

# Hibernation

## What Is Hibernation?

Some animals cannot survive in the winter because it gets so cold. This means they might not live. These animals need to hibernate. Hibernation is when animals find a safe, dry place and sleep through the winter.

Before they sleep, they spend many days eating as much as they can. They then store all this food in their bodies as fat, which keeps them alive through the winter.

After winter, spring comes. This means the weather gets a bit warmer. This is when the animals start to wake up again. Then they need to search for food.

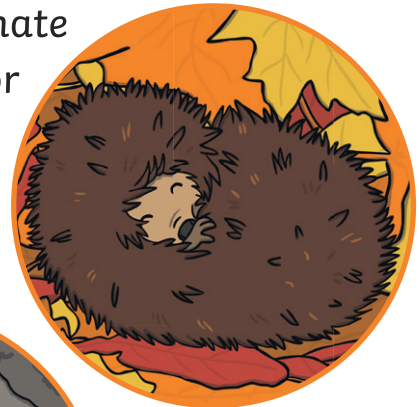
## Did You Know?

Ladybirds hibernate in large groups and they huddle together. They sleep under bark and leaf litter.

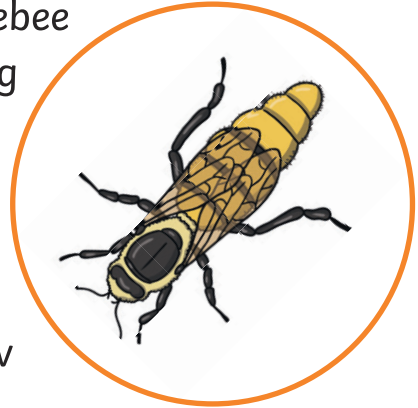
## Animals That Hibernate

**Hedgehogs:** These little mammals hibernate from November or December until March or April. They sleep under hedges or old rabbit burrows. They make a bed for themselves using dry, old leaves.

**Bears:** Some bears can hibernate for six months or more. Before they sleep, they spend time hunting out a safe, warm place and eat as much as they can.



**Queen Bumblebee:** Only the queen bumblebee hibernates; all the other bees die during the winter. She digs a short way into the ground. Then she makes a hole and hibernates in the soil. When she wakes up, about six months later, she finds a new place to build her nest and a whole new team of bees begins.



When tree frogs hibernate, they actually stop breathing and their heart stops beating. Ice crystals form in their blood because of the lack of movement and cold weather. They appear to be dead.



# Questions

1. What does 'some animals cannot survive in the winter' mean?

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2. Why do some animals need to hibernate?

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3. In your own words, explain what hibernation is.

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4. Why do these animals wake up in the springtime?

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5. What do they need to do when they wake up?

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6. What sort of bed do hedgehogs make?

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7. True or false? Ladybirds hibernate on their own.

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8. What happens to all the bumblebees except the queen during the winter?

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9. Name one reason that ice crystals form in tree frogs' blood.

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# Answers

1. What does 'some animals cannot survive in the winter' mean?

**'Some animals cannot survive in the winter' means that some animals might die during the winter.**

2. Why do some animals need to hibernate?

**Some animals need to hibernate because it gets so cold in the winter.**

3. In your own words, explain what hibernation is.

**Pupil's own answer e.g. Animals find a safe, dry place and sleep through the winter.**

4. Why do these animals wake up in the springtime?

**These animals wake up in the springtime because the weather gets a bit warmer.**

5. What do they need to do when they wake up?

**When they wake up they need to find some food.**

6. What sort of bed do hedgehogs make?

**Hedgehogs make a bed of dry, old leaves.**

7. True or false? Ladybirds hibernate on their own.

**False: ladybirds hibernate in groups.**

8. What happens to all the bumblebees except the queen during the winter?

**All the other bumblebees die during the winter.**

9. Name one reason that ice crystals form in tree frogs' blood.

**Either of these two answers: Ice crystals form in tree frogs' blood because they are so cold/because they don't move during hibernation.**

# Hibernation

## What Is Hibernation?

Hibernation is when some animals find a safe, warm place and then fall into a very deep sleep. This is so that they can survive the cold winter months. Winter is a difficult time for some animals to find food. It can also get so cold that many animals die.

When animals hibernate, their body temperature goes down and their breathing slows down too. Before they sleep, they spend many days eating as much as they can. They will then store all this food in their bodies as fat, which keeps them alive through the winter.

When the temperature outside gets a bit warmer, in the springtime, the animals that are hibernating begin to wake up.

## Did You Know?

Even some insects hibernate. Ladybirds hibernate in large groups and they all cluster together. They survive the winter by sleeping under bark and leaf litter.

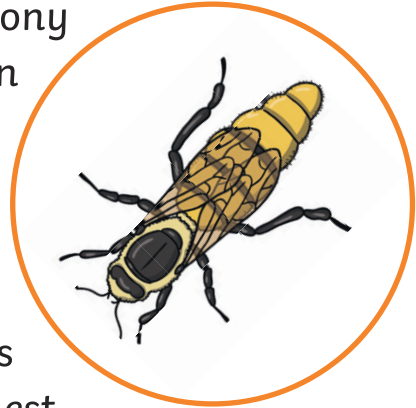
## Animals That Hibernate

**Hedgehogs:** These little mammals hibernate from November or December until March or April. They sleep under hedges or old rabbit burrows. They make a bed for themselves using dry, old leaves.

**Bears:** Some bears hibernate for just a few weeks, others for six months or more. They spend time hunting for a good place to hibernate. They eat enormous amounts of food as they are large animals and need enough fat to keep them alive through the long winter.



**Queen Bumblebee:** The rest of the bee colony will die during the winter, but the queen bumblebee can survive as long as she hibernates. She digs down in the ground about 10cm from the surface. Then she makes a hole and she hibernates in the soil. When she wakes up about six months later, she finds a new place to build her nest and a whole new team of bees begins.



### Fascinating Bat Fact

Some hibernating bats will only take a breath every two hours.



### Fascinating Frog Fact

When tree frogs hibernate they actually stop breathing and their heart stops beating. Ice crystals form in their blood with the lack of movement and cold weather. They appear to be dead.



# Questions

1. Why do some animals hibernate?

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2. What two things happen to their bodies when they hibernate?

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3. How do they know when to wake up?

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4. Where do hedgehogs hibernate?

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5. Which word means that ladybirds huddle together in a large group when they hibernate?

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6. What do bears do before they actually go to sleep?

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7. Explain two things a queen bumblebee does when she hibernates.

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8. Why do you think ice crystals form in the blood of hibernating tree frogs?

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9. Which fact has surprised you the most and why?

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# Answers

1. Why do some animals hibernate?

**Some animals hibernate because they cannot survive the cold winter or find enough food.**

2. What two things happen to their bodies when they hibernate?

**The two things that happen to their bodies are that their temperature goes down and their breathing slows down.**

3. How do they know when to wake up?

**They know when to wake up when the temperature outside gets warmer/when it's springtime.**

4. Where do hedgehogs hibernate?

**Hedgehogs hibernate under hedges or old rabbit burrows.**

5. Which word means that ladybirds huddle together in a large group when they hibernate?

**The word that means ladybirds huddle together is 'cluster'.**

6. What do bears do before they actually go to sleep?

**Bears hunt out a good place to hibernate and eat enormous amounts of food.**

7. Explain two things a queen bumblebee does when she hibernates.

**Pupils' own response including any of the following facts: digs down in the ground about 10cm from the surface/makes a hole and hibernates in the soil.**

8. Why do you think ice crystals form in the blood of hibernating tree frogs?

**Pupils' own response based on it being so cold and the frog not moving.**

9. Which fact has surprised you the most and why?

**Pupils' own response with a relevant reason.**



# Hibernation

## What Is Hibernation?

Hibernation is when certain animals find a safe, warm place and then fall into a very deep sleep to make sure that they survive the cold winter months. Apart from being very cold, winter is a time when food is scarce and difficult for some animals to find in their usual places, so instead they sleep for many weeks, sometimes months.

Whilst they are hibernating, their body temperature drops and their breathing slows down so that they are not using too much energy. They do not need to eat during hibernation because before they sleep, they spend many days eating as much as they can. They then store all this food in their bodies as fat, which keeps them alive through the winter.

When the temperature outside begins to rise, in the springtime, the animals that are hibernating begin to wake up.

## Did You Know?

Even some insects hibernate. Ladybirds hibernate in large groups and they all cluster together. They survive the winter by sleeping under bark and leaf litter.

## Animals That Hibernate

**Hedgehogs:** These little mammals hibernate from November or December until March or April. They sleep under hedges or old rabbit burrows. They make a bed for themselves using dry, old leaves.

**Bats:** Bats also hibernate from November or December to March or April, depending



on the temperature outside. They hibernate in disused buildings, old trees and caves. They hibernate on their own or in small groups.

**Bears:** Some bears hibernate for just a few weeks, others for six months or more. Before winter sets in, they spend time hunting for a suitable place to hibernate.

They eat enormous amounts of food first as they are large animals and need enough fat to keep them alive through the long winter.

**Queen Bumblebee:** The rest of the bee colony will die during the winter, but the queen bumblebee can survive as long as she hibernates. To do this, she needs to dig down in the ground about 10cm from the surface. Then she makes a hole where she hibernates in the soil. When she wakes up about six months later, she will find a new place to build her nest and she will begin a whole new team of bees.



### Fascinating Bat Fact

One bat hibernated in captivity - in a zoo - for 344 days! Bats in the wild hibernate for less time. That bat was asleep for nearly a year! Some hibernating bats only take a breath every two hours.

### Fascinating Frog Fact

When tree frogs hibernate, they actually stop breathing and their heart stops beating. Ice crystals form in their blood due to the lack of movement and the cold. They then appear to be dead.

# Questions

1. Explain why some animals need to hibernate.

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2. Which word has the author used to explain that there might not be much food around in the winter time?

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3. Describe what changes happen to their bodies whilst they are hibernating and explain why they occur.

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4. Which season do they avoid and which season do they wake up in?

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5. Why do bears eat as much food as they can before hibernating?

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6. Why do you think bats in the wild hibernate for less time than bats in captivity?

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7. Where would you expect to find ladybirds during the winter months?

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8. Describe how a new colony of bumblebees develops each year.

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9. If you saw a tree frog hibernating, why might you think it was dead?

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10. Give two reasons why ice crystals form in the tree frog's blood.

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11. Which fact do you find most interesting? Explain your reasons.

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# Answers

1. Explain why some animals need to hibernate.

**Some animals need to hibernate because they cannot find food and the winter gets so cold.**

2. Which word has the author used to explain that there might not be much food around in the winter time?

**The word the author uses to explain there might not be much food around is 'scarce'.**

3. Describe what changes happen to their bodies whilst they are hibernating and explain why they occur.

**Whilst the animals are hibernating, their body temperature drops and their breathing slows down so that they are not using too much energy.**

4. Which season do they avoid and which season do they wake up in?

**The animals avoid winter and wake up in the spring.**

5. Why do bears eat as much food as they can before hibernating?

**Bears eat as much as they can before hibernating, because they need to store fat in their bodies to keep them alive during the winter.**

6. Why do you think bats in the wild hibernate for less time than bats in captivity?

**Pupils' own response but possibly mentioning that animals in the wild might get disturbed or animals in captivity might be better looked after.**

7. Where would you expect to find ladybirds during the winter months?

**I would expect to find ladybirds under bark or leaf litter in the winter months.**

8. Describe how a new colony of bees develops each year.

**A colony of bees develops when the queen bumblebee hibernates and in the spring wakes up, finds a new place to build her nest and starts a new colony.**

9. If you saw a tree frog hibernating, why might you think it was dead?

**You might think a hibernating tree frog is dead because its breathing and heartbeat stops.**

10. Give two reasons why ice crystals form in the tree frog's blood.

**The ice crystals form because the tree frog is so cold and it doesn't move.**

11. Which fact do you find most interesting? Explain your reasons.

**Pupil's own response with relevant reasons.**