

arctic science lesson plan 2

Test your arctic
science skills!



Science 2 - Arctic food chain

Learning Objectives

- To teach the children about the importance food chains in the Arctic.
- To introduce the children to the idea of interdependence.
- To identify where we as humans fit into the food chain.

Key Vocabulary

Food chain

Plankton

Krill

Fish

Seals

Polar Bears

Arctic Fox

Interdependence

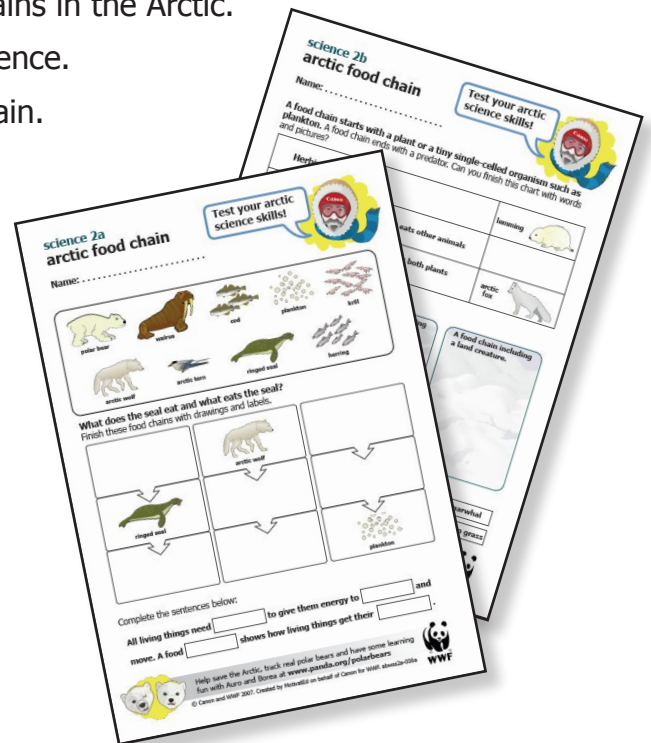
Predator

Food web

Carnivore

Herbivore

Omnivore



Resources

- Website – Arctic Science
- Science Activity Sheet 2 – Arctic Food Chain

Whole Class Introduction

- Ask the children if they know – or can guess what is meant by – the term 'food chain'?
- Establish that a food chain is essentially the order in which animals – including humans – eat other animals and plants. Generally the larger animals, such as hunters and predators, get the 'first pickings' while the smaller ones come lower down the food chain.
- Can the children work out why it is important that species survive. Talk about the concept of interdependence, which can be defined as reliance all living things have on each other in order to survive. In relation to the Arctic mention that global warming is having an effect on the food chain.
- Make a list with the class of the living things we as humans depend on, such as animals for food, materials, plants for food, wood for building, etc.
- Read through both sides of Activity Sheet 2 with the whole class. Ask for volunteers to explain the food chain process as shown on the sheet
- Explore the unfamiliar words, such as herbivore, carnivore and predator, and check that the children understand what they mean. Are humans carnivores, herbivores or omnivores? Do we

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all fall into the same category?

Independent Activities

- Ask the children to complete both sides of the activity sheet. They may need, or want to carry out further research to find out more about food chains for birds, sea creatures or land creatures.
- The children could also find out about a range of arctic animals such as the polar bear, musk ox, walrus or caribou. They should write down their findings about what these different animals eat. Which animals are dependent on sea creatures for food and how does the food chain work for them?
- Ask the children to think of themselves in the food chain. Can they make a flow chart showing how they fit into the food chain?
- The children could try writing a definition for each of the words listed under 'key vocabulary' above. Can they think of any other words to add to the food chain list?
- Ask children to explore what happens to the food chain if seals and/or polar bear numbers are diminished by global warming.

Plenary

- Ask the children to tell you two things they know now that they didn't know before about food chains. Can they describe one of the food chains shown on the activity sheet?
- Do the children understand what is meant by 'interdependence' and why this is so important for the environment?

Extension Activities

- Look into the effects global warming is having on arctic food chains and what the children can do to stop global warming.
- To reinforce and extend the concept of interdependence and food chains, the children could use the Internet to find out about food webs. What does a food web show that a food chain doesn't?
- Although it is a simple organism the krill is an essential part of the food chain for huge creatures like whales. Ask the children to find out about krill and to make an illustrated fact sheet about how the krill supports the survival of other creatures. Can they produce a food chain diagram showing where the Krill fits in?
- Ask the children to learn to spell the 'key vocabulary' words and to construct a piece of information text using some or all of the words.



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