



## Key Stages 3 & 4 Subject Mapping

Physical Processes

Changing Materials

Life Processes

Working Scientifically / Scientific enquiry to be taught throughout.

2019 Autumn Term	2020 Spring Term	2020 Summer Term
<p style="text-align: center;"><b>Forces and motion</b></p> <ul style="list-style-type: none"> <li>• Gravity</li> <li>• Friction &amp; Resistance</li> <li>• Gradients and wheels</li> <li>• Push and pull</li> <li>• Different types of force</li> <li>• Direction force may act</li> <li>• How mechanics can alter forces</li> </ul> <p style="text-align: center;"><b>Evolution and Inheritance</b></p> <ul style="list-style-type: none"> <li>• Learn how living things have changed over time (use of fossils)</li> <li>• Living things produce offspring which are similar but never identical (look at own family if appropriate or animals such as dogs).</li> <li>• How adaptation to environment lead to evolution.</li> <li>• Famous Scientists: Mary Anning, Charles Darwin and Alfred Wallace</li> </ul>	<p style="text-align: center;"><b>Changing Materials</b></p> <ul style="list-style-type: none"> <li>• Reversible &amp; irreversible changes</li> <li>• Heating and cooling</li> <li>• Combustion</li> <li>• Acids and alkalis</li> <li>• Reactions and mixtures</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Reproduction and sex Ed.</li> </ul>	<p style="text-align: center;"><b>Life processes</b></p> <p style="text-align: center;"><b>Green plants</b></p> <ul style="list-style-type: none"> <li>• Parts of a plant and function (including how water is transported within plants)</li> <li>• Germination</li> <li>• Effect of light, water, temperature etc.</li> <li>• Plants that grow near water</li> <li>• Impact of vegetation near water supply.</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Circulatory system.</li> <li>• Lifelong healthy behaviours e.g. exercise</li> </ul>

# Science



2020 Autumn Term	2021 Spring Term	2021 Summer Term
<p style="text-align: center;"><b>The Earth and Space</b></p> <ul style="list-style-type: none"> <li>• Movement of the Earth and other planets</li> <li>• Shadows</li> <li>• Importance of sun – light and heat</li> <li>• Pattern of own day</li> <li>• Day and night</li> <li>• How we see things</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Bacteria, ill health, skin and hygiene</li> </ul>	<p style="text-align: center;"><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• Reproduction, life cycle i.e. butterfly</li> <li>• Nutrition</li> <li>• Movement</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Reproduction and sex Ed.</li> </ul>	<p style="text-align: center;"><b>Everyday Materials</b></p> <ul style="list-style-type: none"> <li>• Man-made &amp; Natural Materials</li> <li>• Purpose of materials</li> <li>• Origins of materials</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Heart, lungs, exercise and substance abuse (alcohol and smoking)</li> <li>• Lifelong healthy behaviours e.g. exercise</li> </ul>
2021 Autumn Term	2022 Spring Term	2022 Summer Term
<p style="text-align: center;"><b>Properties of materials</b></p> <ul style="list-style-type: none"> <li>• Exploring clothing and materials for different climates and weather (links to DT)</li> <li>• Explore where different materials come from: man made/natural.</li> <li>• Investigate the journey of an item of clothing.</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Digestion and healthy eating</li> <li>• How nutrients and water are used by the body.</li> </ul>	<p style="text-align: center;"><b>Variation and classification</b></p> <ul style="list-style-type: none"> <li>• Parts of a flower</li> <li>• Propagation, reproduction</li> <li>• Different kinds of plants</li> <li>• Different types of species (e.g. dogs, butterflies, fish etc.)</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Skeleton, muscles and movement</li> <li>• Lifelong healthy behaviours e.g. exercise</li> </ul>	<p style="text-align: center;"><b>Light &amp; Sound</b></p> <ul style="list-style-type: none"> <li>• Changing sounds e.g. how distance effects sound</li> <li>• Sound and hearing</li> <li>• How we see light and how it travels</li> <li>• Exploring shadows</li> <li>• Light and sound in the local environment</li> <li>• Reflection of light</li> <li>• How to protect our eyes in the sun</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Reproduction and sex Ed</li> <li>• Describe the changes as humans develop to old age</li> </ul>

# Science



2022 Autumn Term	2023 Spring Term	2023 Summer Term
<p style="text-align: center;"><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• Everyday Appliances</li> <li>• Building and exploring circuits</li> <li>• Symbol representation of circuit components.</li> <li>• Energy resources</li> <li>• Alternative power sources.</li> <li>• Conduction &amp; Insulation</li> <li>• Keeping warm</li> <li>• Saving electricity</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Teeth and dental care</li> </ul>	<p style="text-align: center;"><b>Separating materials</b></p> <ul style="list-style-type: none"> <li>• Sieving, filtration, evaporation</li> <li>• Chromatography</li> <li>• Dissolving</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Reproduction and sex Ed</li> </ul>	<p style="text-align: center;"><b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• Observe living things i.e. wormery, fish</li> <li>• Body parts of animals, insects and birds</li> <li>• Food chains</li> <li>• Life cycles of a range of plants and animals (fish, insects, mammals)</li> <li>• How different plants and animals reproduce.</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Bacteria, ill health, skin and hygiene</li> <li>• Substance abuse (alcohol and smoking)</li> </ul>
2023 Autumn Term	2024 Spring Term	2024 Summer Term
<p style="text-align: center;"><b>Grouping and classifying materials</b></p> <ul style="list-style-type: none"> <li>• Grouping materials according to different observable criteria</li> <li>• Properties of materials</li> <li>• Uses of materials</li> <li>• Solids, liquids, gases</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Digestion and healthy living</li> <li>• Impact of diet, exercise and lifestyle</li> <li>• How our bodies function</li> </ul>	<p style="text-align: center;"><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• Changes as humans grow older;</li> <li>• Compare humans to other animals;</li> <li>• Compare animals to other animals (e.g. growth rate, life expectancy, habitat, feeding etc)</li> </ul> <p style="text-align: center;"><b>Humans</b></p> <ul style="list-style-type: none"> <li>• Heart, lungs, exercise and substance abuse</li> <li>• Lifelong healthy behaviours e.g. exercise</li> </ul>	<p style="text-align: center;"><b>Forces</b></p> <ul style="list-style-type: none"> <li>• Pushes and pulls</li> <li>• Levers and pulleys (linked to DT mapping)</li> <li>• Magnets</li> </ul> <p style="text-align: center;"><i>(links to compasses in Geography)</i></p> <p style="text-align: center;"><b>Humans</b></p> <p style="text-align: center;">Reproduction and sex Ed</p>