

Year 6 NC - pupils should be taught to:	How we do this in Year 6	Year 6 Vocabulary
<p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p><u>How working scientifically can be met</u></p> <ul style="list-style-type: none"> • identify • explain 	<p>Discuss children’s understanding of the main terms to be used in this unit. Cells, Chromosomes, DNA and Genes: Give a simple explanation of all four terms to support the children’s understanding in this unit. What does variation mean? What causes variation? Introduce children to the ideas of how inherited genes can change a species over many generations. Explain the meaning of inheritance and what inherited characteristics are. Parents and Offspring: Children match the parents and offspring on the IWB. How did you match the parents and offspring? What are the inherited characteristics that you could spot? Inheritance and Variation: Explain how inherited characteristics lead to both similarities and differences between parents and offspring. Place children in mixed ability groups and ask them to sort inherited characteristics cards based on whether the characteristics can be inherited or not. Reveal answers and discuss why some characteristics are inherited and others are not.</p>	<p>Inheritance, animals, plants, humans, parent, offspring, similarities, differences, characteristics, variation.</p>
<p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p> <p><u>How working scientifically can be met</u></p> <ul style="list-style-type: none"> • identify 	<p>Recap how variation can occur from Lesson 1 and introduce the idea of adaptation. Environment and Habitats: What is an environment? What is a habitat? What different types of habitats are there? Children discuss their understanding of environments and habitats before feeding back to the whole class. Show examples on the IWB. What Does Adapted Mean?: Children read and discuss meanings of adapted and decide which are correct or incorrect. Read through the scientific definition of adaptation. Accidental Adaptations: Explain how most mutations occur in DNA and how this leads to the development of adaptive traits. Adaptive Traits: Children to identify different adaptive traits. Humans: What habitats do humans live in? On land - all environments and habitats, except the Arctic or Antarctic. What habitats are they not able to live in? Can you identify adaptive traits that humans have which enable them to live in such a range of different habitats and environments?</p>	<p>Adaptation, environment, habitat, DNA, genes, adaptive traits, mutation, replication, accidental.</p>

<ul style="list-style-type: none"> • explain • identifying scientific evidence 	<p>Children re-read their definitions for adaptation and evolution from lesson 1. Have your ideas changed? If so, how? What is adaptation? What is evolution? Who are the key scientists who came up with the idea of evolutionary change? Theory of Evolution: Give children information about the theory of evolution Pupil Sheet and Theory of Evolution Scientist Masks (These can either be given How does this fit in with the ideas about inherited and adaptive traits? How is x's idea different to y's? Also address any misconceptions - for example children may not know what an academic 'paper' is.</p> <p>Evolution: Children sort evolutionary ideas cards into categories and then independently write a brief paragraph summarising how the ideas changed over time for each of the categories. (Conduct a mini-plenary, reading out good examples of summaries that emphasise the similarities and differences between ideas by paraphrasing key points and ideas.)</p>	<p>Adaptation, environment, habitat, DNA, genes, adaptive traits, mutation, replication, accidental.</p>
<ul style="list-style-type: none"> • identify • explain 	<p><i>(Final lesson)</i> Discuss adaptation of living things. Adaptation and Evolution: Explain the conditions for adaptation by natural selection leading to evolution. Living Fossils: Read through the information about what constitutes a living fossil and how some living things have remained virtually unchanged. Does this mean these living things have never developed mutations or does it mean those that did have become extinct? Which is a more plausible explanation? Show examples of how an adaptation can have both advantages and disadvantages. Evolution and Human Intervention: Explain how humans have affected the evolutionary process through selective breeding of plants and animals. Selective Breeding: Explain the process of selective breeding. Cross Breeding: Explain the difference between cross and selective breeding. Children examine and sort the selective and cross breeding cards into parent(s) and selectively bred offspring. Genetic Modifications: Show a range of ways that humans are intervening in the evolution process. Should humans intervene in this way? Why? Why not? What effect will this have on living things in the future?</p>	<p>Evolution, adaptation, human intervention, selective breeding, environment, inherited traits, genetic, genes, modification.</p>

<p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p>	<p>Inheritance, Adaptation and Evolution: Children match the key words they have learnt so far with their definitions. Fossils Review: Can you recall the fossilisation process? Children to review their understanding of the fossilisation process. Darwin and Fossils: Explain Darwin's views on the evidence fossil records could provide for the theory of evolution. Examining Fossil Evidence: State the advantages and disadvantages of observing fossil records. Fossil Records: Give pairs of children a copy of the evolution timeline and explain why some living things have more fossil records than others. Children to compare fossil evidence of evolution for living things. Children sort animals into pairs with common ancestors.</p>	<p>Evolution, inheritance, theory of evolution, fossil, fossil records, evidence, complete, incomplete, ancestor, common ancestor, traits.</p>
<p><u>How working scientifically can be met</u></p> <ul style="list-style-type: none"> • identifying scientific evidence • examine • explain 		

