



Plankton, Polar Bears and People

Build an arch to represent the balance of the food chain!

Activity Guide

Assemble the arch in the correct order without making it collapse! This activity will help you understand the importance of a **keystone species** like the polar bear in the Arctic habitat.

Try This!

Step 1: Place the large arch center piece standing up on an even surface.

Step 2: Arrange the plant and animal pieces according to the food chain. Think about what each animal eats.

Step 3: Keeping the order that you created, stack the pieces around the center piece. (Hint: consider turning the pieces over to check your order them by name and number.)

Step 4: Remove the center piece while balancing the plant and animal pieces around it.

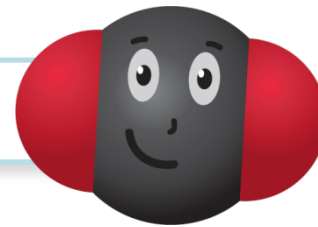


What happens when you remove the polar bear, the keystone species?

Climate Connection

The polar bear, a keystone species important for maintaining ecosystem balance in the Arctic habitat, is currently being affected by climate change. As the climate warms, sea ice breaks up earlier than normal requiring the polar bear to swim longer distances to hunt.

Did you know? Sea otters, grizzly bears, and beavers are keystone species in their different habitats.



Turn the page over to learn more!

What's Happening?

The polar bear, a **keystone species** in the Arctic habitat, is currently being affected by climate change. Most of the polar bear's diet consists of marine animals that the bear hunts from ice sheets. Although the existence of some areas of sea ice is seasonal as air temperatures rise, the sea ice is melting and breaking sooner than normal. This means that polar bears have to swim longer distances to hunt, and may have to go without food for longer periods of time.

A keystone species is very important for keeping ecosystems functioning and in balance. For example, if a keystone species like the polar bear is removed from the Arctic habitat, seal populations will rise significantly, which also affects other organisms in the food chain such as the small fish and plankton. People are affected because we also rely on many of the same species that depend on a healthy Arctic ecosystem.

Consider trying to build the arch without the large center piece! If you try to build the arch by putting the keystone piece first you will realize that it is a difficult task. The keystone holds all of the other arch pieces together and makes the arch strong and stable, much like the polar bear does for the Arctic ecosystem. Keystone species maintain the balance of their habitat.



Keystone species affect many other organisms in an ecosystem and help to determine the types and numbers of various other species in a community.

Climate Detective Challenge

Why is a keystone species important?

Find the answer to this question on the Activity Map!

