Calcot Schools Knowledge organiser – Science

Topic: Evolution & Inheritance	**Year 6**	Strand: Biology

Prior knowledge from previous year groups:

Year 2— Understand difference between things that are living, dead and never been alive. Pupils should be able to give examples.

Year 3 - Describe in simple terms how fossils are formed. Pupils should be able to identify how fossils have been preserved.

What will the children know by the end of the unit?

- Describe how living things change over time.

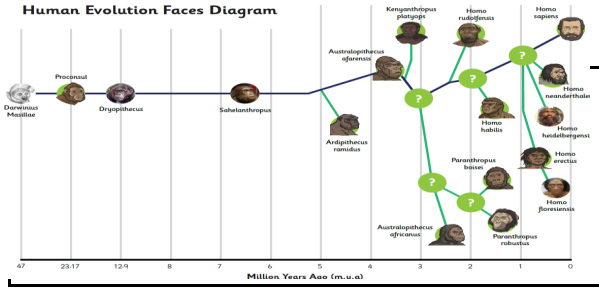
Explain how fossils provide information about living things that inhabited the Earth millions of years ago.

- Identify adaptations of animals and plants and explain how these could lead to evolution.

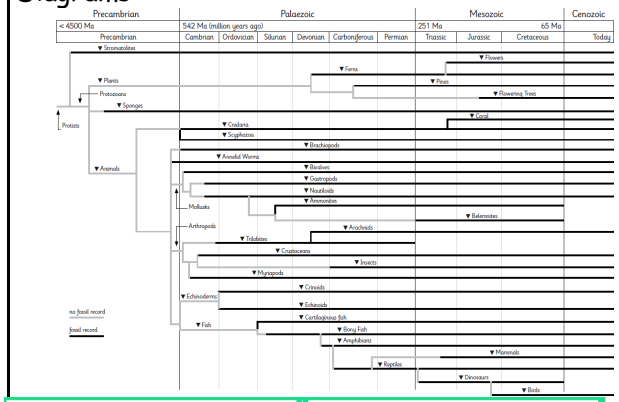
Give examples of plant and animal adaptations and how they are suited to their environments.

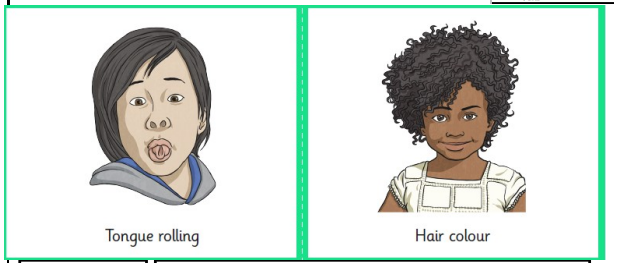
- Explain how living things produce offspring of the same kind, but not identical to their parents

- Research and present the work of significant scientists in the field and their contributions (Mary Anning, Charles Darwin and Alfred Wallace).



Diagrams:





Alfred Wallace (1823 - 1913)
British Naturalist and Explorer
Knowing that Darwin was interested in ideas about transmutation, I sent him an article I had written in which I described natural selection and how it caused varieties of the same species. My evidence was from observations in South America and Asia. While our ideas were similar, Darwin emphasised competition for food more while I emphasised how environmental changes could lead to natural selection. However, I had not intended to publish my work straight away.

Charles Darwin (1793 – 1874)
Charles Darwin – old
English Naturalist and Geologist
I had put off finishing my book and really struggled with it because I knew that I was opposing the idea that many religious people believed: that God had created all living things just as they were now. My grandfather's negative experience when he suggested the idea of transmutation also made me question whether I wanted to publish my ideas. When I received Wallace's paper, some of my friends said to publish straight away so that I would be known as the first person to propose natural selection, but I didn't think that was fair. So I decided that we would announce the theory and we should both be attributed with its discovery.

Vocabulary:

fossil	palaeontologists
adaptation	genetically modified
offspring	natural selection
inheritance	fossilisation
evolution	variation
genetics (genes)	chromosomes
Mary Anning, Charles Darwin, Alfred Wallace	breeding

Investigate!

- Adaptations of various plants and animals from pictures and field observations.
- Independent research on palaeontologists and their contribution in their field.
- Design your own breed of dog activity.
- Study pictures of adaptations in animals
- Study pictures of ammonite and trilobite fossils