



Lesson 2: Visiting Antarctica – fieldtrip

Aim and introduction

This lesson helps pupils engage with software which integrates maps and other media so that they can plan a piece of virtual fieldwork in Antarctica.

NOTE: This lesson uses ArcGIS software – StoryMap. The link should be accessible to all however, it would be advisable to set up a free school account using this link: <https://teach-with-gis-uk-esriukeducation.hub.arcgis.com/pages/gis-for-schools>

This lesson should take 1 hour to complete.

Curriculum links

- Use Geographical Information Systems (GIS) to view, analyse and interpret data.
- Use fieldwork in contrasting locations to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information.

Learning goals

1. Work through a fieldwork enquiry cycle to plan a piece of virtual fieldwork.
2. To build confidence in using interactive map software.

Learning outcomes

- **Greater depth:**
Pupils will be able to identify several different questions around Antarctica that they might want to investigate. They can classify these questions into different categories. They will be able to work through the key parts of the fieldwork enquiry cycle to plan an effective piece of virtual fieldwork. Pupils will be able to confidently use GIS software and other appropriate online tools to support their investigation.
- **Expected level:**
Pupils will be able to identify different questions around Antarctica that they might want to investigate. They may be able to classify these questions into different categories. They will be able to work through the key parts of the fieldwork enquiry cycle to plan a sound piece of virtual fieldwork. Pupils will be able to use GIS software to support their investigation.
- **Working towards:**
Pupils will be able to identify some questions around Antarctica that they might want to investigate. They will be able to work through most of the relevant parts of the fieldwork enquiry cycle to plan a piece of virtual fieldwork – some areas might be more detailed than others. With guidance, pupils will be able to use GIS software to support their investigation.

- **Support:**

Pupils will be able to identify at least one question around Antarctica that they might want to investigate. This might not be the one they end up investigating. With guidance, they will be able to work through most of the relevant parts of the fieldwork enquiry cycle to plan a piece of virtual fieldwork – expect limited detail or development. With support, pupils will be able to use GIS software to support their investigation.

British Values (SMSC)

Moral: Developing a strong sense of personal morality; learning to make ethical and moral decisions; understanding how our actions impact others.

Challenge and support

Support pupils by questioning on their understanding of fieldwork and extreme environments. There are also a selection of enquiry questions and links to ideas on fieldwork data collection methods in the fieldwork booklet and StoryMap to support understanding.

Challenge pupils by questioning about how they could collect their data, classify enquiry questions and encourage them to create their own fieldwork enquiry. They can also explore the risks associated with fieldwork in extreme environments.

Key questions

What do you think might make it a challenge to investigate Antarctica?
How do you think you might be able to overcome that challenge?

Key terms

Fieldwork, Data collection, Geographical Information Systems (GIS), Investigation, Method

AfL

Interpretation of resources to create a fieldwork investigation.
Peer assessment of the method.

Learning resources

- Ticket to Antarctica Teacher Presentation_Visiting Antarctica
- Fieldwork booklet
- StoryMap: <https://storymaps.arcgis.com/templates/34d6644e60ac46f8aed118a1ae5c6bae>

What you will need

- Recommended: Free [School ArcGIS](#) account with access to their software.
- ICT equipment for pupils to use. Ideally one between two or a personal device.

Lesson Outline

Starter

1. Teacher presentation on fieldwork in extreme environments using Slide 2 of the teacher presentation.
2. Pupils then watch the video on the StoryMap showing different parts of Antarctica.
3. They think, pair, share some questions they would like to investigate using inspiration from the video.

Main

4. Teacher presentation on the fieldwork enquiry cycle. Explain to the class that they will be undertaking stages 1 and 2 of the cycle for the virtual fieldtrip.
5. Pupils have time to explore the different places available on their virtual fieldtrip using the StoryMap so that they can decide on where they want to focus their investigation.
6. Teacher questions the class on in any of their initial questions from the starter are still relevant or if they want to have a different question. Some examples are in the fieldwork booklet for them if they need it. Pupils then decide on what question they are investigating.
7. Pupils then use the links from the StoryMap to plan their data collection and complete the method table in the fieldwork booklet using the success criteria provided.

Plenary

8. Pupils swap their method with a peer to mark based on the success criteria. They give the method a mark out of 9 (indicating how many of the points in the success criteria they have met) then WWW and EBI for feedback.