

## Key Stage 3 Curriculum

**Subject:** Biology

**Head of Department:** Miss M. Mohammed

Science helps students to understand the phenomena that occur in us, and the world in which we live, as well as enhancing our knowledge of the universe.

Biology encompasses the study of humans, animals, plants and other living beings, as well as exploring nature and natural habitats.

In Key Stage 3, pupils study the following:

Term	Year 7	Year 8	Year 9
Autumn	<p><b>Topic:</b> Cells  <b>Fertile Q:</b> What are all living things made of?  <b>Content:</b></p> <ul style="list-style-type: none"> <li>• Cell structure</li> <li>• Microscopy</li> <li>• Cell specialisation &amp; differentiation</li> <li>• Stem Cells</li> <li>• Principles of organisation</li> <li>• Mitosis</li> </ul>	<p><b>Topic:</b> Health &amp; Disease  <b>Fertile Q:</b> How can I keep my body healthy?  <b>Content:</b></p> <ul style="list-style-type: none"> <li>• Prokaryotes &amp; eukaryotes</li> <li>• Culturing Microorganisms</li> <li>• Coronary heart disease</li> <li>• Health issues</li> <li>• The effect of lifestyle on disease</li> <li>• Cancer</li> <li>• Communicable diseases</li> <li>• Human defence systems</li> <li>• Vaccination</li> <li>• Antibiotics &amp; painkillers</li> <li>• Plant disease</li> </ul>	<p><b>Topic:</b> Evolution &amp; Biodiversity  <b>Fertile Q:</b> Why is life on Earth so diverse?  <b>Content:</b></p> <ul style="list-style-type: none"> <li>• Prokaryotes &amp; eukaryotes</li> <li>• Advantages and disadvantages of sexual and asexual reproduction</li> <li>• Variation</li> <li>• Adaptations</li> <li>• Evolution</li> <li>• Evidence for evolution</li> <li>• Fossils</li> <li>• Extinction</li> <li>• Resistant bacteria</li> <li>• Classification</li> <li>• Biodiversity</li> <li>• Maintaining biodiversity</li> </ul>
Spring	<p><b>Topic:</b> Human Body  <b>Fertile Q:</b> How does our body work to keep us alive?  <b>Content:</b></p> <ul style="list-style-type: none"> <li>• Diffusion</li> <li>• Human Digestive System</li> </ul>	<p><b>Topic:</b> Reproduction  <b>Fertile Q:</b> How does a species make more of itself?  <b>Content:</b> Mitosis  Hormones in reproduction  Meiosis</p>	<p><b>Topic:</b> Plant Biology  <b>Fertile Q:</b> Why does the Earth need plants?  <b>Content:</b></p> <ul style="list-style-type: none"> <li>• Osmosis</li> <li>• Plant organ systems</li> </ul>

	<ul style="list-style-type: none"> <li>• Digestive enzymes</li> <li>• The heart</li> <li>• Blood &amp; blood vessels</li> </ul>	Sexual & asexual reproduction Advantages and disadvantages of sexual and asexual reproduction	<ul style="list-style-type: none"> <li>• Plant disease</li> <li>• Photosynthesis</li> <li>• Plant hormones</li> </ul>
Summer	<p><b>Topic:</b> Ecology</p> <p><b>Fertile Q:</b> How many organisms are on our planet?</p> <p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Communities</li> <li>• Biotic and abiotic factors</li> <li>• Organisation of an ecosystem</li> <li>• Trophic levels</li> <li>• Pyramids of biomass</li> <li>• Transfer of biomass</li> </ul>	<p><b>Topic:</b> Genetics &amp; Inheritance</p> <p><b>Fertile Q:</b> Why am I a little bit like both my parents but not exactly like either?</p> <p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Chromosomes</li> <li>• DNA &amp; the genome</li> <li>• DNA structure</li> <li>• Genetic inheritance</li> <li>• Inherited disorders</li> <li>• Sex determination</li> <li>• Variation</li> <li>• Understanding of genetics</li> </ul>	<p><b>Topic:</b> Physiology</p> <p><b>Fertile Q:</b> How does our body keep us safe?</p> <p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• Active Transport</li> <li>• Respiration</li> <li>• The brain</li> <li>• The eye</li> <li>• Hormones in reproduction</li> <li>• Contraception</li> </ul>