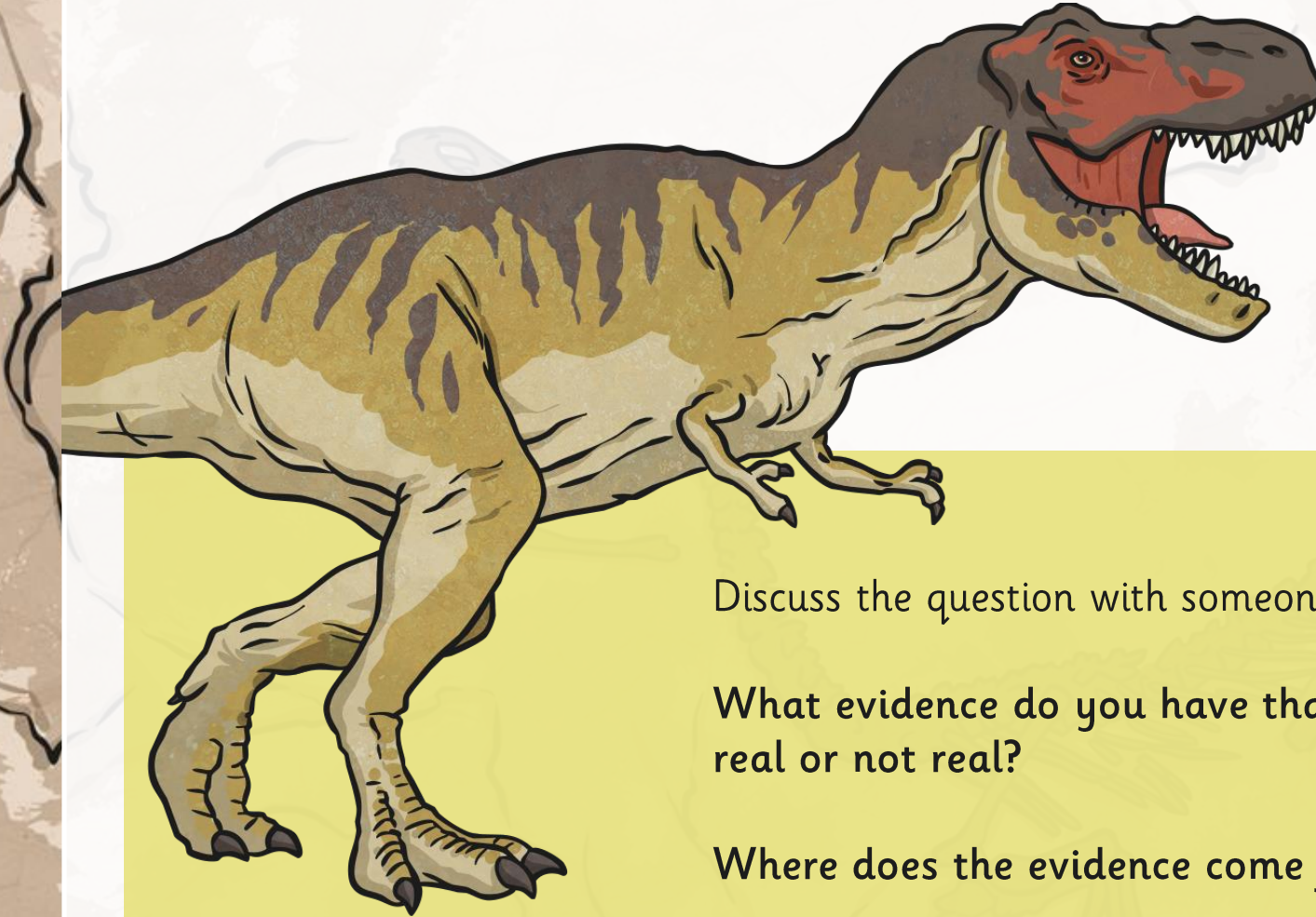


Key Skills

- I can explain how fossils are formed.



Are Dinosaurs Real?



Discuss the question with someone at home.

What evidence do you have that they are real or not real?

Where does the evidence come from?

Are Dinosaurs Real?



It is believed that dinosaur fossils have been found for centuries and these gave rise to some of the mythical creatures in ancient cultures. However, without documented evidence we can not know this for sure.

What we do know is that our current knowledge of dinosaurs and **palaeontology** (the study of fossils) started in the 1800s. So we really have only known about them for the last 200 years! We know about dinosaurs due to the discovery of fossils and fossilised skeletons.



Bones or Fossils?

There are some key concepts we need to know before moving on.

What is the difference between bones and fossils?

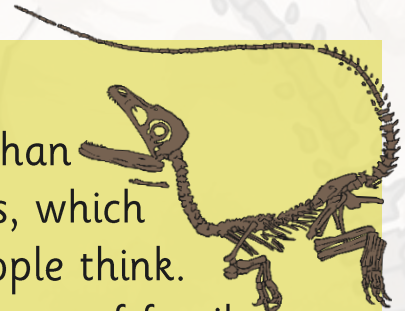
Bones

Bones are any piece of the hard whitish tissue that makes up the skeleton in animals including humans.



Fossils

Fossils are more than just ancient bones, which is what many people think. There are three types of fossils – body fossils, trace fossils and chemical fossils.



Chemical fossils

Chemical fossils contain carbon, which is proof that they must be formed from once living things. Examples of chemical fossils include coal, petroleum oil and natural gas.



Fossilisation Process

There are many different ways that fossilisation occurs. However, you will focus on how fossils form in rocks (both body and trace fossils).

Fossilisation only takes place in sedimentary rocks as the heat from the lava that creates igneous rocks and changes the structure of metamorphic rocks would be too high for fossils to survive.



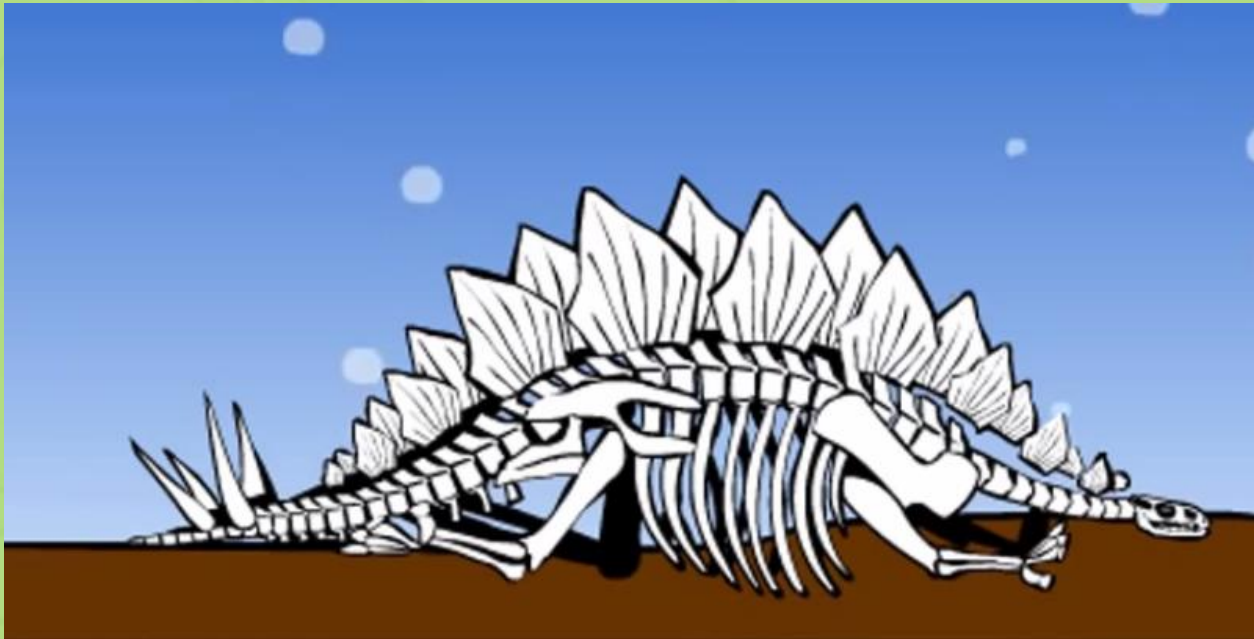
Step 1

An animal or creature dies on land or in the sea.



Step 2

The animal rots away leaving just the hardest parts - bones or shell.



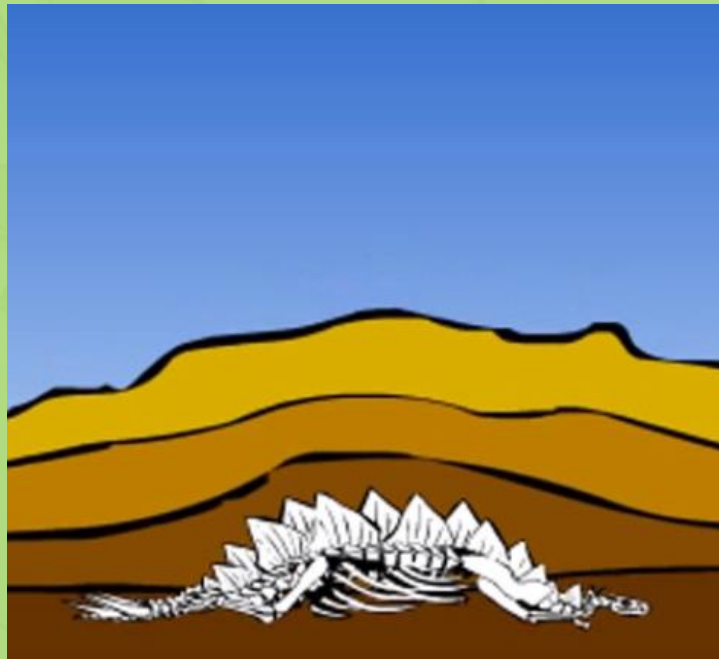
Step 3

Sediment falls and covers the remains.



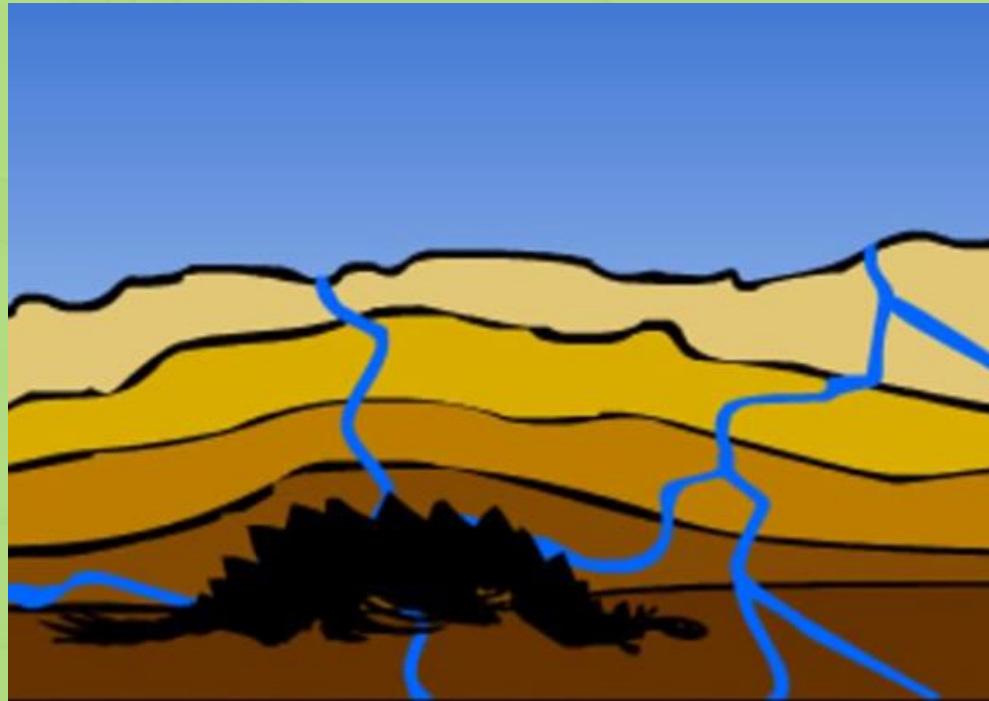
Step 4

Pressure forces the sediment layers together, turning them into sedimentary rock.



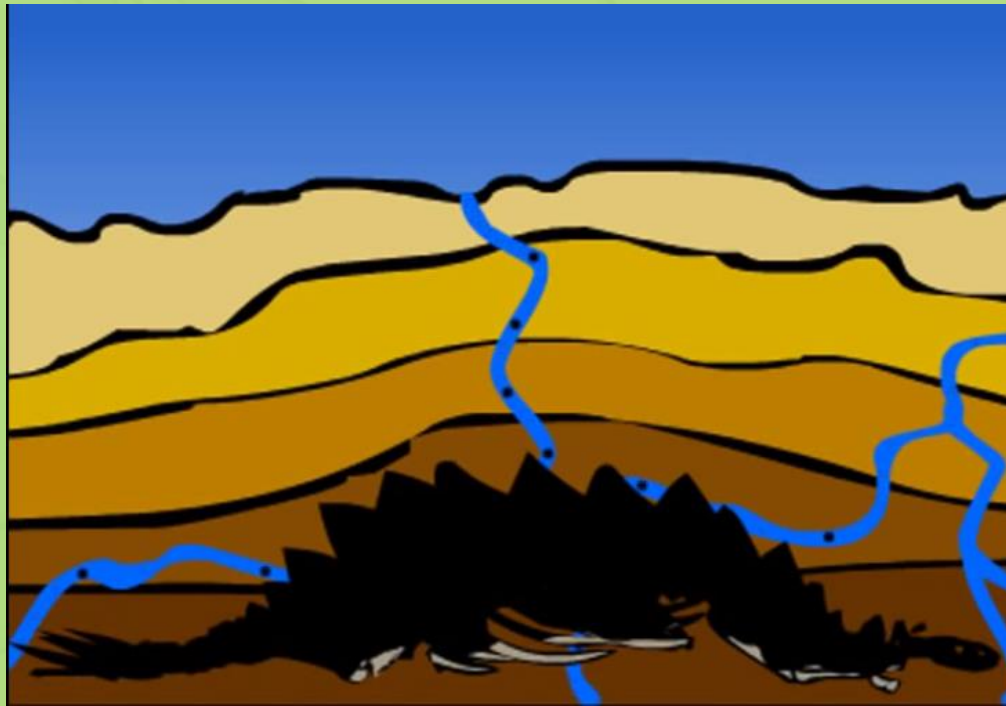
Step 5

Water leaks through the rock and washes away the remains, leaving behind a space that is the same size and shape of the skeleton. This is called a mould.



Step 6

The mould fills up with smaller pieces of rock. This take the shape of the skeleton.



Step 7

Over time, this space becomes solid rock. This is called a cast fossil.



Step 8

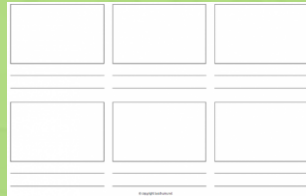
After millions of years, weathering (rain, wind) will wear away the rock above and people can dig them up.



Task

Today you can choose between two tasks.

1. You can create a storyboard of the fossilisation process.



Or

2. You can create your own research project about fossils. You could find out about the most famous fossils found around the world. Who discovered them? Where was it found? What animal is the fossil from? When did they find the fossil? Remember to include a drawing of the fossil and any other information you find.

<https://www.dkfindout.com/uk/dinosaurs-and-prehistoric-life/fossils/>

Web Links

The following web links will help you with your understanding of fossils.

<https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/z2ym2p3>

<https://www.bbc.co.uk/teach/class-clips-video/geography-ks1-ks2-fossil-hunting-along-the-jurassic-coast/zbbrkmn>

<https://www.dkfindout.com/uk/dinosaurs-and-prehistoric-life/fossils/>

<https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/z22g7p3>