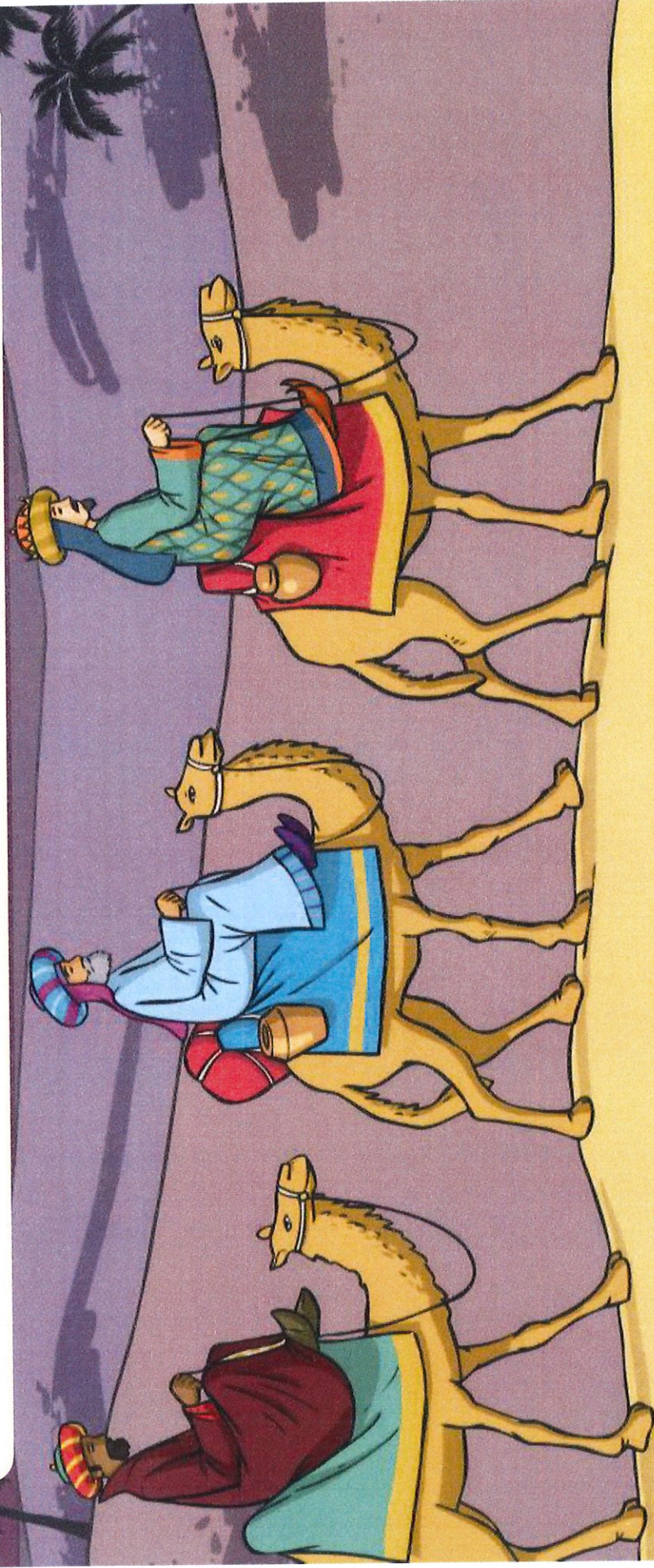


Aim

- To understand what Epiphany celebrates.
- To know the story of Epiphany.



What is Epiphany?

Epiphany is a Christian feast day of celebration.
The earliest mention of Epiphany as a Christian feast was in AD 361, by
Ammianus Marcellinus, who was a Roman soldier

The word 'epiphany' comes
from the verb 'to appear'. This
means that the feast of
Epiphany is a celebration of the
time the Baby Jesus was seen
by the visitors who had
travelled to see him.

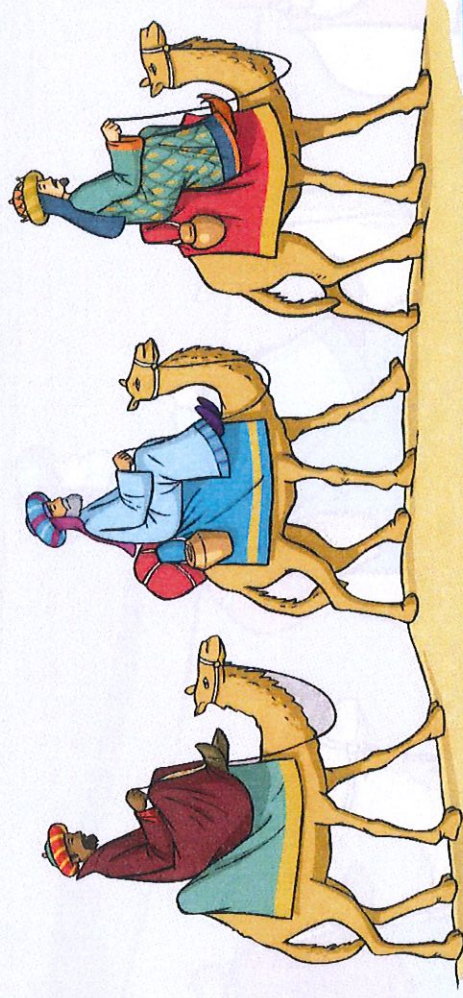


Who do you think these visitors were?

The Visitors

The visitors were the Wise Men. They are sometimes called the Three Kings.

They studied the stars and constellations. In those days, people 'read' the stars and interpreted what they meant.



These men lived in the east, so they were possibly from Persia, which is now called Iran.

Did you know?

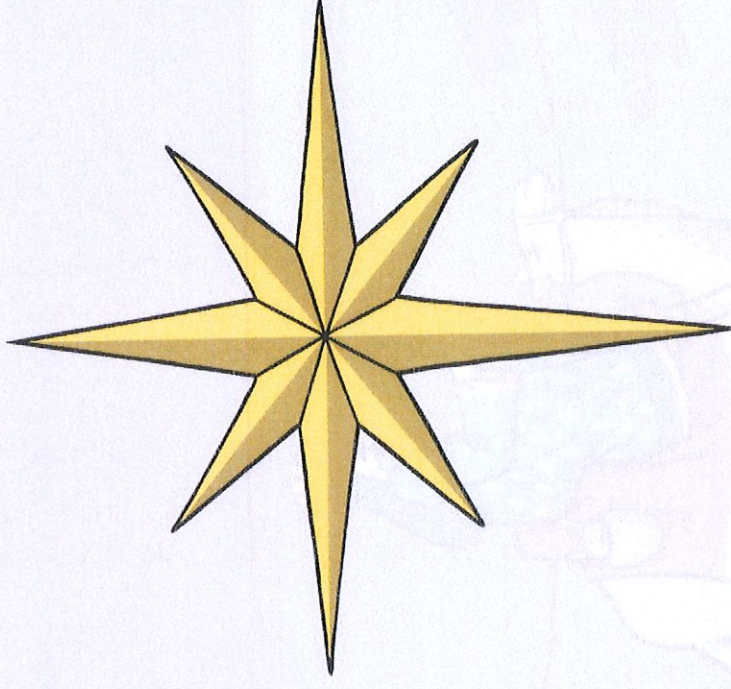
The Wise Men are often called Magi, which was a word given to describe priests and clever men.

The Meaning of the Star

The Wise Men were very clever, and understood the religious writings that had been written many years before.

These religious writings told them that one day there would be a great star and the star would mean that a new king had been born.

So when they saw this star, the men decided to pack up their belongings, and follow the star to wherever it led them.

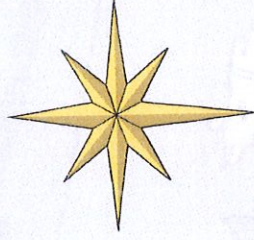


What do you think this tells us about these men?

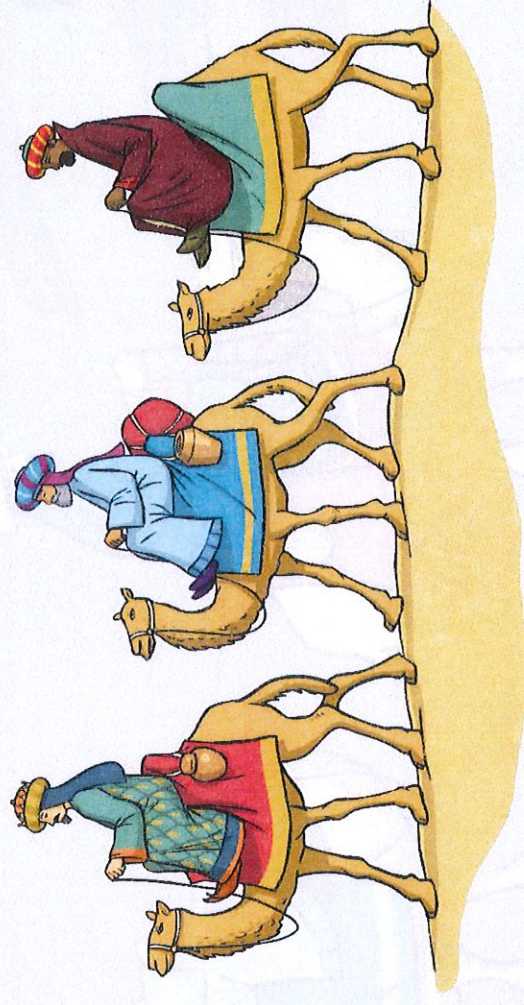
The Journey

The journey would have been very long. It is approximately 1000 miles from Persia to their destination.

The Wise Men probably travelled on camels, across deserts and over mountains, in very extreme weather.



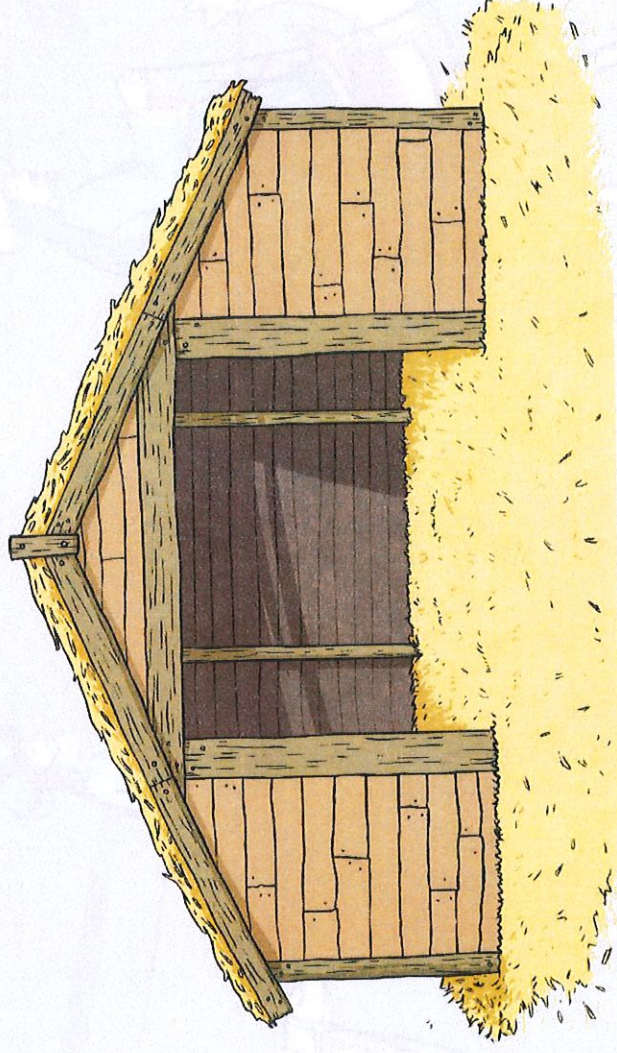
The star led them to
the town of
Bethlehem in Israel.



What difficulties do you think they might have faced on their journey?

The Place They Found Jesus

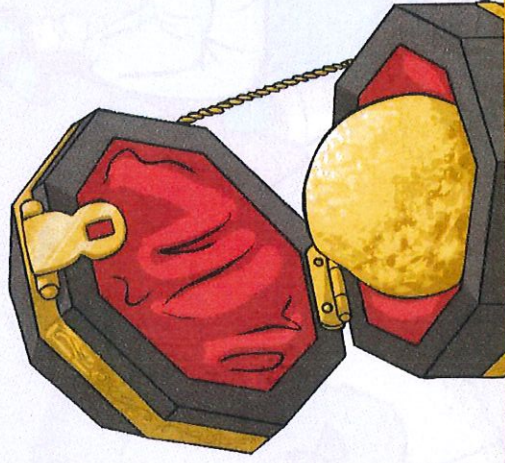
The star came to rest over the place where the Baby Jesus was. It is often thought they were in the stable, but the Wise Men arrived so much later after Jesus was born, they actually found him living in a house in Bethlehem, with his mother and father.



The Gifts

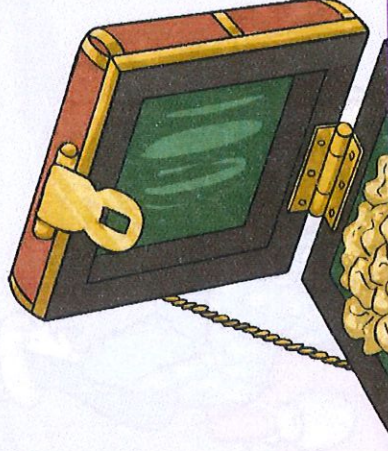
The Wise Men had taken expensive gifts with them. Gifts suitable for a king.

They brought gold, which was a sign of their love.



Gold was a very precious and expensive metal.

They brought frankincense, which was a sign of their faith.



Frankincense was an expensive sap from an African tree. It would be burnt to release a calming scent.

The Gifts

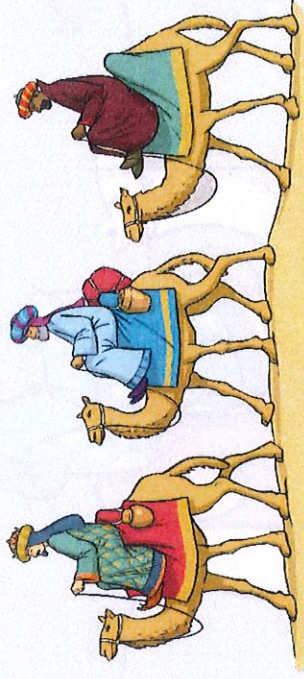
The Wise Men had taken expensive gifts with them. Gifts suitable for a king.

They brought myrrh, which was a sign of obedience to the king.



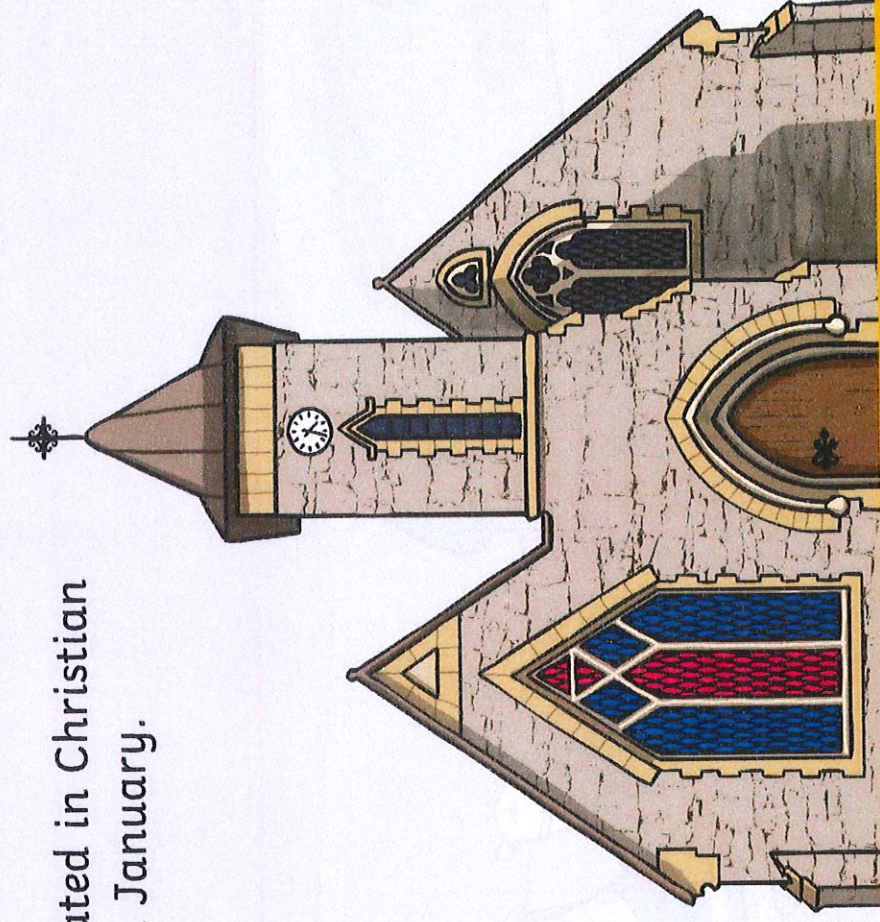
Myrrh was also the sap from an African tree. The tree grew in rocky, shallow ground. It would have been like an oil.

Why do you think the Wise Men are often called the Three Kings?



The Feast of Epiphany

The feast of Epiphany is celebrated in Christian churches, usually on 6th January.



How do we know about this story?

Can you create a storyboard based on the Epiphany?

Storyboard

1 – Epiphany (The Feast)

2 – The Visitors

3 – The Meaning of the Star

4 – The Journey

5 – Where was Jesus?

6 – The Gifts

Story Board

1 – Epiphany (The Feast)	2 – The Visitors	3 – The Meaning of the Star
4 – The Journey	5 – Where was Jesus?	6 – The Gifts



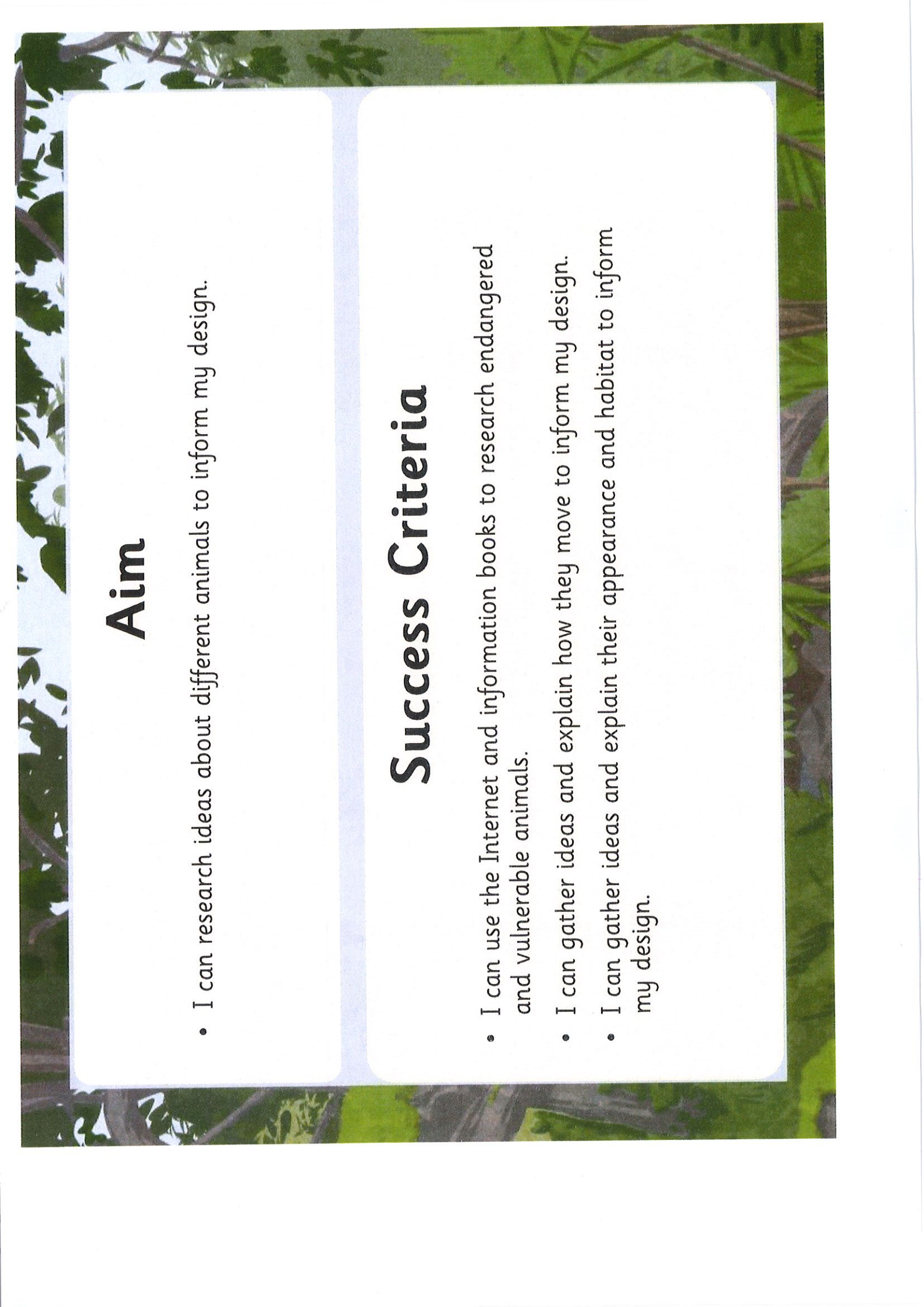
Design and Technology

Automata Animals

Amazing Animals



twinkl



Aim

- I can research ideas about different animals to inform my design.

Success Criteria

- I can use the Internet and information books to research endangered and vulnerable animals.
- I can gather ideas and explain how they move to inform my design.
- I can gather ideas and explain their appearance and habitat to inform my design.

Design Brief



The 'World Wide Fund for Nature' is an international non-governmental organisation founded on April 29, 1961.

It works on issues regarding the conservation, research and restoration of the environment.



Design Brief

The WWF (World Wide Fund for Nature) want to get people interested in caring for the endangered/vulnerable animals which live on our planet.

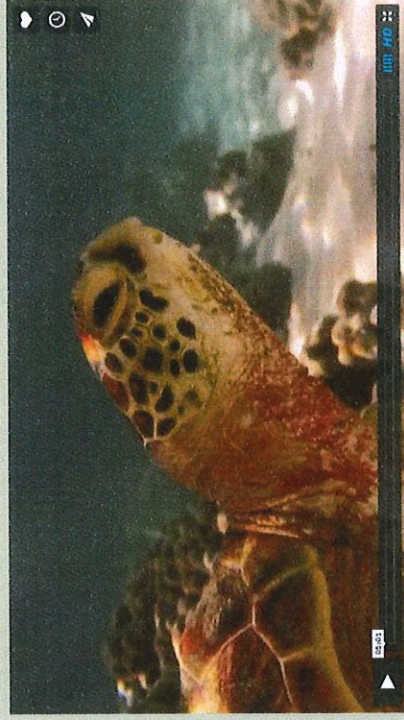
They think it would help if people could see the animals in more detail.

The WWF do not believe it is ethically correct to put live animals on display. They believe that animals should be left to thrive in their natural habitat.

A different way to show the animals could be to use working, moving models.

Design Brief –To create a collection of appealing moving mechanical animal models (automata animals) that will captivate people's interest.

Watch this video about a sea turtle, which is an endangered animal.





Exploring Animals

als

Name	Movement	Appearance	Habitat
Sea turtle			
Adelie penguin			
Bottlenose dolphin			
Giant panda			
Orangutan			

Habitat

Name	Movement	Appearance	Habitat

Habitat

Name	Movement	Appearance	Habitat

Habitat

Describing Animals



Now think about the Adélie penguin
- a vulnerable animal.

You can tell Adélie penguins apart
from other penguins by their simple
black and white markings and the
distinct white ring around their eyes.



As you watch the short clip fill in the
Exploring Animals Activity Sheet.

Exploring Animals				
Name	Movement	Appearance	Habitat	
Sea turtle				
Adélie penguin				
Bottlenose dolphin				
Giant panda				
Orangutan				



Further Research

In preparation for making a realistic working model of an animal with moving actions you will research the different characteristics of endangered animals.

Exploring Animals

Star icon

Exploring Animals

Star icon

Exploring Animals

Star icon

Name	Movement	App
Sea turtle		
Adelie penguin		
Bottlenose dolphin		
Giant panda		
Orangutan		
Bengal tiger		
Black rhino		
Snow leopard		
Asian elephant		

Name	Movement	App
Sea turtle		
Adelie penguin		
Bottlenose dolphin		
Giant panda		
Orangutan		
Bengal tiger		
Black rhino		

Name	Movement	Appearance	Habitat
Sea turtle			
Adelie penguin			
Bottlenose dolphin			
Giant panda			
Orangutan			

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Classifying



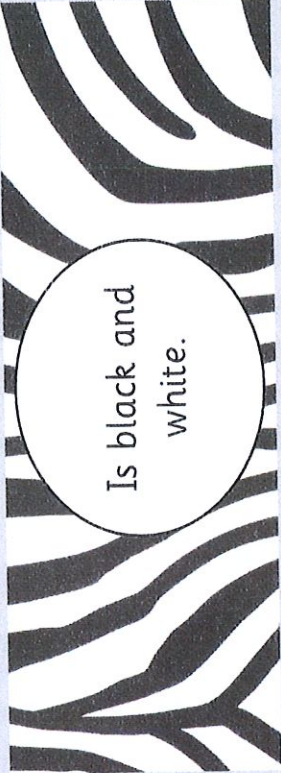
Look at these headings.

On your sticky note, write the name of an animal that you have looked at today which would belong in that group.

Have you found an animal that belongs under two or more headings?



Lives in the sea.



Is black and white.



Uses pouncing movements to catch prey.

Aim

- I can research ideas about different animals to inform my design.

Success Criteria

- I can use the Internet and information books to research endangered and vulnerable animals.
- I can gather ideas and explain how they move to inform my design.
- I can gather ideas and explain their appearance and habitat to inform my design.



Exploring Animals

○○○

Name	Movement	Appearance	Habitat
Sea turtle			
Adélie penguin			
Bottlenose dolphin			
Giant panda			
Orangutan			



Exploring Animals

○○○

Name	Movement	Appearance	Habitat
Sea turtle			
Adélie penguin			
Bottlenose dolphin			
Giant panda			
Orangutan			
Bengal tiger			
Black rhino			



Exploring Animals

○○○

Name	Movement	Appearance	Habitat
Sea turtle			
Adélie penguin			
Bottlenose dolphin			
Giant panda			
Orangutan			
Bengal tiger			
Black rhino			
Snow leopard			
Asian elephant			

Evidence for Evolution

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Aim

- I can examine the evidence demonstrating how plants have evolved.

Success Criteria

- I can examine fossil evidence.
- I can explain how a living thing has evolved over time.

Inheritance, Adaptation, Evolution



Adaptive Trait

A genetic characteristic passed from parent give to their offspring.

Inheritance

Visible characteristics passed from parent to offspring.

Evolution

Usually genetic mutations caused by replication of damaged DNA or errors in replications.

Natural Selection

Visible characteristics caused by adaptations.

Inherited Trait

Adaptation over time.

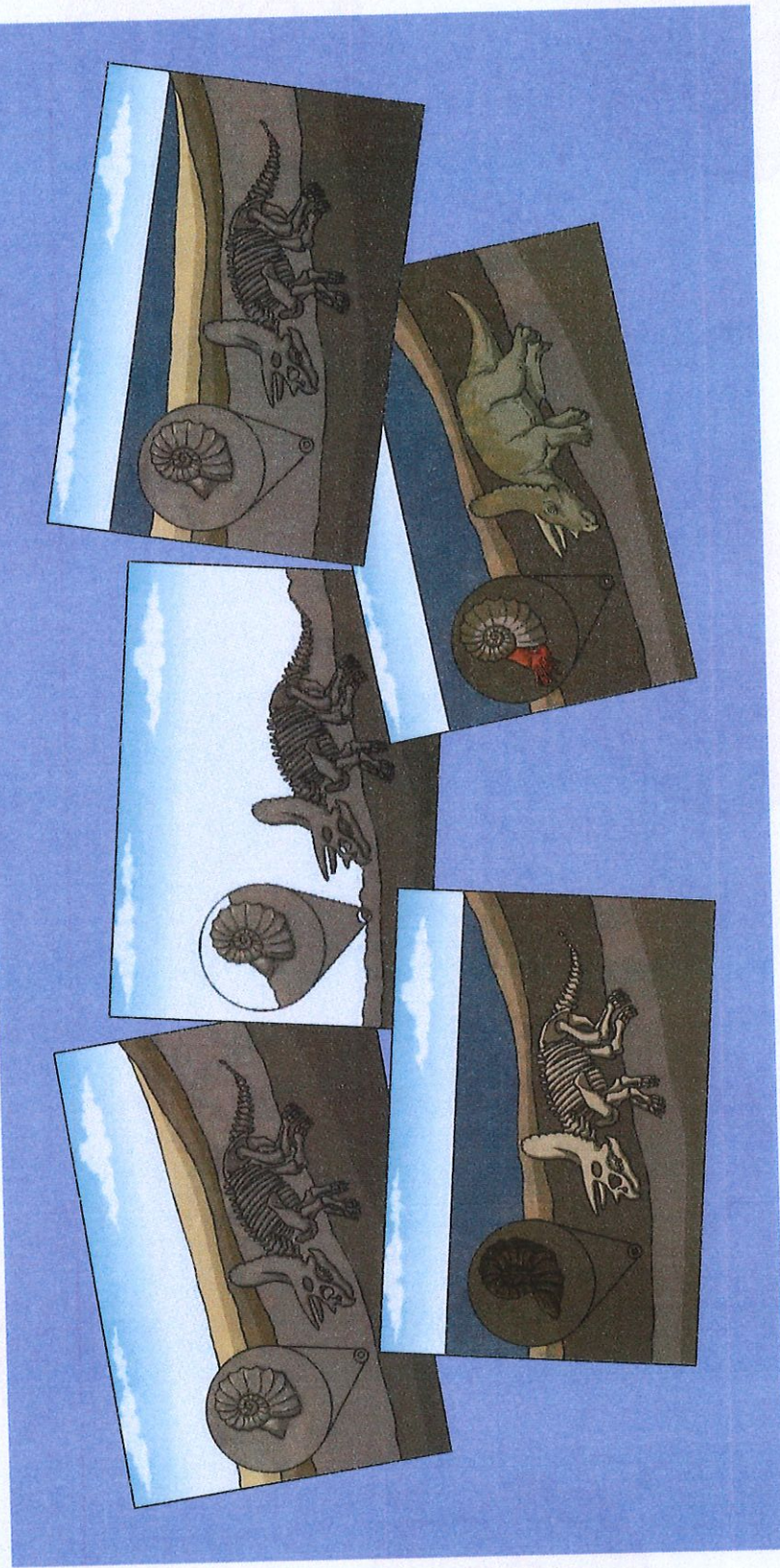
Adaptation

The key mechanism of evolution. It determines which traits become more or less common and therefore are reproduced.

Fossils Review



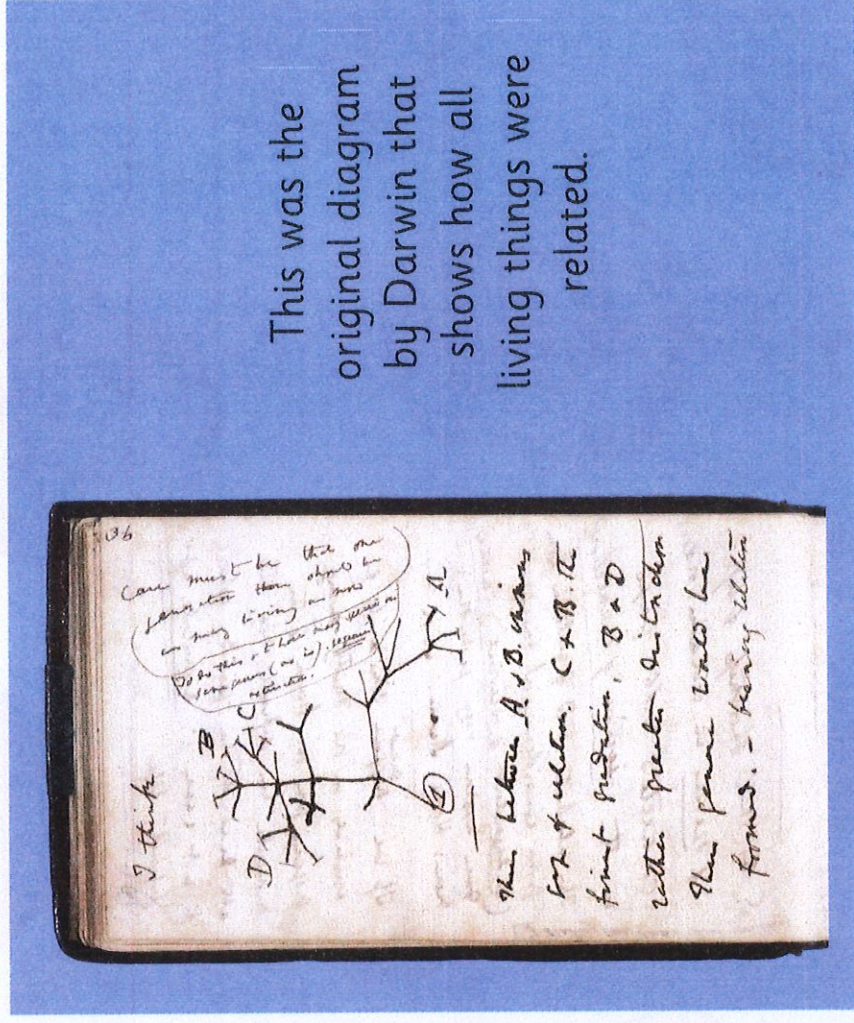
Can you recall the fossilisation process?



Darwin and Fossils

Tree of Life

Darwin believed that there was a single point of origin for all living things and that we then evolved into the living things that we are today through a process of adaptation.



This was the original diagram by Darwin that shows how all living things were related.

Darwin and Fossils

Darwin used fossils as evidence to support his theory of evolution.

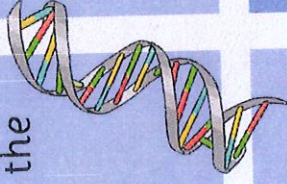
Based on his observations and his own fossil finds, he realised that many of the varieties and species of living things simply would not have fossilised or would have been destroyed.

Because of the issues related to fossilisation, he did not think it would be possible to find all the 'transitional forms' (i.e. common ancestors) between two living species.



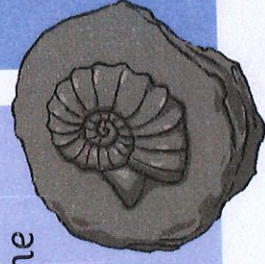
Examining Fossil Evidence

Since Darwin's time, we have continued to find fossils that have proven his theory, including some of the transitional forms. This is now supplemented by the findings of geneticists who can examine the DNA of living things to detect similarities and differences.



When looking at fossils alone, however, it is not always possible to detect if the traits began as inherited or adaptive traits. In order to understand this we need more information about the environment and other related living things.

When examining fossil evidence it is necessary to look for both the similarities and differences in terms of traits.



For the purpose of this lesson, you will examine fossil records and examine the visible traits.

Fossil Records

Darwin was correct when he said that we would not find complete fossil records for all living things due to the process of fossilisation.

We know that the majority of fossils are found in sedimentary rocks. The lava that forms igneous rock would not enable fossilisation to take place. Fossils in metamorphic rocks that used to be sedimentary rocks are rare, as the magma heats the rock and will distort the fossils embedded within it.

Also there were periods where greater fossilisation of living things occurred than at other times.



Fossil Records



Many varieties and species of living things have no fossil record and therefore scientists have to work with the fossils they do have.

The most complete fossil records are of animals with endo or exoskeletons as the calcium in the bones does not decay as quickly as other matter that makes up living things.

For this reason, many living things, such as soft bodied animals and most types of plants, have very incomplete records and fossil finds are very rare.

Not all animals with endo and exoskeletons have complete fossil records.

Fossil Evidence of Evolution



Examine the similarities and differences between the fossil evidence and its living relative. Write a paragraph below explaining how the flatfish has evolved based on these fossil records.

Flatfish	
Fossil	Living Relative





Fossil Evidence for Evolution



Examine the similarities and differences between the fossil evidence and its living relative. Write a paragraph below explaining how the fern leaf has evolved based on these fossil records.

Fern Leaves		
Fossil	Living Relative	
		





Just like a Whale

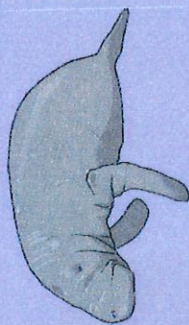
Darwin observed animals living in the same area and outside the observation that it was 'just like a whale'. It has now been proven that bears and whales do indeed have a common ancestor. ~~all birds have known this at the time!~~



Black bear



Bird



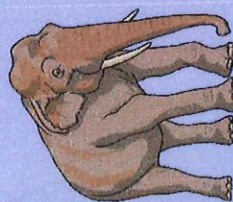
Manatee



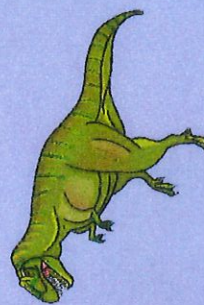
Whale



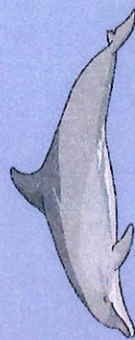
Hippopotamus



Elephant



Tyrannosaurus Rex



Dolphin



Aim

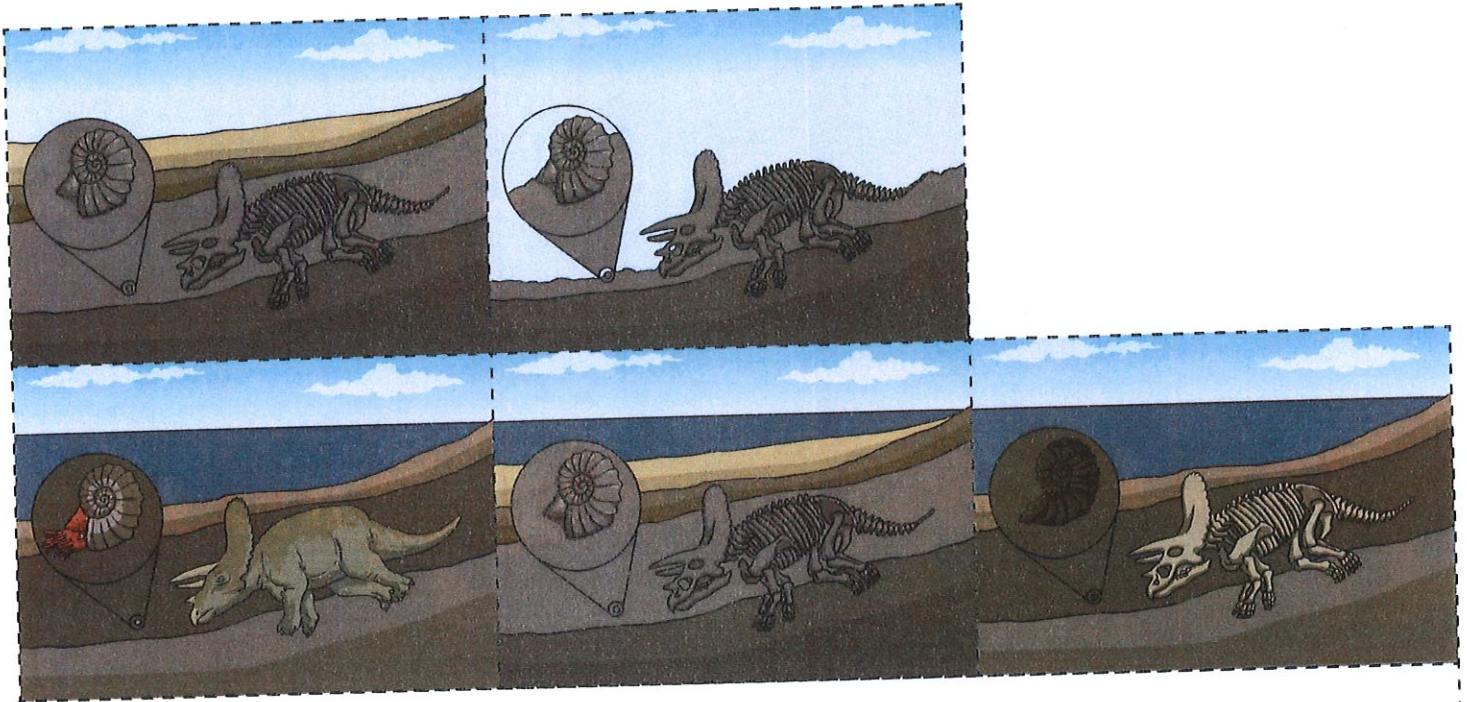
- I can examine the evidence demonstrating how plants have evolved.

Success Criteria

- I can examine fossil evidence.
- I can explain how a living thing has evolved over time.



Fossilisation Process Cards



As erosion and weathering takes place, eventually the fossils become exposed.

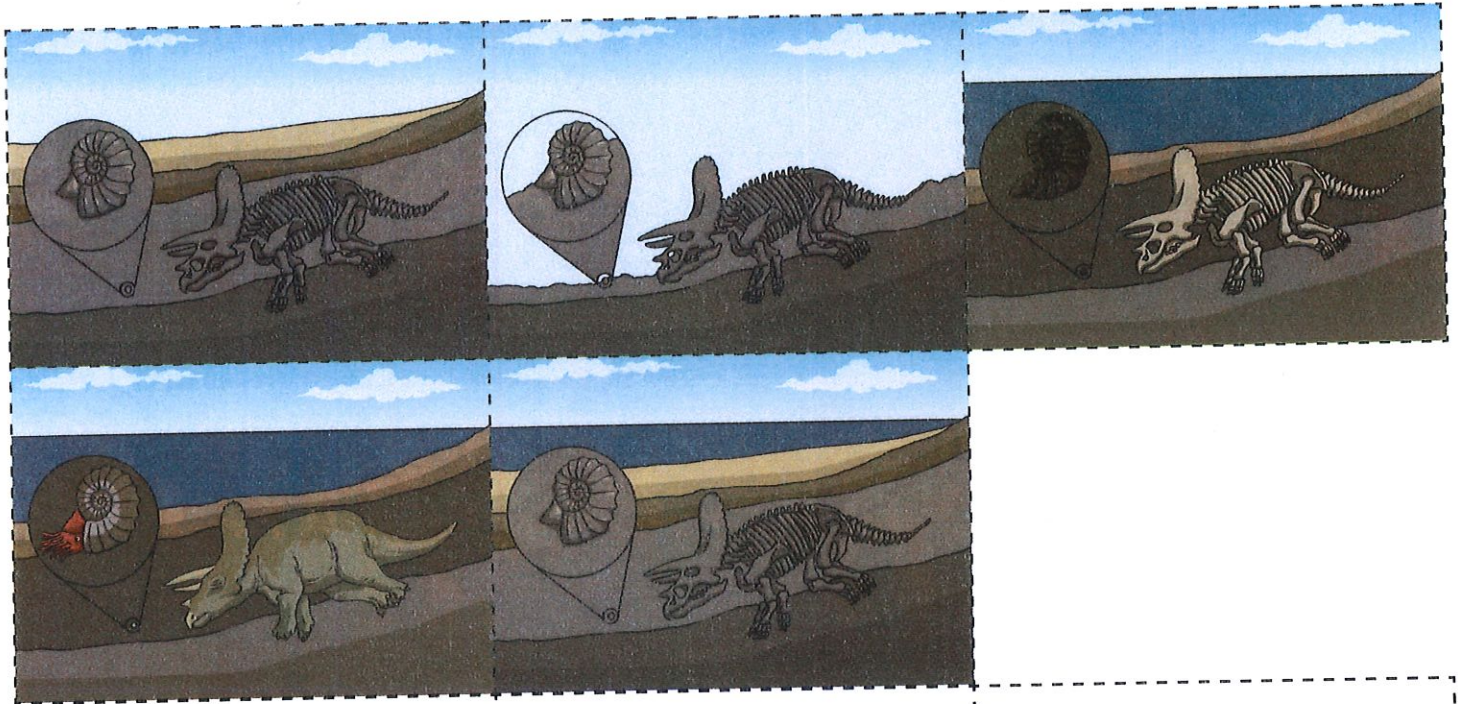
Over a long period of time the sea will recede in certain places.

Over time more layers of rock cover it and by this time the only thing to remain of the animal would be its bones (except in the case of mould fossils where the bones would also be decayed).

An animal or creature dies and ends up in the sea. It gets covered by a layer of rock.

Over thousands of years the mould fossil might become a cast fossil with sediment entering the mould. In the case of replacement fossils, the original bone matter changes to mineral matter but this does not affect the shape of the bones.

Fossilisation Process Cards



layers

bones

plant

erosion

living thing

replacement

dies

rock

sediment

leaves

sea

exposed

weathering

cast

animal

mould

recede

UK Mountains



Aim

- I can locate key areas of higher ground in the UK.
- I can use a map to find and describe key features of the mountains.

Success Criteria

- I can use a legend to find areas of higher ground on a map.
- I can tell you the county an area of higher ground is found in.
- I can use the index in an atlas to find mountains.
- I can find the height of a peak on a map.
- I can tell you different ways areas of higher ground are shown on a map.
- I can tell you what a hill might look like based on its contours.
- I can draw contour lines to show higher ground.



Where are the UK's Mountains?

Where are the highest areas of ground in the UK?

Which countries of the UK are these located in?

Where do you think the highest peak in the UK might be located?

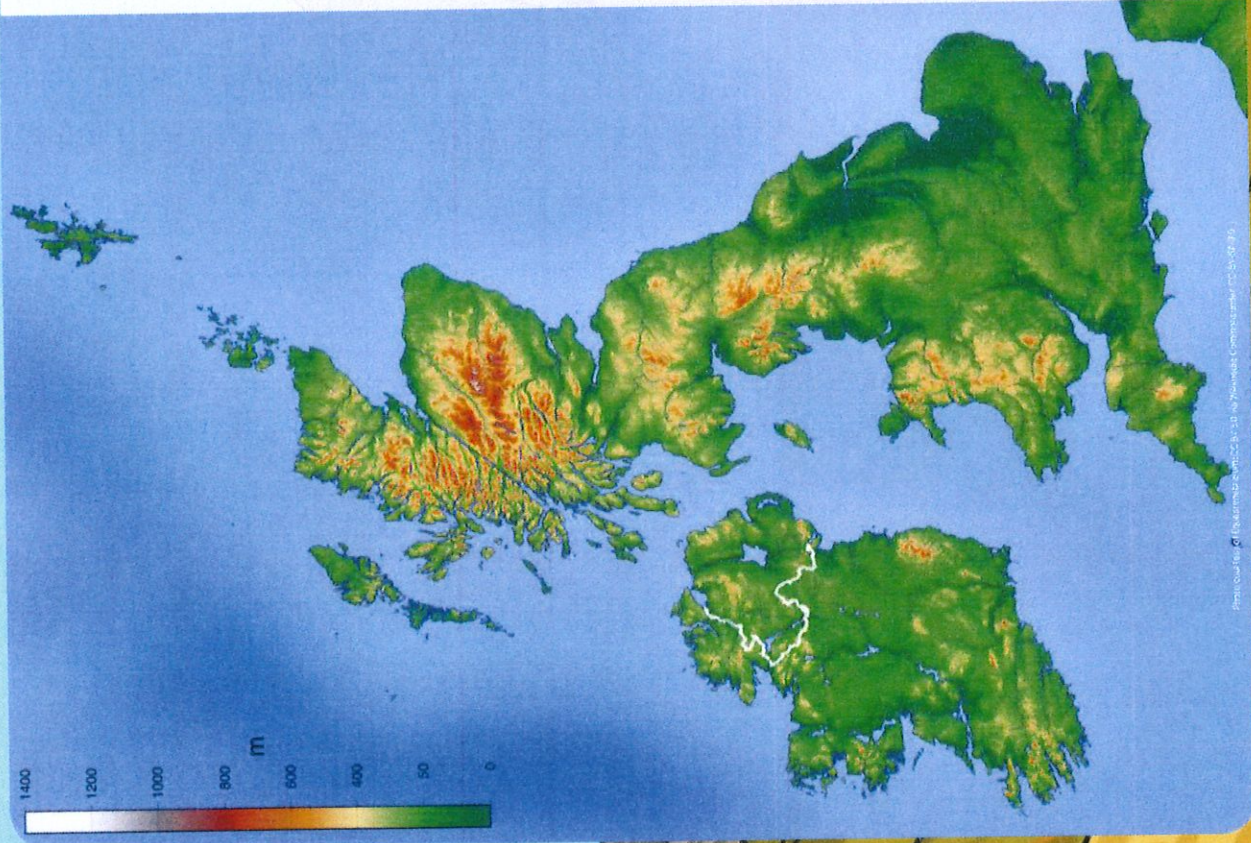


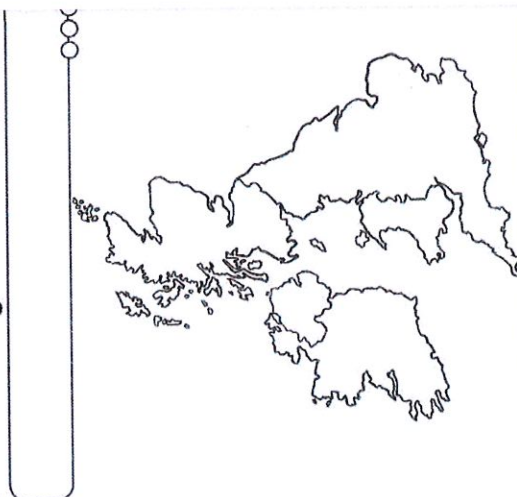
Image courtesy of the Ordnance Survey. All rights reserved. Copyright 2015. Ordnance Survey.



Where are the UK's Mountains?

Use your atlas to locate the UK's mountain ranges and mark them on your map.

*** Locating UK Mountains

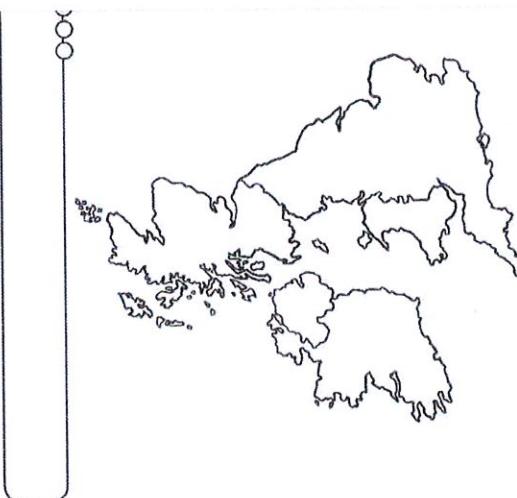


Use a brown pencil crayon to shade the main areas of high ground in the UK. Label each one and find out the height of its highest peak.

1. Pennines	2. Grampian Mountains	3. Snowdonia	4. Dartmoor	5. Cumbrian Mountains	6. Spanish Mountains
Height in m of highest peak					
County highest peak is located in					

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** Locating UK Mountains

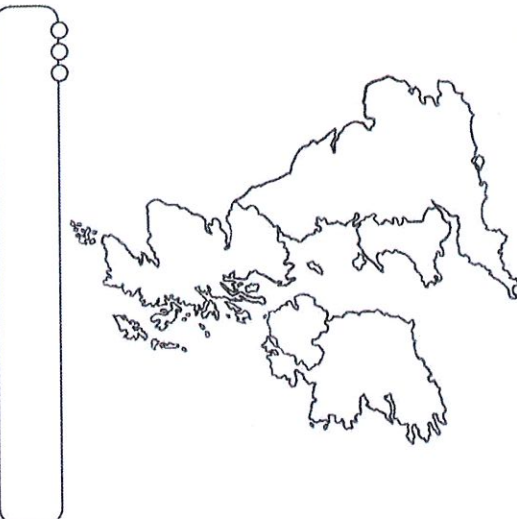


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Height in m of highest peak					
County highest peak is located in					

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* Locating UK Mountains

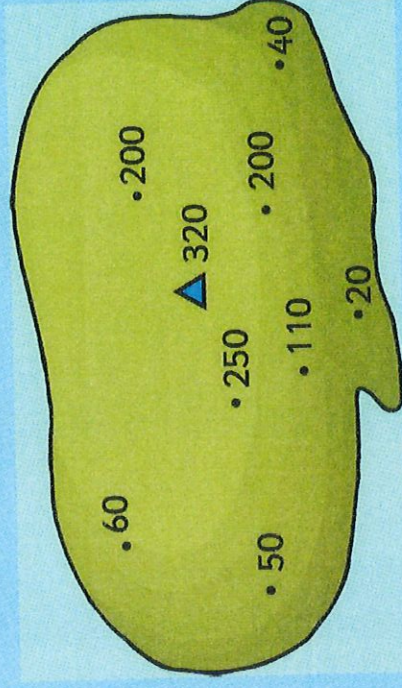
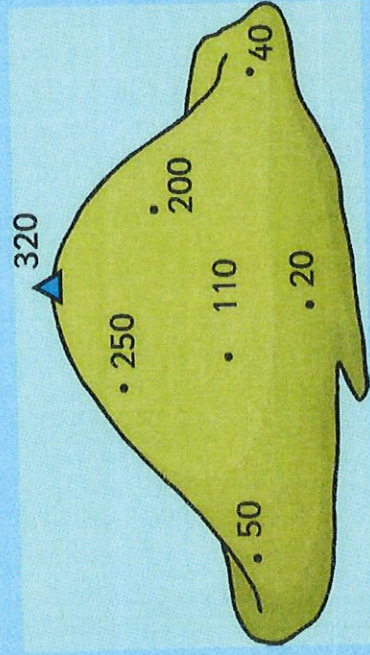


Use a brown pencil crayon to shade the areas of high ground in the UK. Use the following numbers to identify each region.

1. Pennines	4. Dartmoor
2. Grampian Mountains	5. Cumbrian Mountains
3. Snowdonia	6. Spanish Mountains

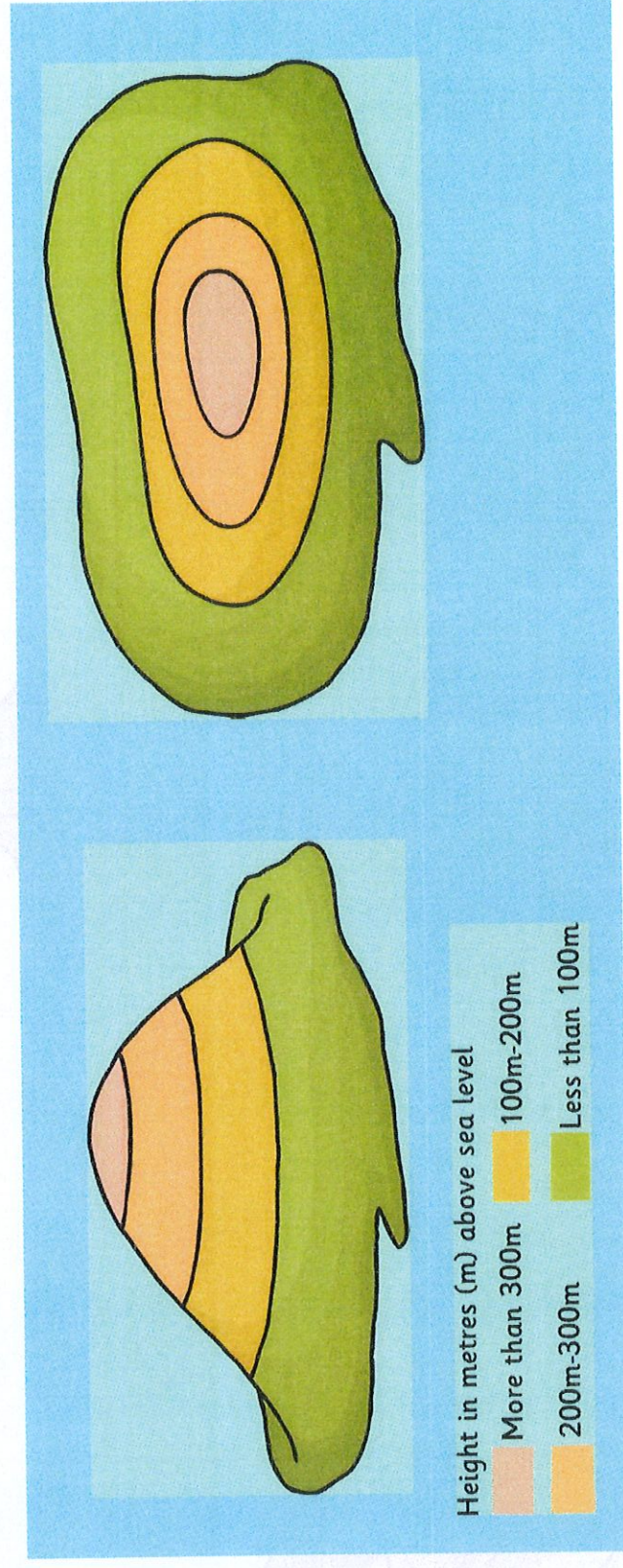
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How is Land Height Shown on Maps?



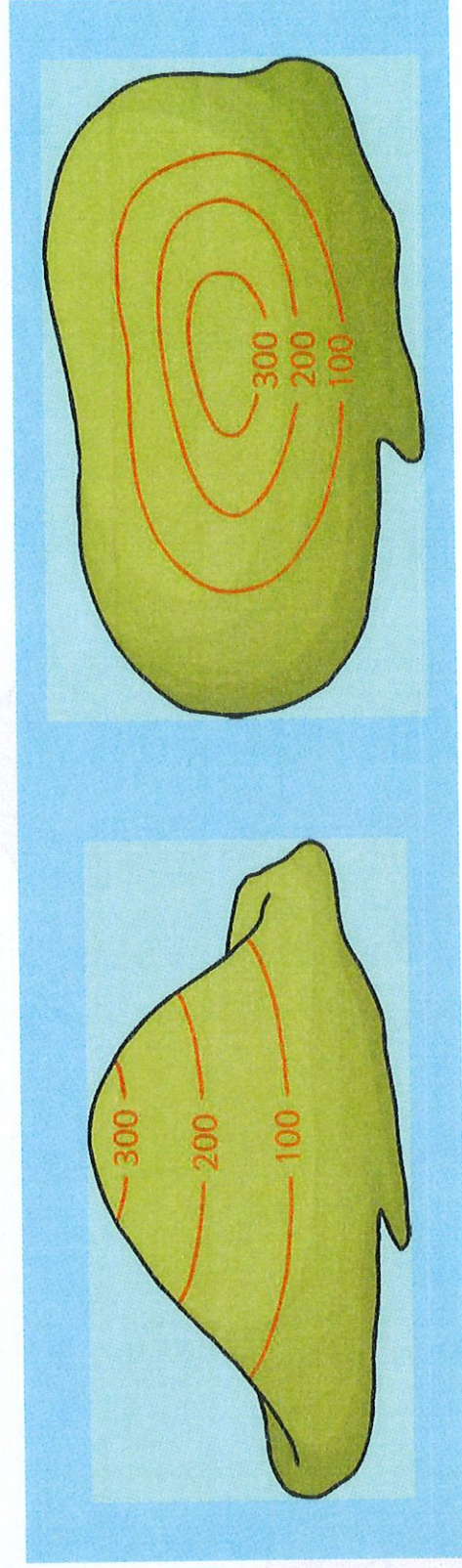
Does the map to the right show you how steep the hill really is?

How is Land Height Shown on Maps?



Does the map on the right show you quickly and simply how high the hill is?

How is Land Height Shown on Maps?



The brown lines are contour lines.

Contour lines join land that is the same height above sea level.

On most maps, lines are marked at 5m or 10m intervals.

The closer the lines are together, the steeper the slope will be.

Modelling With Contours



Now it's your turn to use contours to create your own hills and maps!

Contours Model

Instructions:

1. Cut around the numbered line.

2. Stick the shape onto thick cardboard and cut around it.

3. Shade the shape labelled 50 in red and shape labelled 60 in brown.

When your group has finished, stick your pieces of card together in number order, with 10 at the bottom and 60 at the top. Use the inner lines on each piece to help you line up your shapes.

Contours Model

Instructions:

1. Cut around the numbered line.

2. Stick the shape onto thick cardboard and cut around it.

3. Shade the whole shape in yellow.

When your group has finished, stick your pieces of card together in number order, with 10 at the bottom and 60 at the top. Use the inner lines on each piece to help you line up your shapes.

Contours Model

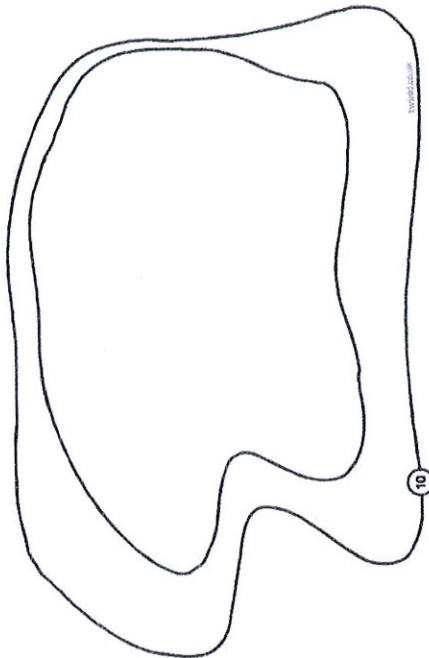
Instructions:

1. Cut around the numbered line.

2. Stick the shape onto thick cardboard and cut around it.

3. Shade the whole shape in dark green.

When your group has finished, stick your pieces of card together in number order, with 10 at the bottom and 60 at the top. Use the inner lines on each piece to help you line up your shapes.





Contour Match

Which hills match with each contour map?



1



2



3



4



5



6



A



B



C



D



E



F

Answers:

1. B

2. E

3. D

4. C

5. F

6. A



Aim

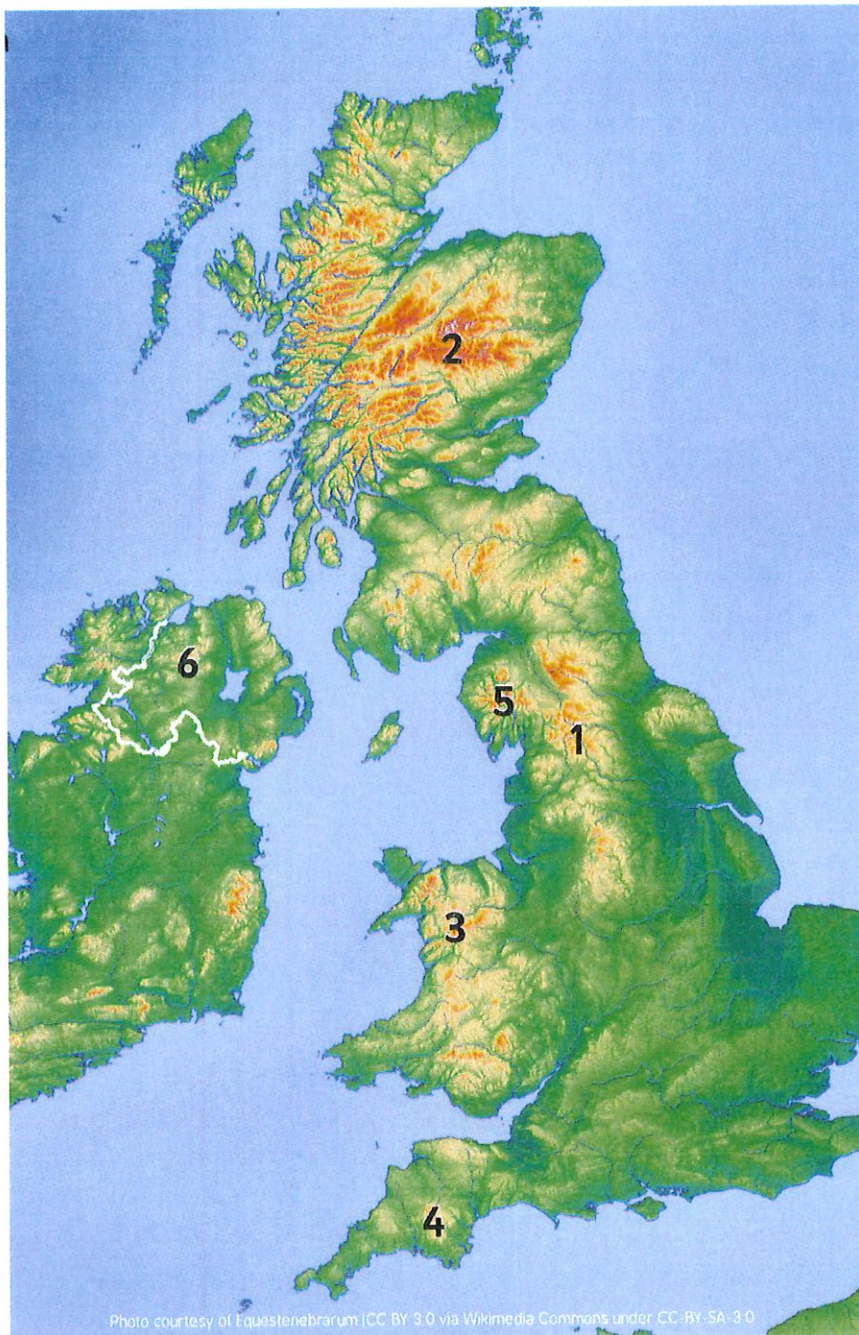
- I can locate key areas of higher ground in the UK.
- I can use a map to find and describe key features of the mountains.

Success Criteria

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- I can draw contour lines to show higher ground.



Locating UK Mountains Answer Sheet



Use a brown pencil crayon to shade the areas of high ground in the UK.
Use the following numbers to identify each region.

1. Pennines

2. Grampian Mountains

3. Snowdonia

4. Dartmoor

5. Cumbrian Mountains

6. Sperrin Mountains



Locating UK Mountains



Use a brown pencil crayon to shade the main areas of high ground in the UK.
Label each one and find out the height of its highest peak.

	1. Pennines	2. Grampian Mountains	3. Snowdonia	4. Dartmoor	5. Cumbrian Mountains	6. Sperrin Mountains
Height in m of highest peak						

Locating UK Mountains



Use a brown pencil crayon to shade the areas of high ground in the UK.

Use the following numbers to identify each region.

1. Pennines

4. Dartmoor

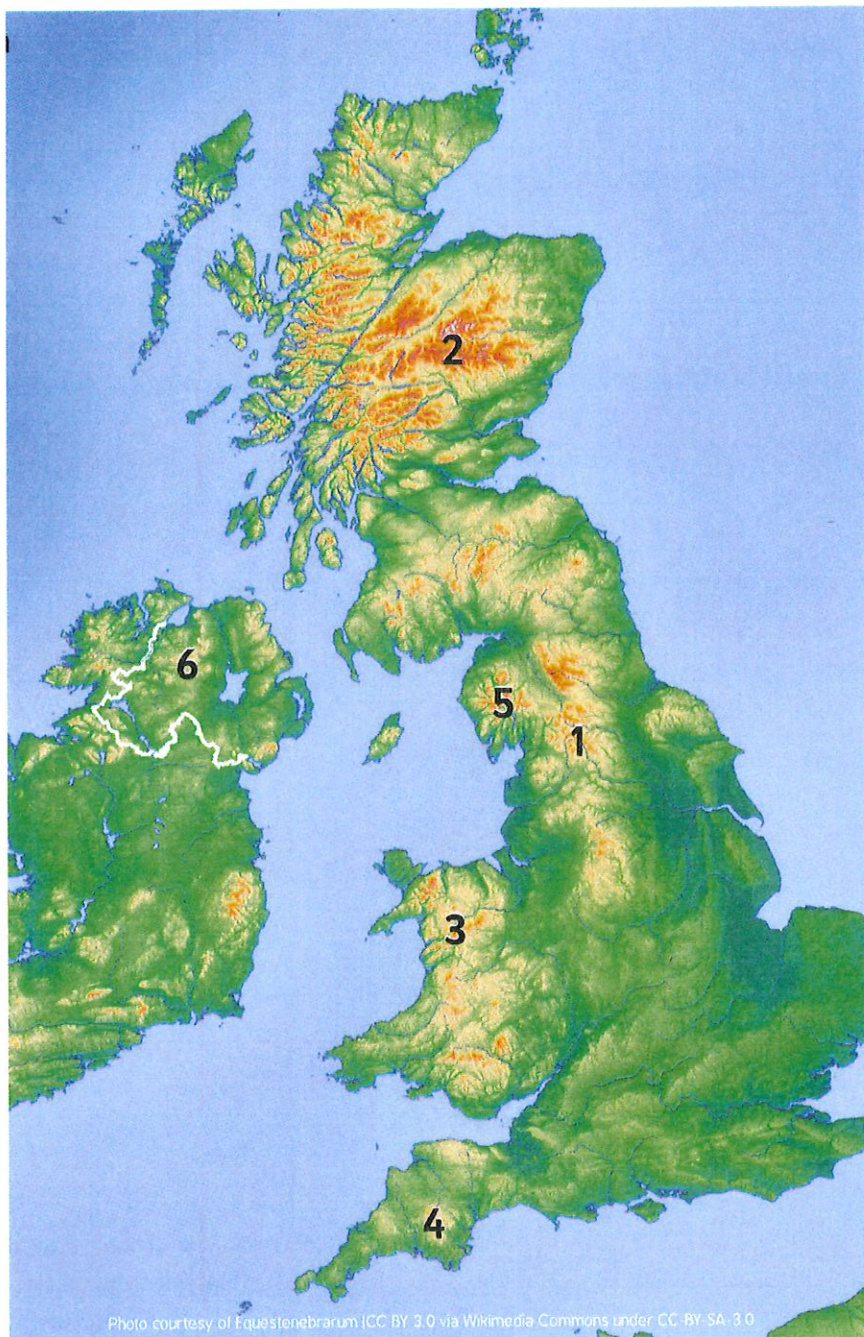
2. Grampian Mountains

5. Cumbrian Mountains

3. Snowdonia

6. Sperrin Mountains

Locating UK Mountains Answer Sheet



Use a brown pencil crayon to shade the main areas of high ground in the UK.
Label each one and find out the height of its highest peak.

	1. Pennines	2. Grampian Mountains	3. Snowdonia	4. Dartmoor	5. Cumbrian Mountains	6. Sperrin Mountains
Height in m of highest peak	893m (Cross Fell)	1344m (Ben Nevis)	1085m (Snowdon)	619m (High Willhays)	978m (Scafell Pike)	683m (Sawel)

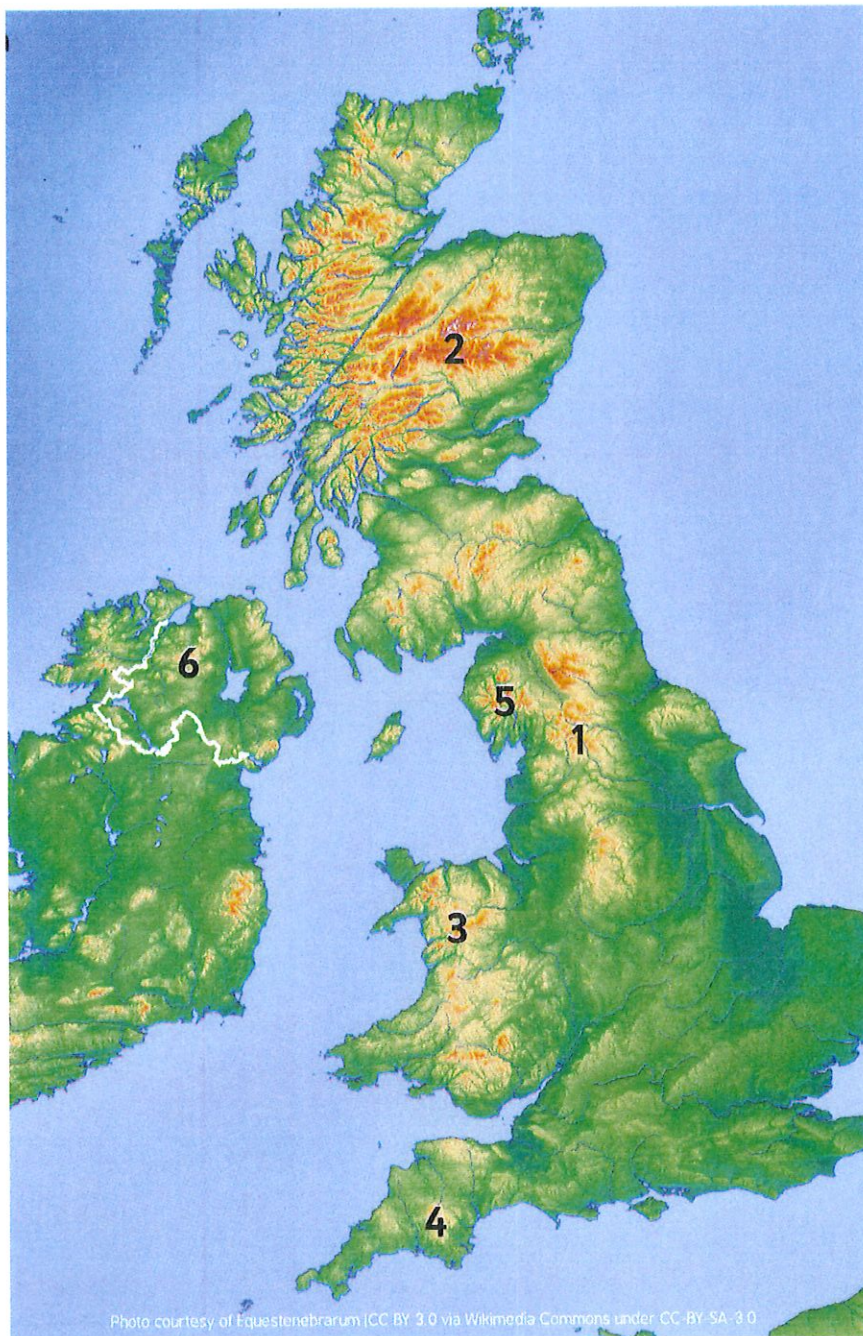
Locating UK Mountains



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	1. Pennines	2. Grampian Mountains	3. Snowdonia	4. Dartmoor	5. Cumbrian Mountains	6. Sperrin Mountains
Height in m of highest peak						
County highest peak is located in						

Locating UK Mountains Answer Sheet



Use a brown pencil crayon to shade the main areas of high ground in the UK.
Label each one and find out the height of its highest peak.

	1. Pennines	2. Grampian Mountains	3. Snowdonia	4. Dartmoor	5. Cumbrian Mountains	6. Sperrin Mountains
Height in m of highest peak	893m (Cross Fell)	1344m (Ben Nevis)	1085m (Snowdon)	619m (High Willhays)	978m (Scafell Pike)	683m (Sawel)
County highest peak is located in	Durham	Highland	Gwynedd	Devon	Cumbria	Strabane / Limavady / Londonderry