



## Activity 4.8 Compiling an epidemic case study

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

**Task:** Compile a case study on an epidemic, using the information and success criteria outlined below for guidance.

### General Information

This research project can be submitted as a poster, video or PowerPoint presentation. If you would like to use another format, check with your teacher first. You should include information on the following:

- When and where the epidemic occurred. Give the geographical location of the outbreak, when it occurred and how long it lasted.
- The cause of the disease. State what type of pathogen it is. Give some of the characteristics of that type of pathogen. For example, what kingdom it belongs to, if it is unicellular or multicellular.
- The mode of transmission. Is it transmitted by direct or indirect contact or is it transmitted by a vector? Which type of direct or indirect contact transmission is most commonly associated with spread of the disease? If it is vector borne, what is the vector? In what countries/continents is the vector commonly found?
- The source of the disease outbreak. Identify what is thought to be the source of the epidemic you are investigating. Did it originate in an animal host? Is it known how the index case caught the disease? (The index case is the patient in an outbreak who is first noticed by the health authorities and who makes them aware that an outbreak might be emerging.)
- The incidence and prevalence of the disease. How many new cases were emerging per day or week in the early stages of the epidemic and at its height? Can you find graphs showing case numbers? What were the total number of recorded cases for the epidemic?
- Factors that affected spread of the disease. How did the cultural, economic or social conditions of the affected area impact the spread of the disease? Did it affect some people but not others? Was medical intervention readily available? If not, why not? Were there political factors that affected how rapidly the disease spread or how efficiently it was contained?

### Success Criteria

To achieve success in this task, you should:

- State the geographical location of the epidemic, when it occurred and how long it lasted.
- Identify the biological cause of the disease epidemic and outline the characteristics of the pathogen.
- Describe the mode of transmission of the disease.
- Outline what is known about the source of the epidemic. State what is known about the index patient and/or the origin of the disease.
- Define the terms incidence and prevalence.

- Gather data on both incidence and prevalence. Include a graph or other visual representation of one or both of these measurements.
- Identify factors other than the biology of the pathogen that affected the spread of disease. Clearly explain how these factors impacted how long the epidemic lasted and how far it spread.
- Use reliable and valid sources. These must be included in a bibliography as part of your presentation.
- Think creatively and present your project in a unique way.
- Present the information in your own words.