



Lesson 1: The Antarctic Biome

Scheme of Work

Aim and introduction

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This lesson builds an understanding of the Antarctic Biome, including its physical characteristics and importance to the wider world. It contributes to pupil confidence and depth of knowledge approaching an exam question about the polar biome.

Curriculum links

An overview of the distribution and characteristics of large scale natural global ecosystems. For two selected ecosystems, draw out the interdependence of climate, soil, water, plants, animals and humans; the processes and interactions that operate within them at different scales; and issues related to biodiversity and to their sustainable use and management.

Learning goals

1. To know some of the main threats to the Antarctic biome.
2. To understand potential ways to manage the threats to the biome.

Learning outcomes

- **Greater depth**
Pupils can clearly make distinct and well-supported links between the different characteristics of the Antarctic biome. They can reflect upon and improve their understanding using their own and learnt knowledge.
- **Expected level**
Pupils can make links between the different characteristics of the Antarctic biome. They can reflect upon their understanding using their own and learnt knowledge.
- **Working towards**
Pupils can make some links between the different characteristics of the Antarctic biome. They can reflect upon their understanding using their own and/or learnt knowledge.
- **Support**
Pupils can make limited links between the different characteristics of the Antarctic biome. They can reflect upon their understanding using mainly learnt knowledge.

Key questions

- What are the key characteristics of the Antarctic biome?
- How does this biome differ from others?
- How do plant/animals adapt to this biome?

British Values (SMSC)

- **Social:** Developing strong communication and teamwork skills; understanding the importance of social responsibility.

Key terms

Characteristics, Biome, Geology, Vegetation

Learning resources in this pack

- **Download:** Ticket to Antarctica Teacher Presentation_The Antarctic Biome
- **Download:** Starter image – found in the ‘resources’ section of the teacher PowerPoint.

AfL

- Antarctica: true or false quiz.
- Reflections on questions asked at the start of the class.

Lesson Outline

Starter

1. Pupils are given a piece of an image as they enter the classroom. They put (but not stick it down) this image at the top of their note page and write questions they want to know about it.

They then need to find the other parts of this image by grouping up with others who have the rest of the image to complete a full picture. This ideally will be in a group of between 3-4 pupils

Main

2. Slides 3-6 are a teacher presentation about Antarctica, covering basic geographic facts, types of ice, and a video about why Antarctica is important to the rest of the world.
3. Slides 7 includes a QR code to a short quiz testing recall of slides 3-6.
4. Pupils complete a carousel activity identifying the key characteristics of the Antarctic biome.
 - Slide 11: **Climate**
Graph creation and analysis activity
 - Slide 12: **Vegetation**
Sketching and annotation activity
 - Slide 13: **Animals**
Video note taking and mind map
 - Slide 14: **Geology**
Synthesis of longer article

Plenary

5. Pupils reflect on the questions they wrote at the start of the lesson and use a different pen colour to answer ones they now know. They can find the remaining out as a homework task if this fits within the school's homework policy.
6. Optional video: Meet a polar scientist studying DNA and adaptation.