Name: _____ Date: _____

How a Hummingbird Sleeps Through Cold Nights

Circle group

A hummingbird is very small. It burns a lot of energy. Its wings beat so fast that they blur, and its heart races. It needs fuel, mostly sweet nectar from flowers.

In the day, this is easy. Flowers are everywhere. At night, the bird cannot feed. If it stayed awake and warm all night, it might run out of energy before morning.

So on cold nights, many hummingbirds go into a deep rest called torpor. The bird's body gets much cooler. Its heart and breathing slow down. It hardly moves. It uses only a small part of the energy it would use while awake.

In the morning, the bird shivers its flight muscles to warm up. Then it flies off to find nectar.

Torpor is a trade. The bird is slow and easy to catch while it rests. But it saves the energy it needs to live until sunrise.

Questions

1. What does a hummingbird eat for fuel?

_____

_____

2. Why can a hummingbird not feed at night?

_____

_____

3. What happens to a hummingbird's body in torpor?

_____

_____

4. How does the bird warm up in the morning?

_____

_____

5. Why is torpor a trade?

_____

_____

6. Why does a hummingbird burn energy so fast?

_____

_____

Words to know

nectar: the sweet liquid inside flowers
torpor: a deep rest where the body slows way down
energy: the power an animal needs to move and live

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How a Hummingbird Sleeps Through Cold Nights

Triangle group

A hummingbird has a problem. Its body is tiny, and it burns energy at a great rate. Its wings beat so fast that they blur, and its heart races. All of this needs fuel, mostly the sugary nectar from flowers.

During the day this is easy, since flowers are everywhere. At night, though, the bird cannot feed. A hummingbird that stayed fully awake and warm all night might run out of energy before morning.

So on cold nights, many hummingbirds go into a deep rest called torpor. In torpor, the bird's body temperature drops far below its normal level. Its heart beats much more slowly, and it breathes slowly too. It hardly moves, and it uses only a small part of the energy it would burn while awake. A bird in torpor may hang from a branch, looking almost lifeless.

In the morning, the bird shivers its flight muscles to warm up. Soon its body is back to normal, and it flies off to find nectar.

Torpor is a trade. The bird is slow and easy to catch while it rests, but it saves the energy it needs to survive until sunrise. It is one clever way a very small animal copes with the cold.

Questions

1. What does a hummingbird eat for fuel?

_____

_____

2. Why can a hummingbird not feed at night?

_____

_____

3. What happens to a hummingbird's body in torpor?

_____

_____

4. How does the bird warm up in the morning?

_____

_____

5. Why does the passage call torpor a trade?

_____

_____

6. Why does a hummingbird burn energy so fast?

_____

_____

Words to know

nectar: the sweet liquid inside flowers
torpor: a deep rest where the body slows way down
energy: the power an animal needs to move and live
lifeless: looking as if it were not alive
copes: deals with a hard problem

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How a Hummingbird Sleeps Through Cold Nights

Square group

A hummingbird faces a serious problem. Its body is tiny, yet it burns energy at an astonishing rate. Its wings beat so quickly that they blur, and its heart races as though it were running a marathon. All of this activity demands fuel, which comes mostly from the sugary nectar inside flowers.

During the day, finding fuel is easy, since flowers grow almost everywhere. At night, however, the bird cannot feed. A hummingbird that remained fully awake and warm through the dark hours might exhaust its energy before morning arrived.

So on cold nights, many hummingbirds sink into a deep rest known as torpor. In torpor, the bird's body temperature falls far below its normal level, its heart beats much more slowly, and its breathing slows as well. It hardly moves, and it consumes only a small fraction of the energy it would burn while awake. A bird in torpor may hang from a branch, looking almost lifeless.

When morning comes, the bird shivers its flight muscles to warm itself. Soon its body is back to normal, and it darts off to search for nectar.

Torpor is a careful trade. The bird is slow and easy to catch while it rests, but it saves the energy it needs to survive until sunrise. It is one clever way that a very small animal copes with the cold.

Questions

1. What does a hummingbird use for fuel?

_____

_____

2. Why is a hummingbird unable to feed at night?

_____

_____

3. What changes in a hummingbird's body during torpor?

_____

_____

4. How does the bird warm itself in the morning?

_____

_____

5. Why does the passage describe torpor as a trade?

_____

_____

6. Why does a hummingbird burn energy so quickly?

_____

_____

Words to know

nectar: the sweet liquid inside flowers
torpor: a deep rest where the body slows way down
energy: the power an animal needs to move and live
lifeless: looking as if it were not alive
copes: deals with a hard problem

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: How a Hummingbird Sleeps Through Cold Nights

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: How a Hummingbird Sleeps Through Cold Nights

Easier · 149 words · Flesch-Kincaid grade 3.2

1. Sweet nectar from flowers.
2. It cannot find nectar in the dark.
3. It gets cooler, and its heart and breathing slow down.
4. It shivers its flight muscles.
5. The bird saves energy but is slow and easy to catch.
6. It is tiny, with fast wings and a racing heart.

Triangle: How a Hummingbird Sleeps Through Cold Nights

This passage · 205 words · Flesch-Kincaid grade 5.2

1. The sugary nectar from flowers.
2. The flowers are not available to it in the dark, so it cannot find nectar.
3. Its temperature drops, and its heart and breathing slow down.
4. It shivers its flight muscles.
5. The bird saves energy but is slow and easy to catch while it rests.
6. It has a tiny body, fast wings and a racing heart.

Square: How a Hummingbird Sleeps Through Cold Nights

Harder · 226 words · Flesch-Kincaid grade 6.9

1. The sugary nectar inside flowers.
2. Flowers cannot be found in the dark, so it cannot find nectar.
3. Its temperature drops, and its heart and breathing slow down.
4. It shivers its flight muscles.
5. The bird saves energy but is slow and easy to catch while it rests.
6. It has a tiny body, fast wings and a racing heart.