

Y6 Science – Evolution and Inheritance

NC Targets to be covered:

- describe how adaptation can lead to evolution
- research and identify how animals and plants are adapted to suit their environment in different ways
- describe how variations occur between individuals of the same species
- use evidence from their observations to describe how offspring vary and are not identical to their parents
- describe how fossils provide information about living things that inhabited the Earth millions of years ago
- recognise that living things have changed over time.

Learning Ladders:

I can recognise that living things have changed over time

I can describe how fossils provide information about living things that inhabited the Earth millions of years ago

I can use evidence from my observations to describe how offspring vary and are not identical to their parents

I can describe how variations occur between individuals of the same species

I can research and identify how animals and plants are adapted to suit their environment in different ways

I can describe how adaptation can lead to evolution

Working Scientifically

I can report and present my findings from enquiries, in oral and written forms, such as displays and other presentations (e.g. explaining and concluding my findings, and explaining the degree of trust in my results).

I can identify scientific evidence that has been used to support or refute ideas or arguments.

Week	Order of Study – Main plots and Subplots
1	<u>LI- I can use evidence from my observations to describe how offspring vary and are not identical to their parents.</u> Stick in and complete the first two sections of the KWL grid, and then stick in knowledge organiser. Sorting exercise to identify what is inherited from parents and what is not. Discussion based on why certain characteristics are inherited and why others are not. <i>Self assessment.</i> <u>Resources needed:</u> Worksheet on Inheritance <u>Key terminology</u> – Inheritance - Characteristics
2	<u>LI- I can research and identify how animals and plants are adapted to suit their environment in different ways.</u> Tell the class that today they will be focusing on animal adaptations. Remind the children that adaptations are related to the environment the animal lives in so it is important to think about the climate, weather conditions, possible predators and food sources in a particular environment and then relate how certain adaptations helps the animal survive in their habitat. Study animals/plants from a range of different biomes and examine carefully how they have adapted to survive in their environment. For example – where do polar bears live in the wild? What are the climate/weather conditions like? What adaptation does the polar bear have that enable it to survive in extreme cold conditions? What do polar bears eat? How do they catch their prey? What features and adaptations enable them to be successful predators? <i>Teacher mark.</i> <u>Resources needed</u> <u>Key terminology</u>– Adaptation – habitat - environment
3	<u>LI- I can identify scientific evidence that has been used to support or refute ideas or arguments.</u> <u>Research enquiry- What happened when Charles Darwin visited the Galapagos islands?</u> Pupils pose questions to enable their enquiry into Darwin's theory of Evolution. There is a special focus the evidence presented by Darwin in relation to his study of species of tortoises and how they had evolved differently on the 7 Galapagos islands and the possible reasons for this. <i>Peer assessment.</i> <u>Resources needed:</u> <u>Key Vocabulary</u> –Enquiry Evolution - variation
4	<u>LI- I can describe how variations occur between individuals of the same species.</u> <u>Pattern Seeking enquiry- Is there a pattern between the size and shape of a bird's beak and the food it will eat?</u> Carry out the beak experiment in line with Darwin's study. The pupils will examine carefully the difference in beaks in order to understand their specific purpose and the reason as to why the evolution took place over a period of time. What is each beak suited to? How would the different beaks effect the diet of the birds. Did access to foods influence the shape of the beaks. Reasons for evolution.

	<u>Self assessment.</u> Resources needed: Key Vocabulary – Evolution – Survival of the Fittest – off spring variation
5	<u>LI- I can recognise that living things have changed over time and describe how adaptation can lead to evolution.</u> <u>Teacher mark.</u> Specific focus on the Survival of the Fittest and how small adaptations from generation to generation eventually lead to an evolution of a specie. Look carefully at the actual meaning of the term Survival of the Fittest. What traits are there within certain species that will enable them to survive. It is these traits that are passed on to their offspring. Case study – giraffes. Resources needed: Key Vocabulary – Survival of the Fittest – adaptations – specie – off spring variation
6	<u>LI- I can describe how fossils provide information about living things that inhabited the Earth millions of years ago.</u> What is a fossil? Has anyone ever found a fossil? Can you remember how fossils form? Discuss as a class. Ensure that the children understand the science vocabulary being used to explain what a fossil is. Watch the clip https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/z2ym2p3 Ask the children if they have any questions about how fossils are formed. Explain that species evolve and change with time. In this lesson, we are going to be looking at how horses have evolved. Give out the horse fossil fact sheet and ask the children to work in pairs and make notes about how horses have changed through the years. Discuss as a class. To end the lesson, ask the children if they think evolution is still happening today. Can they explain why they think it is or isn't using scientific vocabulary taught through the unit? Discuss as a class and review answers. • Establish that evolution is still happening today and ask the children to think about how modern-day humans might be influencing evolution, both positively and negatively? Encourage them to think about climate change, pollution, destruction of habitats, breeding programmes, introduction of invasive species, etc <u>Peer assessment.</u> Resources needed: Key Vocabulary – Fossil shell Jurassic paleontology extinct ammonite
Assessment time – Complete the final column of their KWL grid.	