

# Amazing Adaptations!

Adaptations are changes that happen over long periods of time, sometimes millions of years! They help species to survive in different environments so plants and animals are specially adapted to suit the habitats where they live.

Plants and animals in the U.K. are used to cold winters - they have **adapted** to the weather conditions.

How do Hedgehogs survive British winters?

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How do **you** cope with the cold?

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How do some British trees cope with the cold?

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In rainforests, the weather never gets very cold. Do you think rainforest plants and animals would be able to **survive** in the British countryside?

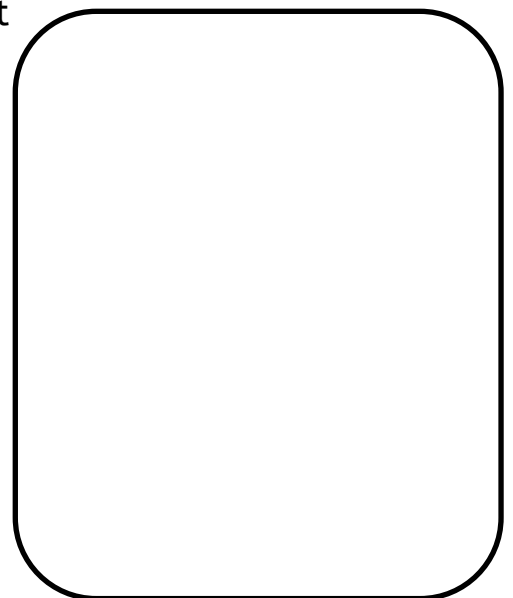
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**During your visit to The Living Rainforest you will look at how plants and animals have adapted to a rainforest environment.**

In the box, draw an animal that lives in the rainforest canopy.

If you were an animal that lives in the rainforest canopy, what things would you need to be good at?

- 1.....
- 2.....
- 3.....
- 4.....



## Here comes the sun



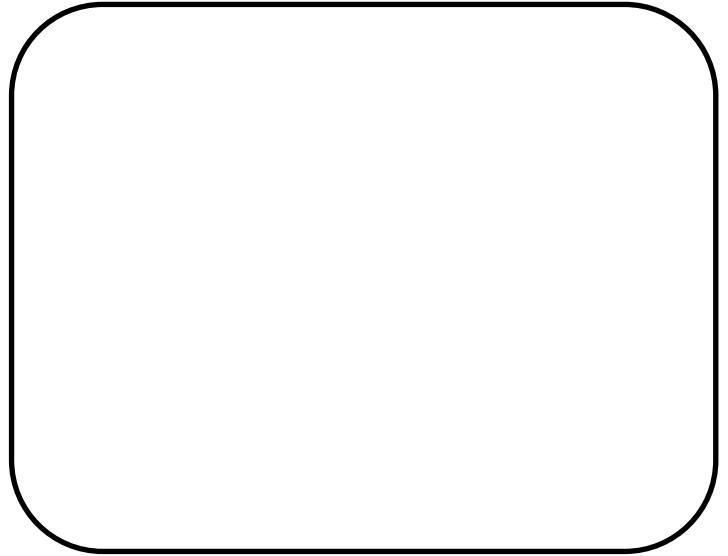
The forest floor is a dark, humid place as the dense canopy layer filters out most of the sunshine. Plants growing on the forest floor have adapted to the lack of sunlight in clever ways.

## Big leaves

Find the **Giant Taro plant** and draw a picture of one of its leaves in the box.

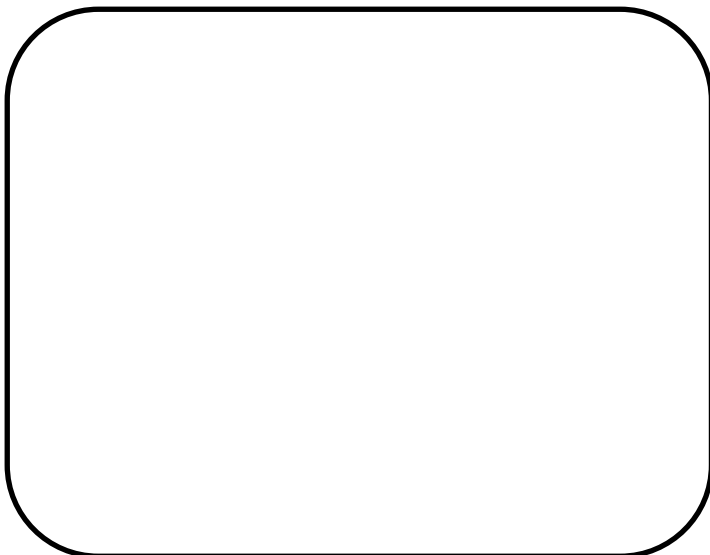
Why has the Giant Taro adapted to have such enormous leaves?

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## Hitch-Hikers

Some plants have adapted to grow on other plants in the understorey or high up in the canopy. They are called **Epiphytes**. Find an epiphyte and draw a picture of it (you could choose the **pitcher plant**, or a **bromeliad**, or an **orchid**)



How does your plants adaptations help it survive in the canopy?

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## Too much water

Water is a vital part of the rainforest and all plants need it to grow and survive. Sometimes however it rains very hard in the rainforests.



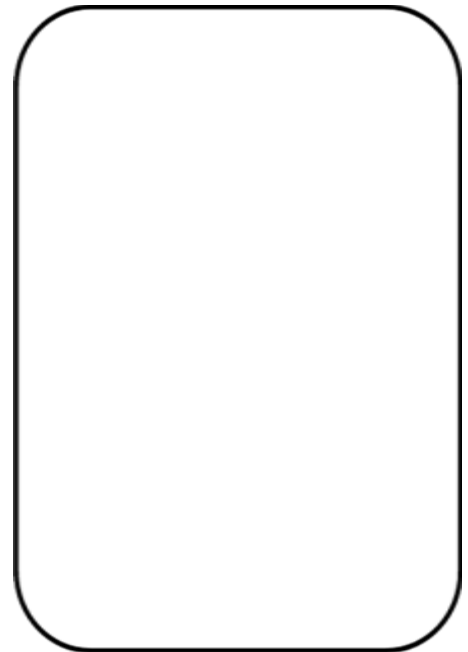
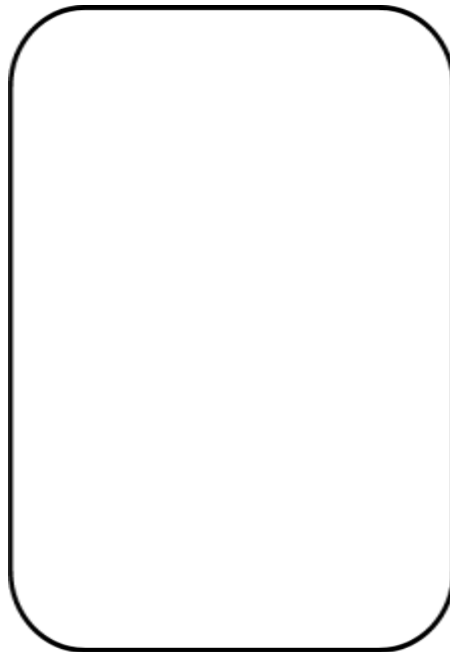
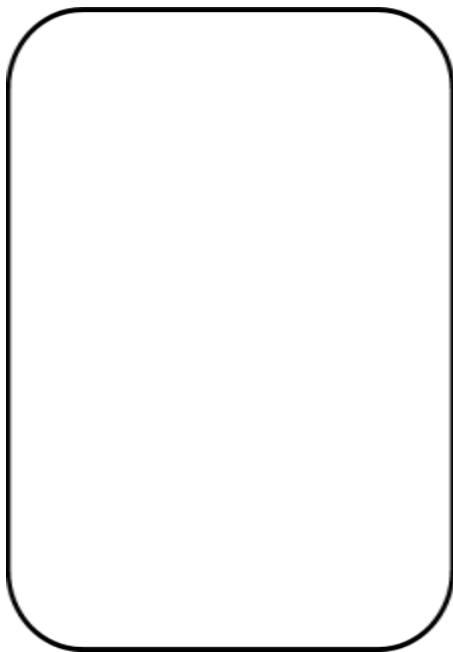
Why can this be problem for plants?

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Can you draw and label 3 adaptations different leaves have made to remove excess water from their surface? Name a plant(s) that use each type of adaptation?



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## Surviving in the jungle

Animals living in the rainforest are always **competing** with each other for food and space - and trying not to get eaten by something bigger! **To survive, they have adapted in clever ways to suit their environment.**

Try to complete the table below, naming as many of the animals as you can find in the glasshouses. Then write down the ways in which they are adapted to their environment and how the adaptations help them to survive.

Name of animal	Layer of rainforest it lives in	Adaptation

## Rainforest Specialists

Our family of **Geoldi's Monkeys** are a troop of rainforest specialists!

Tick the adaptations below which you think are true and help them survive.

- Small size
- Good eyesight and hearing
- Variety of vocalisations to communicate
- Black colour for camouflage
- Claws on feet and long tail for climbing, jumping and balancing
- All of the above

Select one of the above adaptations and explain how it would help a monkey in the rainforest.

..... would help because .....

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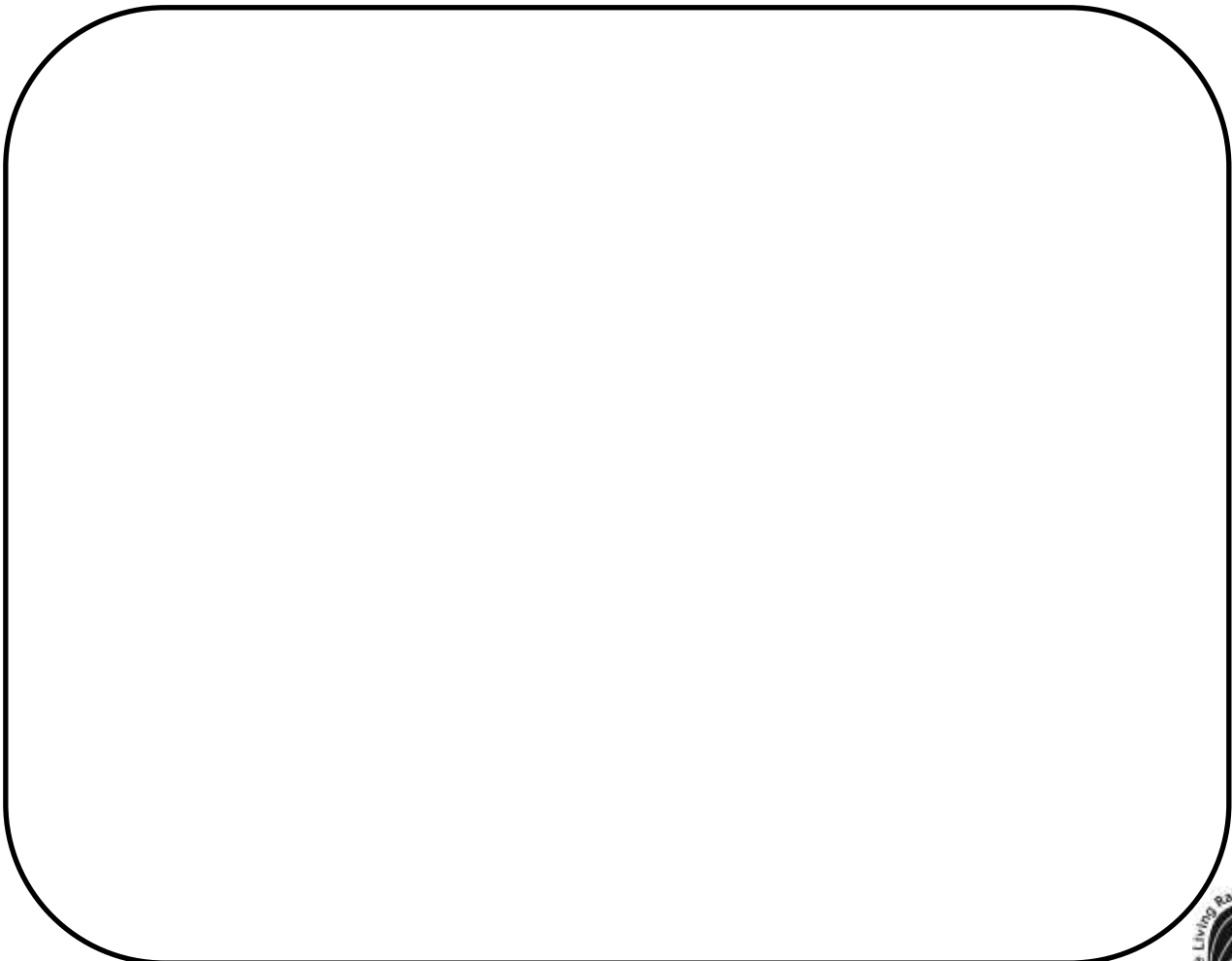
# Camouflage

Camouflage is an important method of defence for canopy creatures.

Can you list **3 animals** that have adapted to use camouflage as protection - disguising themselves from predators? What colours they are?

1. ....
2. ....
3. ....

Draw a picture of your favourite animal in the rainforest that uses camouflage. Label their colour and write how it helps them to disguise themselves.



# Jewels of the Rainforest

Colour the **Poison dart frog** with bright colours

Why have these frogs adapted to be so brightly coloured?.....

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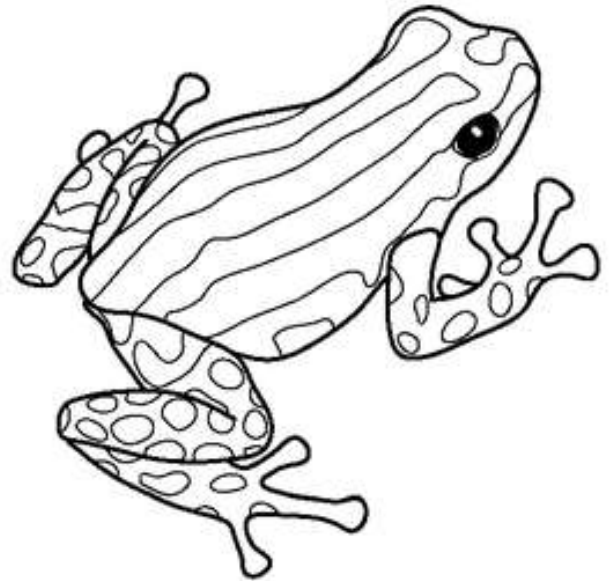
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## Microhabitats

Fit the words in the box below into the following paragraph to find out about a rainforest microhabitat. Each word is only used once.

Dart frogs have a special relationship with a P..... found in the canopy layers called a B..... The plants form a M..... as W..... collects in the base of the plant forming P..... for the frogs to lay their E..... in.

In the Bromeliad pools the eggs are protected from P..... who might eat them and M..... into T..... Food is provided by L.....L..... falling into the pools and once the tadpoles turn into froglets they climb down to the F.....F..... to live as A.....

Microhabitat	Tadpoles	Bromeliad	Adults
Pools	Predators	Forest Floor	
Metamorphosis	Eggs	Water	Leaf Litter





## New animal discovered!

Can you be as clever as nature? The animals you saw at The Living Rainforest have adapted in many ways to the hot, wet environment. Now it is your turn to design an animal with special adaptations to cope with the conditions in a rainforest.

Think about the following:

1. Which layer of the forest does your animal live in?
2. What type of animal is it (bird, insect, reptile, mammal, fish...)?
3. What special adaptations does it have?
4. How do these help it to survive?

Now **draw** and **label** a picture of your animal.