



Lesson 2: Food chains and webs in the Antarctic

Scheme of Work

Aim and introduction

...

This lesson asks pupils to apply their understanding of the physical characteristics of the polar biome from Lesson 1 to an exam question. It then builds pupil understanding of the Antarctic food chain and the interdependence of species and the environment.

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 apply understanding from Antarctic biome lesson an examination style question.
2. To identify some of the species in the Antarctic.
3. To apply knowledge of these species into a food web.

Learning outcomes

- **Greater depth**
Pupils will be able to apply knowledge and understanding fully in an examination style question. They will be able to make logical links through a food web using their own and learnt knowledge.
- **Expected level**
Pupils will be able to apply knowledge and understanding in an examination style question. They will be able to make links through a food web using their own and learnt knowledge.
- **Working towards**
Pupils will be able to apply mainly knowledge and show some understanding in an examination style question. They will be able to make links through a food web using learnt knowledge.
- **Support**
Pupils will be able to apply some knowledge in an examination style question. They will be able to make some links through a food web using learnt knowledge.

Key questions

- How do plants and animals adapt to the Antarctic biome?
- How are they interconnected with the characteristics learnt last lesson?
- What makes Antarctica biodiverse?

British Values (SMSC)

- **Moral:** Developing a strong ethical framework for decision-making.

Key terms

Food chain, food web, interdependent, keystone species

Learning resources in this pack

- **Download:** Ticket to Antarctica Teacher Presentation_Antarctic Food Chains and Webs
- **Download:** Ticket to Antarctica_Food web mix and match sheet

AfL

Examination style question to assess application of knowledge from the previous lesson.

Lesson Outline

Starter

1. Pupils answer an examination style question on the key characteristics of the Antarctic biome based on previous learning.

Self or peer mark using the marking criteria on Slide 3 of the teacher PowerPoint.

Main

2. Teacher presentation on the plants and animals who live in or around Antarctica.

Pupils use a mix and match sheet to link the species to descriptions on how they have adapted as well as what they eat.

Challenge pupils to look at patterns of what is being eaten and look at possible reasons as to why some organisms are more frequent while others are not.

- Alternatively, pupils can use a tool such as the one linked [here](#) to find out about the different species and complete a food web of some of the species in the Antarctic.
3. Pupils then create a food web based on the information they have gathered. They can then self-assess using the layout on the presentation (Slide 13).

Plenary

4. Pupils complete a scenario exercise where they identify what happens when a species within the food web has been affected in some way. This could be done as:
 - A whole class discussion
 - Group discussion
 - A research task in class or as homework, requiring pupils to build up information on these issues more deeply.
5. An alternate/additional activity [task](#) about the loss of krill is available here.