

Name _____

Daily Science

**Big
Idea 2**

WEEK 2

**Day
1**

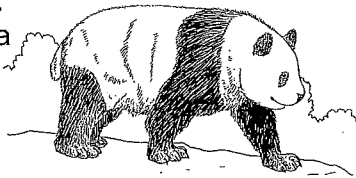
Weekly Question

**Why do pandas eat plants
but polar bears eat meat?**

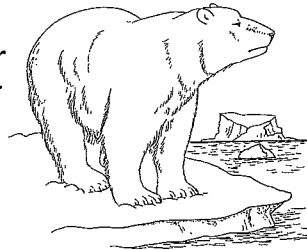
Giant pandas and polar bears are both members of the bear family. Although they are related, pandas and polar bears live in very different ecosystems. Giant pandas live in the rainy, mountainous forests of central China. They have a diet that is almost entirely made up of bamboo. Polar bears live on the flat, barren ice of the Arctic Circle. They hunt a type of seal that also lives there.

Because pandas and polar bears rely on other organisms in their ecosystem for food, they are **consumers**. To fit their unique diets and ecosystems, both giant pandas and polar bears have special **adaptations** to help them survive.

giant
panda



polar
bear



Vocabulary

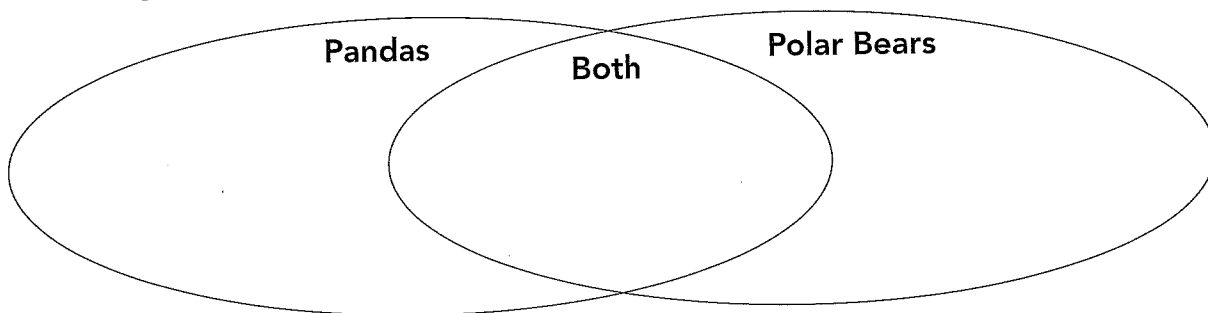
adaptation

AD-ap-TAY-shun
changes in an
organism to become
more suited to its
environment

consumer

kon-SOO-mer
an organism that
relies on other plants
and animals for food

- A. Use information from the passage to fill in the diagram below, comparing pandas to polar bears. Include where they live and what they eat.



- B. Explain how you think each animal's adaptation helps the animal survive in its particular ecosystem.

1. dolphin's blowhole: _____
2. camel's long eyelashes: _____
3. monkey's tail: _____

Name _____

Daily Science

Big Idea 2

WEEK 2

Day 2

Weekly Question

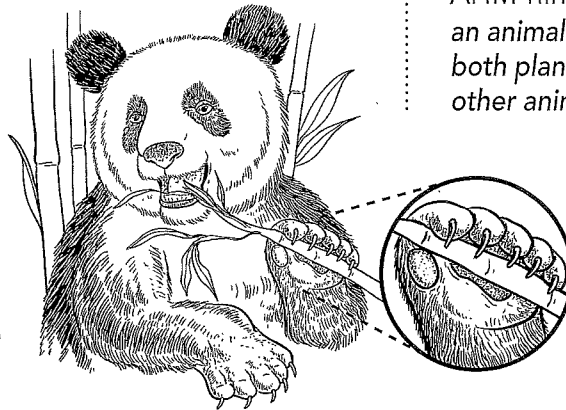
Why do pandas eat plants but polar bears eat meat?

Giant pandas live in a very small mountain region in central China. This area has plenty of rain, mild summers, and cool winters. The climate is good for the bamboo plant, which grows densely in the mountain forests. And *this* is good for pandas.

Although most bears are **omnivores**, pandas are **herbivores**. They spend about 12 hours every day eating bamboo! Why so much? It's because bamboo isn't very nutritious and their digestive systems can't digest it well. So pandas have to consume huge amounts for their bodies to absorb enough nutrients.

In order to eat bamboo, pandas have developed certain adaptations. One adaptation is flat molars that help pandas grind the plant material. Pandas also have a long bone that extends from their wrist, which allows them to better grasp bamboo shoots and leaves.

Nobody knows for sure why the pandas eat bamboo instead of other plants. But some scientists think it is because bamboo grows so densely, and the pandas don't have to compete with other animals for it.



Vocabulary

herbivore

HER-bih-vor
an animal that eats only plants

omnivore

AHM-nih-vor
an animal that eats both plants and other animals

A. Describe two adaptations that help pandas survive on a diet of bamboo.

1. _____
2. _____

B. Rewrite each sentence, changing or adding words as needed to make the statement true.

1. Most bears are herbivores. _____
2. Pandas easily digest bamboo. _____
3. A panda's habitat is hot and dry. _____

Name _____

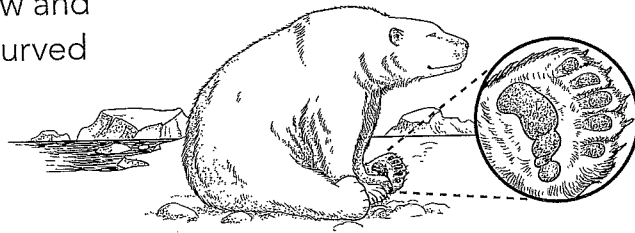
**Day
3**

Weekly Question

Why do pandas eat plants but polar bears eat meat?

Far north in the Arctic Circle, polar bears live on the sea ice, swim in the frigid waters, and inhabit nearby islands and coastlines. Their habitat is frozen most of the year, and plants do not survive in these extreme conditions. So polar bears have adapted by becoming **carnivores**. They rely on a diet that consists entirely of meat—specifically, seals. Polar bears rarely catch the seals on land or in the open water, however. Instead, the bears hunt seals by waiting on the edges of holes in the ice, where the seals surface to breathe.

Polar bears have special adaptations for living on the ice and hunting the seals. To keep from slipping, the bears have small, soft bumps on the bottom of each paw and tufts of fur between their toes. Their thick, curved claws grip the ice, as well as catch and hold their prey. In addition, a polar bear's toes are slightly webbed, which helps it swim between pieces of ice.



Daily Science

**Big
Idea 2**

WEEK 2

Vocabulary

carnivore

KAR-nih-vor

an animal that
eats other animals

A. Explain how each feature of a polar bear's paw helps it survive.

1. webbed toes: _____
2. thick, curved claws: _____
3. bumps on pads: _____

B. Answer the questions.

1. Why are polar bears carnivores, and not omnivores like other bears?

2. Polar bears have certain adaptations that most other bears don't have, including two layers of fur and a thick layer of fat called blubber. What do you think these adaptations are for?

Name _____

Daily Science

**Big
Idea 2**

WEEK 2

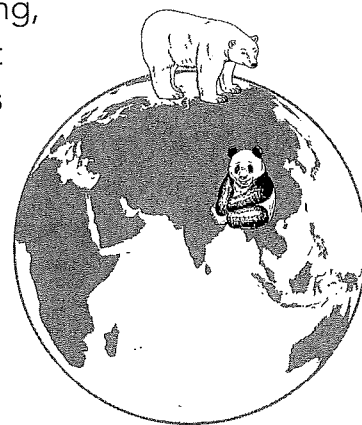
**Day
4**

Weekly Question

Why do pandas eat plants but polar bears eat meat?

Polar bears and pandas have very specific needs for survival. Polar bears depend on the presence of sea ice in order to hunt and breed. Giant pandas depend on a single plant for almost all their food. However, these animals are now being threatened with extinction. Pandas are in danger because large parts of their habitats are being destroyed, which means less bamboo for them to eat. Polar bears are at risk because the polar ice caps are melting, leaving the bears with fewer pieces of solid ice from which to hunt seals. If these changes continue, it is likely that neither polar bears nor pandas will survive.

What would be the impact of this loss on the bears' ecosystems? Scientists are currently studying this to find out more. But the good news is that the bears' shrinking populations have increased people's awareness of habitat loss and some of its causes. And this, in turn, has helped us understand the relationship between all living and nonliving things within any ecosystem—including our own.



Write true or false.

1. Melting sea ice is making it easier for polar bears to hunt seals. _____
2. Pandas depend on one kind of animal for their food. _____
3. Because of habitat loss, polar bears and pandas could possibly become extinct. _____
4. An ecosystem can be affected by changes to one habitat. _____



Many people are making efforts to try to save pandas and polar bears from possible extinction. What kinds of things do you think people could do to help these animals survive?

Name _____

Daily Science

**Big
Idea 2**



WEEK 2

**Day
5**

Weekly Question

**Why do pandas eat plants
but polar bears eat meat?**

A. Use the words in the box to complete the paragraph.

omnivores carnivores adaptations
consumers herbivores habitats

Pandas and polar bears are both _____. However, unlike other bear species, which eat both plants and animals, neither pandas nor polar bears are _____. Pandas are _____ and polar bears are _____. Both pandas and polar bears have developed _____ that allow these animals to consume the food sources available in their particular _____.

B. Would a polar bear be able to survive in a panda's habitat?
Explain why or why not.

C. Name three characteristics of, or things found in, the ecosystem of pandas. Then name three in the polar bear ecosystem.

Panda ecosystem:

1. _____ 2. _____ 3. _____

Polar bear ecosystem:

1. _____ 2. _____ 3. _____