In cold weather, animals have ways of staying warm

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Image 1. Female panda Jin Bao Bao, named Lumi in Finnish, plays in the snow at Ahtari Zoo in Ahtari, Finland, February 17, 2018. Photo by: Roni Rekomaa/Lehtikuva via AP

When the weather outside is frightful, we humans have ways to keep warm. But what about all the animals out there? Won't they freeze?

In fact, wildlife can get too cold. They can lose limbs. They can even die.

Animals Know When It Is Time To Warm Up

In order to protect itself, an animal must be able to feel the cold. For humans cold may feel like pins and needles in our fingers and toes. Animal species have their own ways of knowing that it's time to warm up.

These ways are different for different animals. Mammals and birds are warm blooded. Warm-blooded animals have to keep their body temperature steady in the cold. Cold-blooded animals' temperature changes with the weather. Reptiles and amphibians are cold-blooded. So are bees and dragonflies.

How Cold Is Too Cold?

How cold is too cold depends on the animal, too. A warm-blooded mouse will start to feel cold before a cold-blooded frog. Mammals that hibernate in winter get cold slower than other mammals.

Hibernation is a kind of torpor. Torpor is one way warm-blooded animals survive cold. Animals in torpor look like they are sleeping. They use less energy and need less food.

Torpor helps smaller animals save energy.

Animals have evolved other ways of surviving the cold.

Extra Fat, Thicker Fur

Animals may live in herds or dens. Living in groups helps them keep each other warm. They may burrow underground. They may nest in cavities like hollow trees. Some animals' bodies change when it gets cold. They may develop extra fat. They may grow thicker fur. They may trap air beneath their fur or feathers.

Have you ever wondered how geese can stand on ice or squirrels in snow in their bare feet? The secret is in the way their blood flows. They have their own built-in heating and cooling system.

But what about fish? How do they not freeze in icy waters? Luckily for fish, ice floats. That allows fish to swim freely below the solid surface. Also, fish may not sense cold the way other animals do. Some fish even have special "antifreeze proteins." That keeps them from freezing.

Another secret weapon is "brown fat." It can release energy as heat. It's more efficient than shivering. Shivering uses muscle contractions as a way to heat up.

Migration is also an option for beating the cold. Moving someplace warmer can use a lot of energy, though.

We may never know if animals dread winter. But wildlife do have ways to make sure they live to see another spring.

Quiz

1 What is one way that animals stay warm during winter?

(A) living in groups for more body warmth

(B) living in groups for more predator protection

(C) living alone for more body warmth

(D) living alone for more predator protection

2 How does migration affect animals in cold weather?

(A) They can move to a place that is not as cold but they will use more energy.

(B) They can move to a place that is not as cold but they will use less energy.

(C) They can move to a place that is not as warm but they will use more energy.

(D) They can move to a place that is not as warm but they will use less energy.

3 Why do animals hibernate in the winter?

(A) because they are too bored to stay awake

(B) because they don't like to endure cold

(C) because they use less energy hibernating

(D) because they prefer the spring season

4 According to the section "Extra Fat, Thicker Fur," WHY do fish have "antifreeze proteins"?

(A) because they make the fish freeze faster than other animals

(B) because they help the freezing water melt around the fish

(C) because they make the water freeze and float to the surface

(D) because they help to keep the fish from freezing in cold water

5 What is a special characteristic of "brown fat"?

(A) Brown fat has thicker fur

(B) Brown fat stops freezing

(C) Brown fat releases heat

(D) Brown fat causes shivering

6 Read the selection below from the section "Extra Fat, Thicker Fur."

> *Living in groups helps them keep each other warm. They may burrow underground. They may nest in cavities like hollow trees.*

What does the word "burrow" mean?

(A) grow plants

(B) dig a hole

(C) become cold

(D) live alone

7 What are two ways that animals live through winter?

(A) migrating and hiding

(B) floating and freezing

(C) freezing and hibernating

(D) hibernating and migrating

8 Read the sentences below from the section "How Cold Is Too Cold?"

They use less energy and need less food.

Torpor helps smaller animals save energy.

Which word could replace "save" WITHOUT changing the meaning of the second sentence?

(A) free

(B) raise

(C) store

(D) rescue