

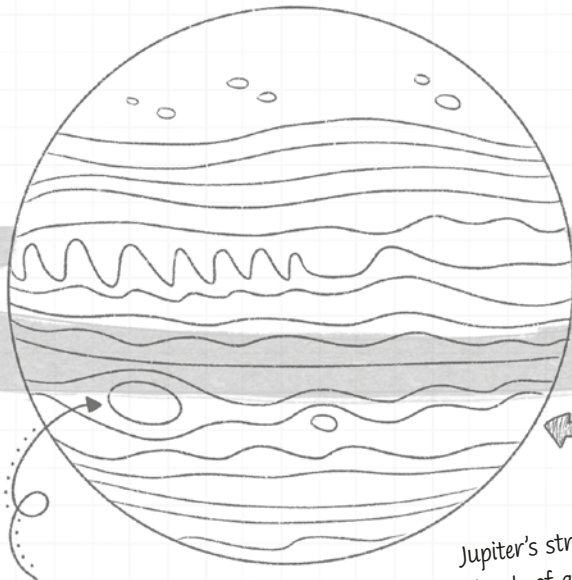
Join The Secret Explorers

on a STEAM adventure!



JUPITER

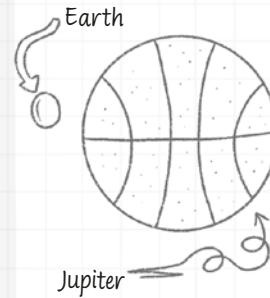
Jupiter is the largest planet in our Solar System. It is mostly made of the gas hydrogen and does not have a solid surface.



GIANT RED SPOT

Jupiter's Great Red Spot is a gigantic spinning storm. It's twice the size of Earth and has raged for hundreds of years.

Jupiter's stripes are clouds of ammonia and water. The clouds are very cold and windy.



FACT FILE

* **Size:** Jupiter is the largest planet in the solar system. You could fit 1,321 Earths inside Jupiter! If Earth were the size of a grape, Jupiter would be the size of a basketball.

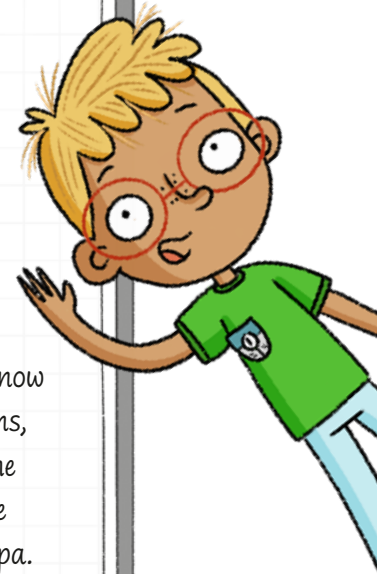
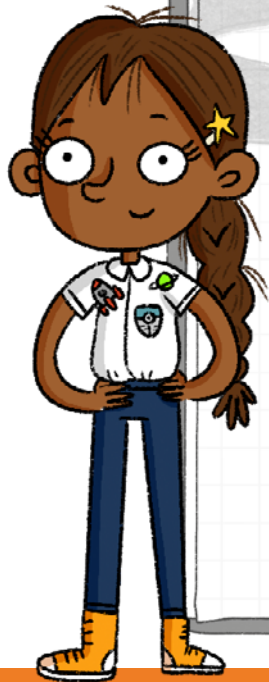
* **Distance from Sun:** Jupiter orbits about 778 million km (484 million miles) from the Sun. Earth is 150 million km (94 million miles) away from the Sun.

* **Moons:** Scientists now think Jupiter has 79 moons, but they're finding more all the time. The four biggest moons are Ganymede, Io, Callisto, and Europa.

* **Length of a day:** A day on Jupiter – only lasts 10 hours – this is how long it takes to rotate on its axis.

Jupiter's rings are made of dust.

A YEAR ON JUPITER IS THE SAME LENGTH AS 12 EARTH YEARS!



Discover everything about Jupiter with Roshni and Ollie, and answer the questions below:

1. How many moons does Jupiter have?
2. What are Jupiter rings made of?
3. How many times could Earth fit into Jupiter?

Suitable for 7-9 years

Content taken from *The Secret Explorers and the Comet Collision*

Also available: Audiobook narrated by actor Alfred Enoch

Answers: 1.) 79 2.) Dust 3.) 1321



CONNOR'S MISSION NOTES

THE HUMPBACK WHALE

- * **Latin name:** *Megaptera novaeangliae*
- * **Animal type:** Mammals – they breathe air, have warm blood, and give birth to live young
- * **Location:** Worldwide, but usually nearer coasts
- * **Length:** Up to 17 m (56 ft)
- * **Weight:** 34 tonnes – more than the weight of five African elephants!

In the southern oceans, humpbacks feed mainly on Antarctic krill.



Each whale has a unique pattern on the underside of its tail.

The pectoral flippers of the humpback are one third of its body length – longer than those of other whales.

WHAT A TUNE!

Male humpbacks make sounds known as whale songs. These calls can be heard by whales many kilometres away and last for up to 30 minutes. Scientists think they might be a way to attract females, to protect their territory, or to communicate with each other.

BEHAVIOUR

- * Every year, most humpbacks migrate to warm waters to give birth to their young. They swim thousands of kilometres.
- * Humpbacks live in groups called 'pods', which include up to 15 whales.
- * An adult humpback can hold its breath underwater for 45 minutes – but usually stays under for 10–15 minutes before coming up for air.

The humpback has a pair of huge nostrils on the top of its head. These are called blowholes, and close when the whales dive underwater.

Barnacles live on the whale's snout.



Have you ever seen a whale? Read this page from Roshni's and Connor's mission notes.

1. What is a name of a group of whales?
2. What do humpback whales eat?
3. For how long can an adult humpback whale hold its breath underwater?

Suitable for 7–9 years

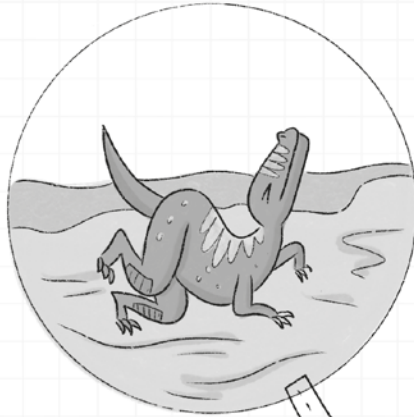
Content taken from *The Secret Explorers and the Lost Whales*
Also available: Audiobook narrated by actor Alfred Enoch

Answers: 1.) Pod 2.) Krill 3.) 45 minutes

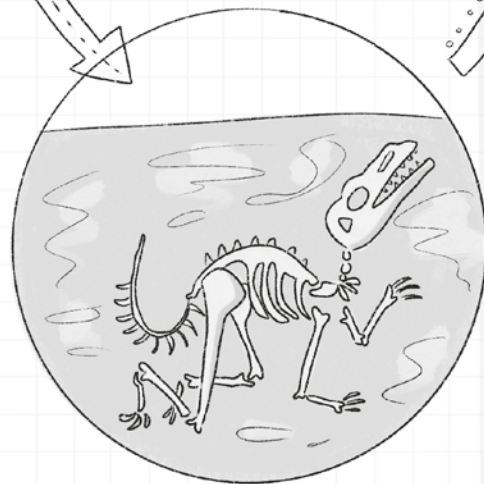


HOW A FOSSIL IS MADE

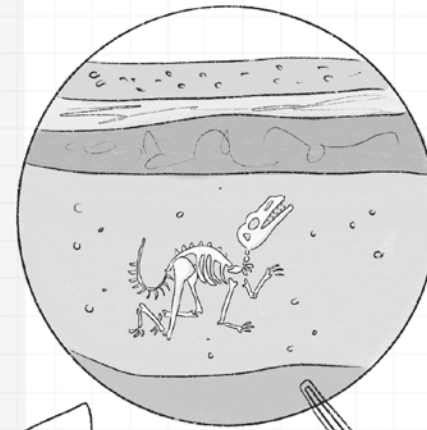
Fossils are the remains of things that have been dead for millions of years. All sorts of life forms have fossilised, from spectacular Stegosaurus skeletons to tiny ammonite shells. Fossils help us understand how life on our planet has changed over millions of years. Scientists called palaeontologists dig up and study fossils.



STEP 1 A creature dies and its body sinks into the mud by a river.

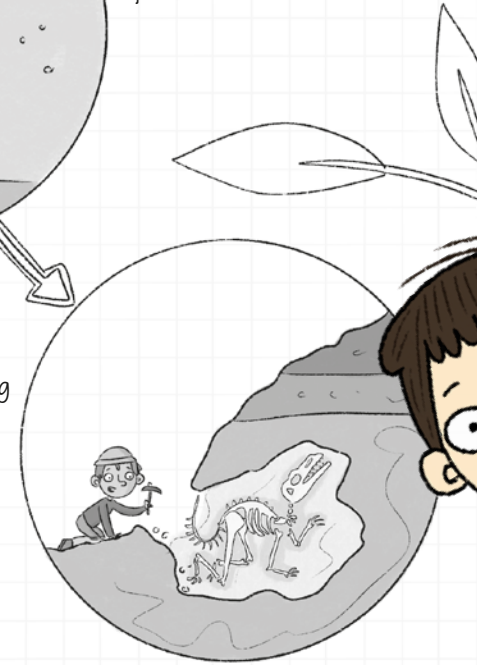


STEP 2 The creature is buried in layers of mud, sand, and ash over a period of millions of years.



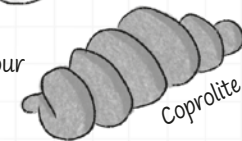
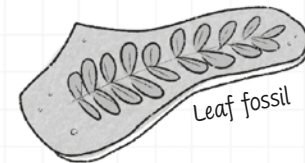
STEP 3 The skeleton of the creature turns from bone to stone.

STEP 4 The fossilised creature is uncovered by palaeontologists. They dig out the fossil and coat it in plaster to protect it. The fossil is then sent to a laboratory to be studied or to a museum to be displayed.



Types of fossil

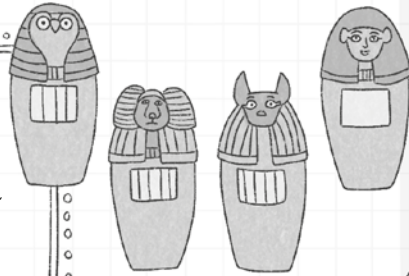
- * Body fossils, such as bones, teeth, and shells
- * Petrified fossils, which are soft tissues, such as muscle and leaves
- * Trace fossils, such as fossilised footprints, which tell scientists about a creature's behaviour
- * Coprolites – fossilised poos!



HOW TO MAKE A MUMMY

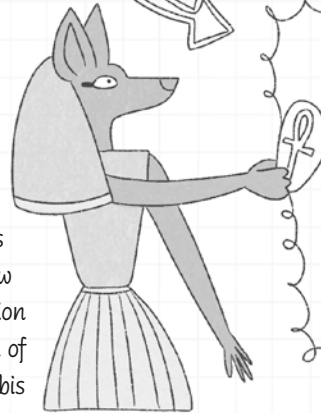
The Egyptians believed in an afterlife where they would be reborn as spirits, but only if their bodies were preserved as mummies. Only very rich people could afford this, and it took at least 70 days to mummify a pharaoh. Before reaching the afterlife, the spirits of the dead were thought to travel through an underworld called Duat.

STEP 1 The body was cleaned using water and salt. The internal organs were taken out and placed in special jars.



Canopic jars with the heads of Egyptian gods

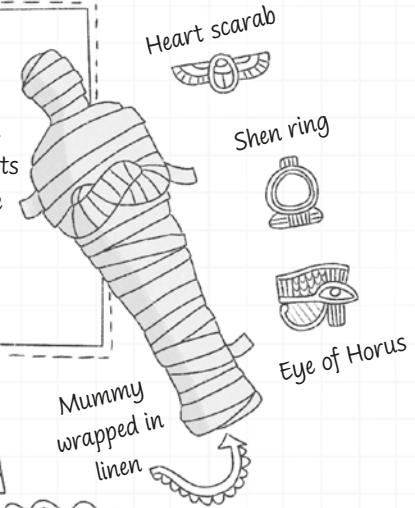
STEP 2 The body was filled with bags of salt and left for 40 days to dry out. After, it was stuffed with bandages and spices.



The priests who oversaw mummification wore a mask of the god Anubis

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STEP 3 The body was then coated with gum and wrapped in linen strips. Tucked among them were special objects that were meant to protect the dead person in the afterlife.



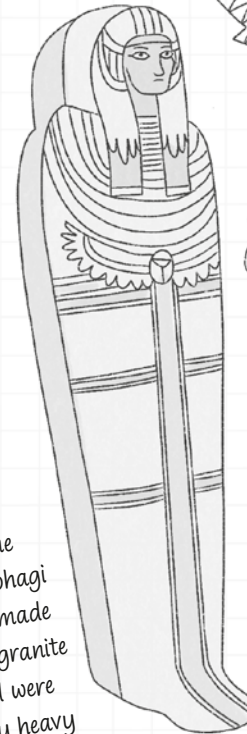
Heart scarab

Shen ring

Eye of Horus

Mummy wrapped in linen

STEP 4 The mummified body was placed in a decorated stone coffin called a sarcophagus. The sarcophagus was placed inside a tomb.



Some sarcophagi were made from granite and were really heavy

ANIMAL MUMMIES!

The Egyptians mummified animals too, including cats, crocodiles, fish, baboons, and birds. These animal mummies were offerings to the gods, but were also to make sure beloved pets would journey to the afterlife.

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Go up against thieves in Ancient Egypt with Gustavo and Kiki and learn all about mummification.

1. How long did it take to mummify a pharaoh?
3. How was the stone coffin where the pharaohs were placed called?

Suitable for 7-9 years

Content taken from *The Secret Explorers and the Tomb Robbers*

Also available: Audiobook narrated by actor Alfred Enoch

Answers: 1.) At least 70 days 2.) Sarcophagus

