

# Summer 2 Week 9 Science Lesson 1

Can I understand that living things have changed over time and fossils provide information about these changes?

In the first half of this term we looked at how different living things could be grouped by their specific characteristics.

Today we are going to be looking at how living things have changed over time and how fossils provide us with information about living things on Earth from millions of years ago.

# **What is a fossil?**

To understand how fossils can give us this important information we first need to know what a fossil is.

Fossils are the stone remains of dead animals or plants. Fossils are usually the skeletons of animals and plants but not always. Fossils can also be things made by animals like footprints or poo!

The most common way that fossils are formed is when small animals like flies and spiders get covered by tree sap and get trapped. The tree sap hardens to form solid amber, preserving them for thousands of years.



Sometimes a whole animal can get trapped in ice, freezing them for thousands of years. Palaeontologists (people who study fossils) have found woolly mammoths that have been preserved this way.



## **How does this help us understand how living things have changed?**

Ice is excellent at preserving whatever may be frozen in it. A mammoth thought to be about 10,000 years old, recently discovered in Siberia, was preserved so well in the ice that the carcass still contained some of its blood. Scientists analysed the blood and found that the mammoth had evolved so that its blood could supply more oxygen around its body, which is vital in icy climates. This is something that modern elephants (which are related to mammoths) cannot do.



The mammoth being studied by scientists in Siberia.

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

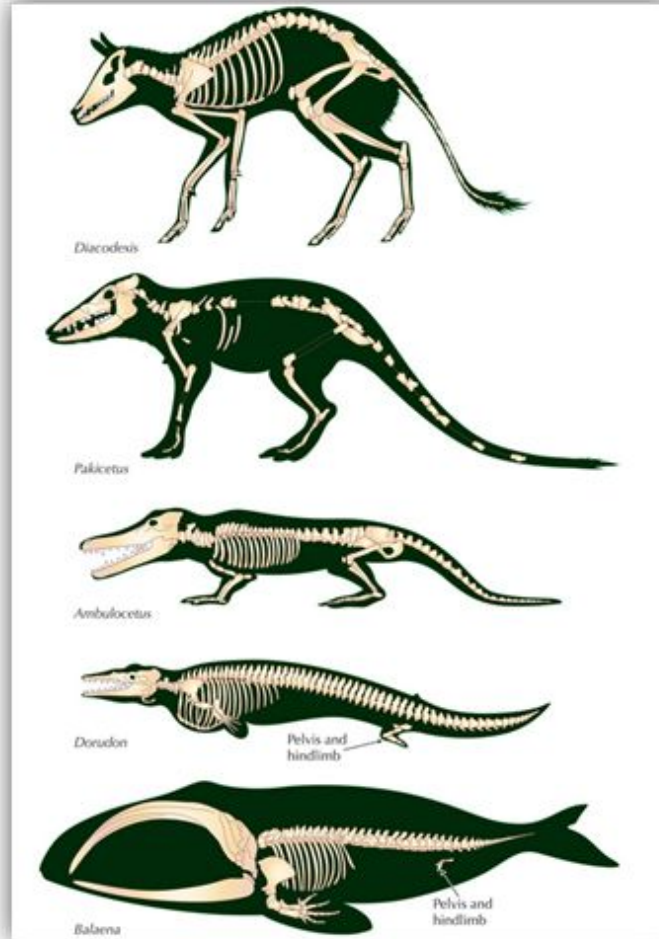
The link below from National Geographic explains in more detail about how fossils are made.

<https://safeYouTube.net/w/QLsL>





Fossils are very useful for telling us more about how animals and plants have evolved over time.



For example, palaeontologists think that these fossil skeletons show how whales might originate from land animals.

Being able to look at preserved forms of living things can help us understand how the creature was adapted and help us understand different environments through history.

The clip below will share a little bit more.

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

Looking at fossils can tell us about what kind of diet the living thing had: whether it was a carnivore or herbivore, whether it could fly or swim and if it was a predator or a prey species.

Your task today is to match the fossil with the dinosaur and write a sentence explaining why you have matched that pair.