



## Activity 13.7 Creating an information pamphlet on nuclear radiation Page 150



**Name:** \_\_\_\_\_

**Task:** Create an information pamphlet on nuclear radiation, using the information and success criteria outlined below for guidance.

### General Information

This research project must be submitted as an information pamphlet. Your pamphlet must have a theme. For example, your pamphlet could:

- Outline how radiation is a part of our daily lives, from natural sources like the sun to common household items. You could highlight the balance between benefits and potential risks.
- Outline how radiation affects space exploration and the challenges it poses for astronauts. You could discuss protective measures and technological advancements.
- Outline practical tips and guidelines for ensuring radiation safety in everyday environments, both at home and in the workplace.
- Outline the role of nuclear energy in addressing global energy needs and mitigating climate change. You could highlight the benefits and challenges of nuclear power.
- Outline the crucial role of radiation in medical diagnostics and treatment. You could discuss applications such as X-rays, CT scans, and radiation therapy.
- Outline how radiation is used in the preservation and analysis of art and archaeological artefacts. You could discuss techniques such as radiocarbon dating.
- Outline the discovery of radiation and its evolution over time. You could highlight key milestones and contributions from scientists.

If you wish to complete your pamphlet on any other theme, check with your teacher before starting, to ensure it is suitable.

### Success Criteria

To achieve success in this task, you should do the following:

- Include a front and back cover that represents your chosen theme.
- Explain what is meant by the term 'isotope' including examples of isotopes for different elements.
- Explain what is meant by nuclear radiation.
- Explain if nuclear radiation is harmful referring to the three main types of nuclear radiation: alpha particles, beta particles and gamma rays.
- Explain how nuclear radiation is represented referring to the symbols and equations or diagrams that are used by scientists.
- Explain what is meant by the term 'half-life' including examples of half-lives for different isotopes.
- Explain what is meant by the term 'radioisotopes' including examples and their uses.
- Use reliable and valid sources. These must be included in a bibliography on the final page of your pamphlet.
- Think creatively and present your project in a unique way.
- Present the information in your own words.

