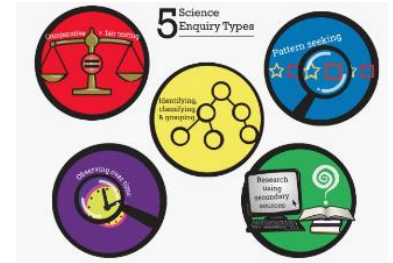


# Year 6 Summer Term

## Evolution and inheritance

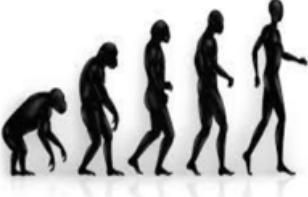

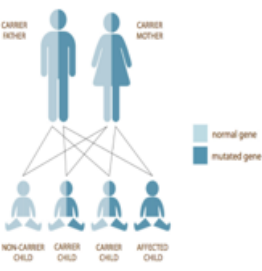



### Prior knowledge

Not covered – new learning

### National Curriculum for year 6

recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago – recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents – identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

<p><b>Overview</b></p> <p>-<u>Evolution</u> is a change over time. It occurs when there is competition to survive (natural selection).</p> <p>-Characteristics are passed from parents to their offspring. This is called <u>inheritance</u>.</p> <p>-Offspring are not identical to their parents. Some characteristics are inherited, but some are new in the offspring – these are called <u>mutations</u>.</p> <p>-<u>Fossils</u> are remains of living things, and provide evidence about living things from the past.</p> <p>-Animals and plants are suited to their environments, and adaptation leads to <u>advantageous changes</u>.</p> 	<p><b>Evidence for Evolution</b></p> <p><b>Fossils are the remains of living things, found in sedimentary rocks.</b></p>  <p>-When paleontologists compare animals in fossils to animals today, they can see similarities and differences between them.</p> <p>-e.g. Fossils show that giraffes necks did not used to be as long. They have developed over time to reach high branches.</p> <p>-Living things also provide evidence of natural selection and evolution.</p> <p>-e.g. On the Galapagos Islands, Charles Darwin found differences between finches from island to island. They had adapted for the different foods that they eat.</p>
<p><b>Inheritance and Mutation</b></p> <p><u>Evolution</u> is the name given for changes to a species over time.</p>  <p>-Living things produce <u>offspring</u> of the same kind.</p> <p>-Some of a parent's characteristics are passed down to the offspring – this is called inheritance.</p> <p>-This is why we often share similar features with our parents, and some conditions are shared (see image).</p> <p>-Inheritance is <u>genetic</u>, not environmental. E.g. If two blonde-haired parents dye their hair black, this does not mean they will have a black-haired child.</p> <p>-Some features are new to the offspring. These are called <u>mutations</u>. This is why we are not exact copies of our parents.</p> <p>-These changes in offspring <u>over time</u> allow evolution to take place.</p>	<p><b>Adaptation</b></p> <p><b>Evolution &amp; natural selection have enabled living things to adapt to their environments.</b></p>  <p>-Sometimes, changes that offspring have from their parents are advantageous – they allow the offspring to cope better in their environment.</p> <p>-However, often the changes are not advantageous (called maladaptations). When this is the case, the offspring will find it more difficult to thrive.</p> <p>-Natural selection can ensure that, over time, the advantageous characteristics survive in the species.</p> <p>-For example, many polar animals have adapted to possess layers of blubber and/or fur (for warmth) and white outer coats (for camouflage).</p> <p>-The dodo, with no predators on its island, had adapted in a number of ways that made it unable to survive when humans arrived (maladaptations).</p>

### Key vocabulary

Adaptation, Evolution, Characteristics, Reproduction, Genetics Fossils,

What does evolution mean?

### Suggested texts

(Foxton) prehistoric life  
Evolution and inheritance

What is the difference between evolution and inheritance?

What does inheritance mean?

### Scientists

- Hippocrates -The Father of Medicine
- Charles Darwin- Evolution
- Alfred Russell Wallace – naturalist
- Rosalind Franklin – DNA
- Nettie Stevens – Geneticist

Professor Alice Roberts - Evolutionary biologist

Can you explain adaptation?



