climate

Unit 8: People and Places

Rivers and seas of my locality/Ireland

Unit 16: Energy

Renewable energy – wave power and hydroelectricity

Sample Integrated Theme: Water

History

Strand: Early People and Ancient Societies

Unit 10: The Vikings

- Vikings as seafarers
- Sea travel, navigation, longships, shipbuilding
- Arrival and settlement in Ireland

Strand: Story

Unit 11: The Saga of Leif Erikson

Sailors and adventurers

Also consider including:

Stories of other great seafarers, e.g. Saint Brendan, Christopher Columbus

Science

Unit 18: Materials and Change

- Explore the effect of heating and cooling on water.
- Investigate how materials may be changed by mixing, i.e. materials dissolved in water.
- Design and make suitable refreshments for guests at a concert, e.g. iced tea or lemonade (adding juice to water).
- Investigate the characteristics of various materials when wet and dry, e.g. experiment with papier mâché.
- Explore some simple ways in which materials may be separated: using sieves of varying meshes; allowing sediments to settle in a jar of liquid.
- Learn about the separation of water and salt through evaporation.
- Explore water as a solid, liquid and gas.

Also consider including:

Forces: Floating/sinking in fresh and salty water

Visual Arts

- Construct: A river or water shoebox diorama; models of Viking boats; 3D constructions of Viking helmets, shields and swords; a model of a Viking village.
- Use fabric and fibre to make a collage of river or sea scenes. Include weaving (fibre or paper).
- Draw/sketch a local river or seascape using a variety of media.
- Papier mâché

Numeracy

- Measurement – capacity
- Data: Plot a graph of rainwater collected.

Literacy

- Poetry: Listen to and read poems involving water themes, e.g. rainfall, a river/stream, the sea. Write shape poems, e.g. in the shape of a water drop. Write acrostic poems using the words, WATER, VIKING and PRECIPITATION.
- Read myths and legends, novels and reference books about Vikings, boats and water, and stories about life on/beside water.
- Report writing: Write reports for project work based on the theme of water.
- Instructional writing: Write recipes, experiments, instructions for making papier mâché, etc.
- Narrative writing themes: 'I Am a Viking Sailor'; 'Shipwrecked'; 'A Fish Tells Its Story'; 'Rainy Day Fun'

Drama

- Charades: Mime activities in/using water; animals in water, jobs in/using water.
- Still image of a scene on a Viking longship
- Mime a raindrop's story or the life of a salmon.
- Dramatise a story about a shipwreck or a water rescue.

Music

- Sing Irish boat songs, e.g. 'Báidín Fheidhlimí', 'Mo Cheallaichín Fionn', 'Tá na Báid'
- Sing 'The Skye Boat Song'.
- Learn songs about rivers.
- Listen to: *Water Music* (Handel); *Four Seasons* (Vivaldi); *The Blue Danube* (Strauss); Viking music; songs of the sea.
- Make music by blowing on bottles or wine glasses filled with different amounts of water. Compose a simple tune.

SPHE

Myself: Safety and Protection – water safety

PE

- Hygiene
- Water safety
- Entry to, and exit from, the water
- Buoyancy and propulsion
- Stroke development
- Water-based ball games
- Understanding and appreciation of aquatics

Useful Geography & Science Resources

Geography

http://www.seomraranga.com/links/geography Seomra Ranga links for Geography

http://www.scoilnet.ie/britannica.shtm Encyclopedia Britannica through Scoilnet (requires registration)

http://www.osi.ie Ordnance Survey Ireland

http://www.worldatlas.com Printable maps

http://www.daft.ie/maps Map of Ireland

http://www.flags.net Flags of the world

Science

http://www.scienceweek.ie Science Week website

http://www.btyoungscientist.com BT Young Scientist & Technology Exhibition

http://www.discover-science.ie Discover Science

http://www.irelandswildlife.com Ireland's wildlife

Geography and Science Packs Available in Most Schools

- Curriculum Documents – Teacher Guidelines for Science and Geography: There are exemplars in the guidelines with ready-made lesson plans for each strand unit in each class.
- Forfás Science pack – Electricity, Magnetism and Light: Every school received one of these teacher's packs containing lesson plans for each class, extension activities and the necessary equipment.
- www.pdst.ie: This website contains activity and lesson suggestions for each strand unit in each class. The material also contains ideas for investigations and Design and Make activities.
- Tree pack for National Tree Week: Every school received a copy containing photocopiable worksheets for each class and a CD. Worksheets are also available for download at http://www.coillte.ie/coillteforest/environment/learn_about_trees/.
- Sustainable Energy Ireland: The Energy File and *Guzzler* books and posters are free and contain lots of practical activities. See www.sei.ie.
- Discover Science and Maths packs: Lesson plans for middle to senior classes are available online at http://www.primaryscience.ie/.
- The Sci-Spy DVD contains background information and investigations and is available for free at http://www.scispy.ie/.
- Watch the SESE Science DVD that was sent to each school. It contains seven lessons including: Design and Make a Land Yacht or Parachute; Mini-beast Hunting; Rock Pool Dipping; Circuits; Magnets; Ramp Activities.
- The *Eureka* supplement from the *Irish Independent* contains lots of background information and practical activities based on a particular topic each month. The *Irish Times* occasionally contains supplements on topics such as birds, trees, the seashore, etc.
- The Something Fishy pack is available for download at http://www.somethingfishy.ie/index2.htm.
- The Planet Aqua pack is available for download at http://www.planetaqua.ie/.
- Enfo has packs, posters, fact sheets and games on the environment and Ireland's flora and fauna. See http://www.askaboutireland.ie/learning-zone/primary-students/enfo-kids/.
- The Geological Society of Ireland sent sample rocks, posters, worksheets and a teacher's manual to each school. Activities are also available for download at http://www.geoschol.com/downloads/activitybook_small.pdf.