

Science Week 1

Evolution and Inheritance

There is a video embedded into the presentation, you may need to select 'enable content' in order to see it. If it doesn't work, I have included a link to follow.

Vocabulary time!

Look up the meanings of these words as they will be important for helping to understand our science topic.

Make sure to look at them regularly to help you remember what they mean.

You could stick them up around the house or tell your family what they mean.

fossil evolve evolution adapt adaptation adaptable

How do we know about living things from the past?



Fossils! Fossils are imprints of long dead plants and animals found in rocks. They are not bones. Which of the pictures below are fossilised plants and which are fossilised animals?

Fossils are important because they were formed many millions of years ago. This means they can tell us how plants and animals on earth used to look.

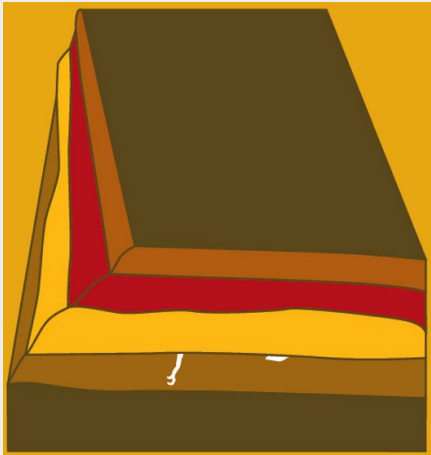
Fossils are good evidence for **evolution** because they show that living things have changed over time.



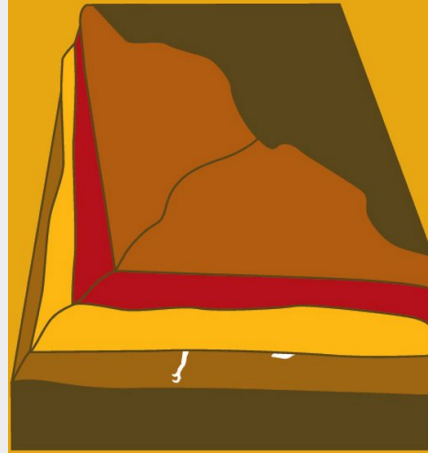
How are fossils formed?



1) An animal or plant is buried shortly after it dies. This could be by mud, ash or sand. This is called sediment and it protects the creature's body from rotting away.



2) More layers of sediment form above the remains of the animal or plant. These push the remains deeper underground. Minerals such as calcium slowly replace the other chemicals in the bones.

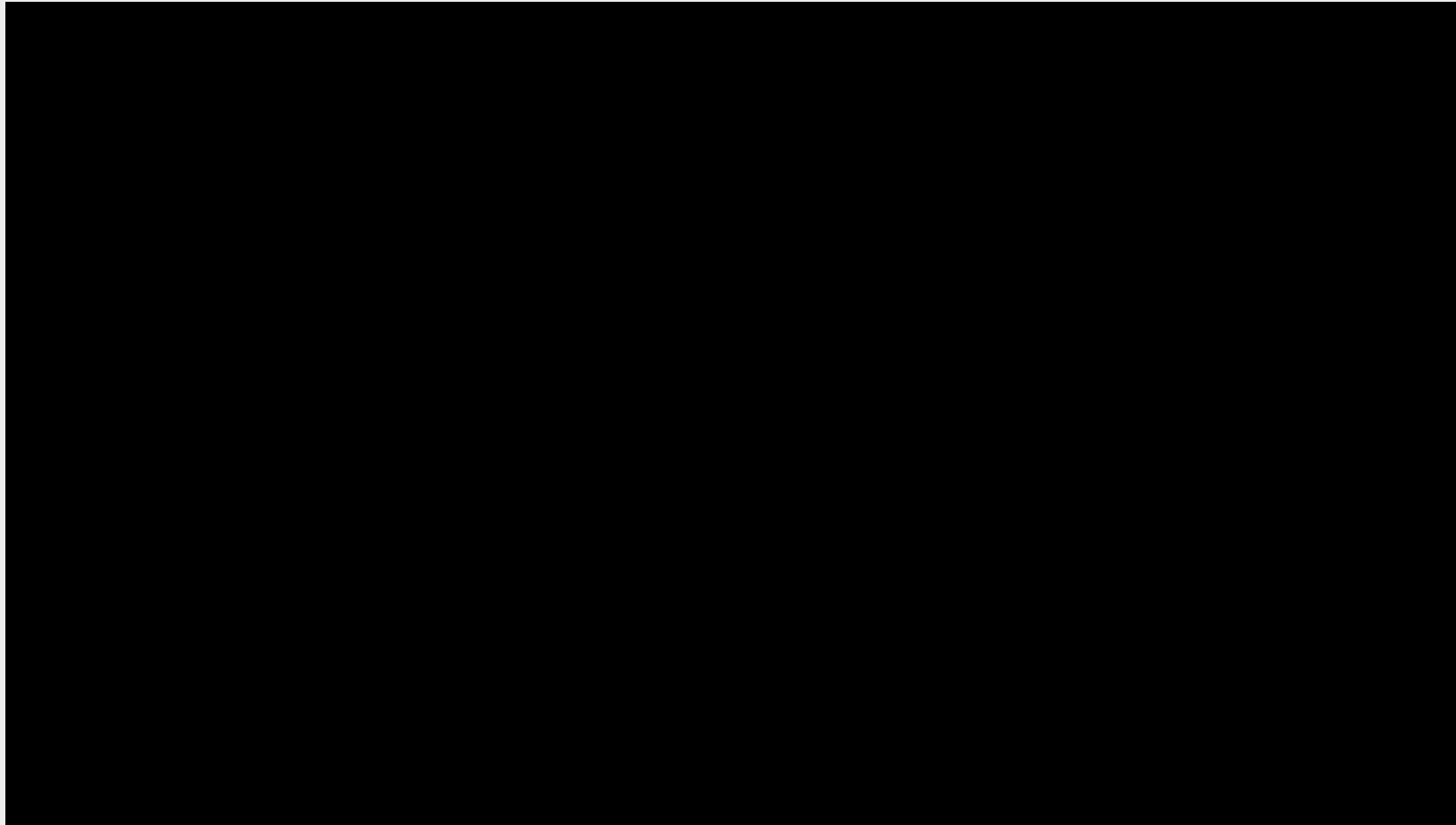


3) Over millions of years, the movement of the rocks pushes the remains nearer to the surface. The combined effect of the pressure over a long period of time turns the sediment into rock and the remains into a fossil.



4) The effects of rain, rivers and the sea on the rocks above the fossil wears away the layers of rock. This (and people digging) can reveal the fossilized remains

Watch this video carefully and answer the questions.



What does Emmet say evolution is?

When is the video being 'filmed'? What does this tell you about evolution?

What does Emmet say about animals of the same species?

Why don't the less successful members of a species stick around for very long?

What does the successful member of the species pass on to his children?

If the video doesn't play, follow the link here: https://www.youtube.com/watch?time_continue=2&v=By-w0QoW_0Y&feature=emb_title

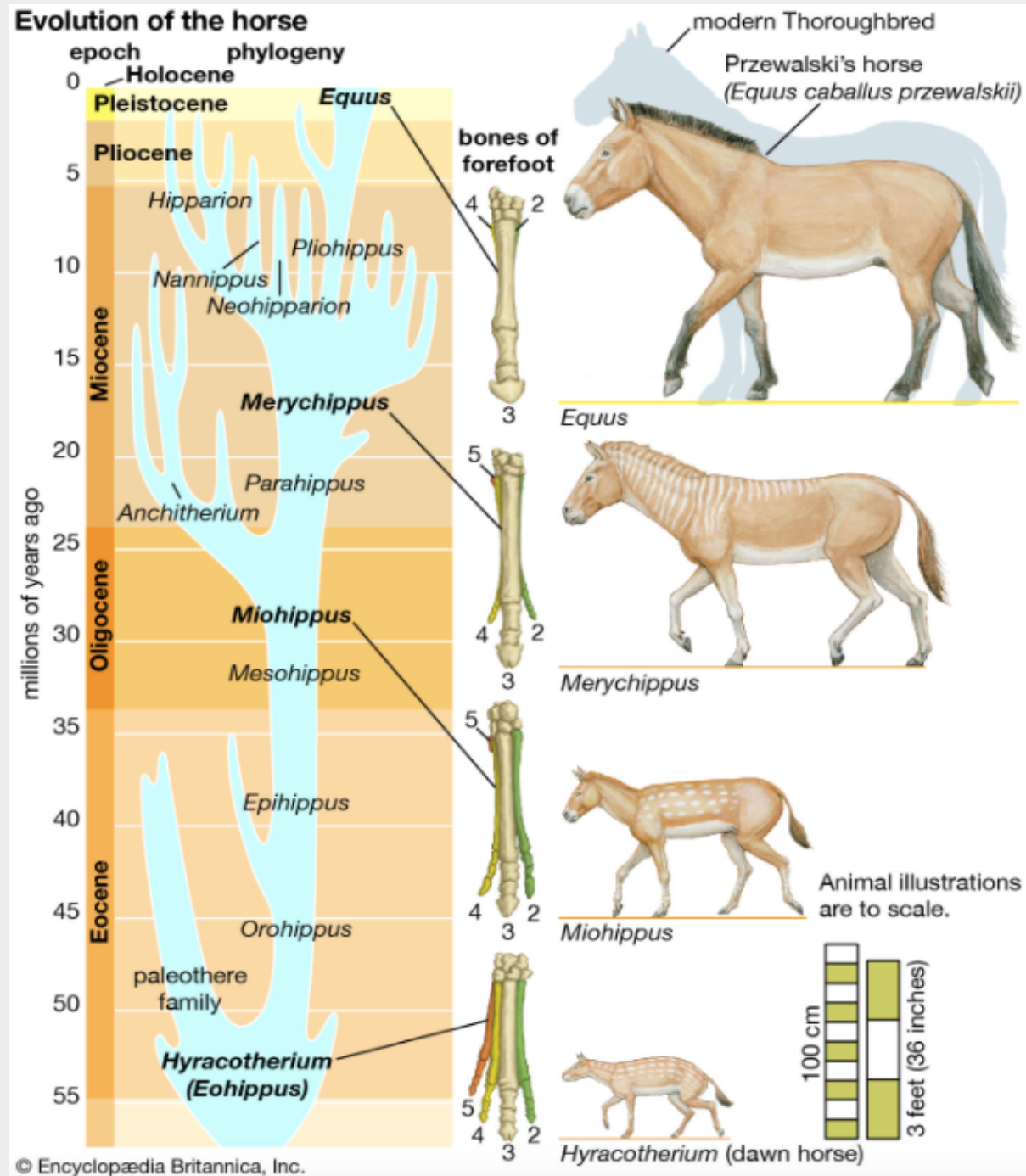
We are going to have a look at how horses have evolved over time.

The Przewalski's horse is the last remaining wild horse which has evolved by natural selection in the wild. Scientists have used fossil evidence, especially from leg bones (shown in the diagram) to trace how these horses have evolved over millions of years.

Down the left-hand side of the diagram shows over how many millions of years this part of evolution has taken place.

Look closely at the images, if you saw a *Hyracotherium* (dawn horse) today, do you think you would know it was a horse? What do you notice about the changes in the animals.

Remember! These changes happened very slowly over millions and millions of years. Evolution does not happen over night!

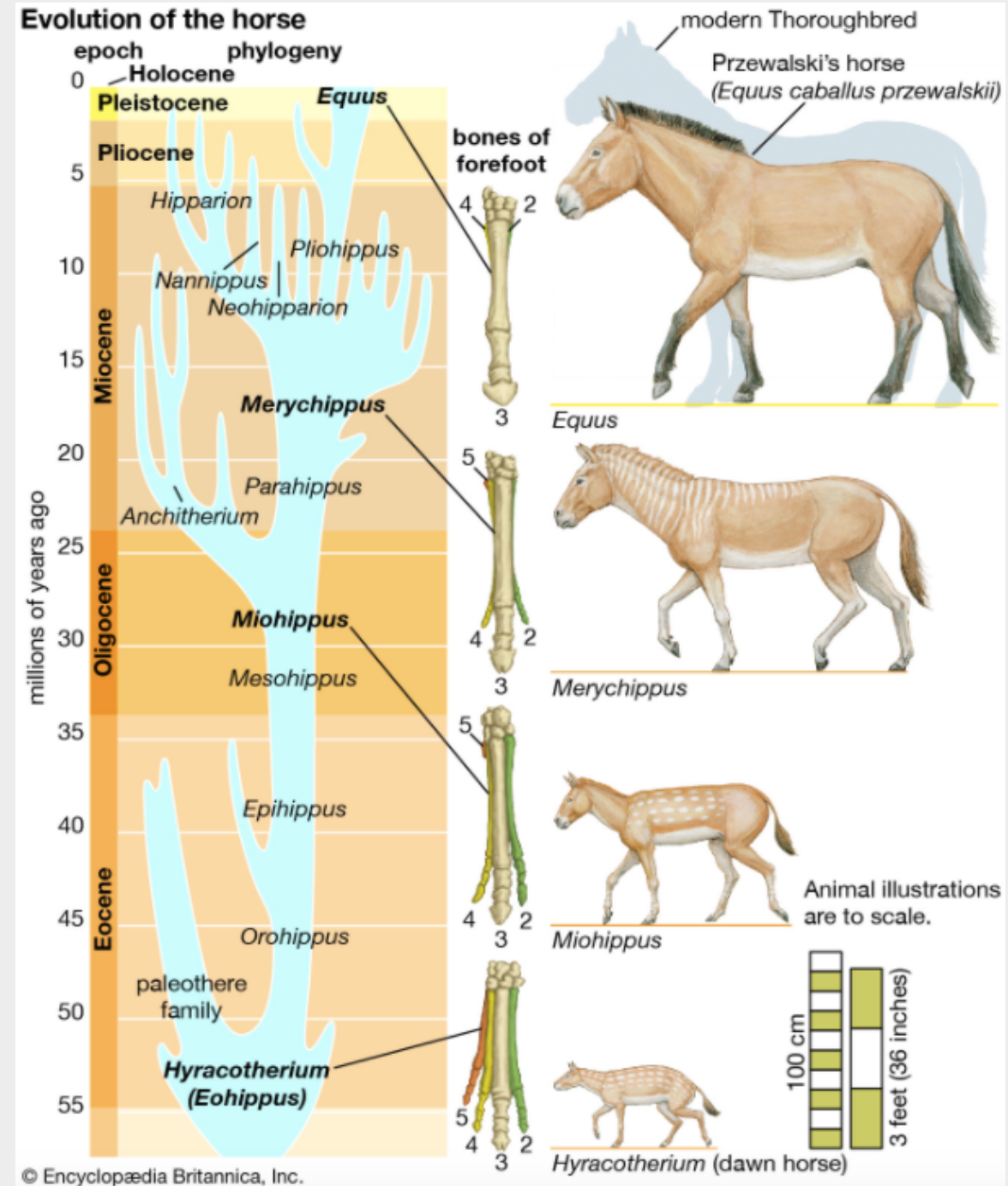


Activity:

Create a table of similarities and differences to compare what has stayed the same and what has changed about horses over the last 55 million years. I have started an example below.

Write down some questions you have about how horses have evolved over time. You might want to do some extra research yourself.

Similarities	Differences
They all have a tail	The tails have got much longer over time



Extra activities:

Can you find another example of animal that has changed significantly over millions of years due to evolution?

Charles Darwin, Mary Anning and Alfred Wallace are key figures in the area of evolution and inheritance. Research one of these people to find out how they developed ideas of evolution within science.