

**SCIENCE CURRICULUM MAP 2022-23**  
**Matched to National Curriculum**  
**In the context of our Science Curriculum**

**Progression of knowledge**

SCIENCE (THEMATIC) COVERAGE: NATIONAL CURRICULUM YEAR 1					
AUTUMN 1 <u>SEASONS</u>	AUTUMN 2 <u>LOOKING AT ANIMALS</u>	SPRING 1 <u>PLANT DETECTIVES</u>	SPRING 2 <u>USING OUR SENSES</u>	SUMMER 1 <u>EVERYDAY MATERIALS</u>	SUMMER 2 <u>STEM AND SCIENTISTS</u>
PHYSICS <i>(Seasonal changes)</i>	BIOLOGY <i>(Animals, including humans)</i>	BIOLOGY <i>(Plants)</i>	BIOLOGY <i>(Animals, including humans)</i>	CHEMISTRY <i>(Everyday Materials)</i>	
<ul style="list-style-type: none"> <li>• Spring, Summer, Autumn, Winter.</li> <li>• Leaves, trees, flowers.</li> <li>• Animals around our school: birds, snails, etc.</li> <li>• Weather</li> <li>• Day length</li> <li>• Seasons changing: senses (see &amp; hear) and weather.</li> </ul> <p style="color: red; font-size: small;">CST – Stewardship enhancing the wellbeing of the planet.</p>	<ul style="list-style-type: none"> <li>• Animals: fish, amphibians, reptiles, birds and mammals, including pets.</li> <li>• Animals: carnivores, herbivores and omnivores.</li> <li>• Animals: bodies, movements, food, caring for animals.</li> </ul> <p style="color: red; font-size: small;">CST – Stewardship enhancing the wellbeing of the planet.</p> <p style="color: blue; font-size: small;">British Values –Respect.</p>	<ul style="list-style-type: none"> <li>• Garden plants and wild plants.</li> <li>• Comparing flowers.</li> <li>• Parts of a plant.</li> <li>• Structure of a tree.</li> <li>• Deciduous and evergreen trees.</li> <li>• Flowering plants, leaves and flowers.</li> </ul> <p style="color: red; font-size: small;">CST – Stewardship enhancing the wellbeing of the planet.</p> <p style="color: blue; font-size: small;">British Values –Respect.</p>	<ul style="list-style-type: none"> <li>• Bodies.</li> <li>• Body parts.</li> <li>• Senses: hearing, feeling, smelling and exploring the world around us.</li> </ul> <p style="color: red; font-size: small;">CST - Human Dignity each made in God's image.</p> <p style="color: blue; font-size: small;">British Values –Respect. British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>• Everyday materials: wood, plastic, glass, metal, water and rock, (<i>paper, fabric</i>).</li> <li>• Objects and the material they are made from.</li> <li>• Physical properties of materials.</li> <li>• Compare and group materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Working Scientifically skills</li> <li>• Scientists: Mae Jemison, Linda Buck.</li> <li>• Career inspiration e.g. vet for weather forecaster.</li> </ul>

**SCIENCE (THEMATIC) COVERAGE: NATIONAL CURRICULUM YEAR 2**

<p align="center">AUTUMN 1 TAKE CARE</p> <p align="center">BIOLOGY <i>(Animals, including humans)</i></p>	<p align="center">AUTUMN 2 MATERIALS: GOOD CHOICES AND SHAPING UP</p> <p align="center">CHEMISTRY <i>(Uses of everyday materials)</i></p>	<p align="center">SPRING 1 THE APPRENTICE GARDENER</p> <p align="center">BIOLOGY <i>(Plants)</i></p>	<p align="center">SPRING 2 GROWING UP</p> <p align="center">BIOLOGY <i>(Animals, including humans)</i></p>	<p align="center">SUMMER 1 WHAT IS IN YOUR HABITAT?</p> <p align="center">BIOLOGY <i>(Living things and their habitats)</i></p>	<p align="center">SUMMER 2 STEM AND SCIENTISTS</p>
<ul style="list-style-type: none"> <li>• Sorting food.</li> <li>• Importance of food, exercise and hygiene.</li> <li>• Staying healthy.</li> </ul> <p>CST – Human Dignity Made in image and likeness of God.</p> <p>British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>• Particular uses of everyday materials: wood, metal, plastic, glass, brick, rock, paper, cardboard.</li> <li>• Inventions.</li> <li>• Describing and shaping objects.</li> <li>• Squashing, bending, twisting and stretching.</li> <li>• Properties of materials: comparing suitability.</li> </ul>	<ul style="list-style-type: none"> <li>• Seeds, blubs, mature plants.</li> <li>• Gardeners.</li> <li>• Caring for plants: water, light and a suitable temperature to grow and stay healthy.</li> <li>• Seed germination.</li> </ul> <p>British Values –Respect.</p>	<ul style="list-style-type: none"> <li>• Babies.</li> <li>• Basic needs of humans survival: water, food, and air.</li> <li>• Growing and changes: offspring into adults.</li> <li>• Body parts.</li> </ul> <p>CST – Common Good Respecting rights and responsibilities, looking after others.</p> <p>British Values –Respect. British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>• Living things and their habitats and microhabitats.</li> <li>• Basic needs of animals and plants.</li> <li>• Animals and plants depend on each other.</li> <li>• Food chains and food sources.</li> <li>• Living, things that are dead and things that have never been alive.</li> </ul> <p>CST – Stewardship Looking after God’s world.</p> <p>British Values –Respect.</p>	<ul style="list-style-type: none"> <li>• Working Scientifically skills</li> <li>• Inventor: Charles Macintosh</li> <li>• Scientists: Louis Pasteur, Professor Sarah Gilbert, Rachel Carson</li> <li>• Career inspiration e.g. doctors and nurses.</li> </ul>

**SCIENCE (THEMATIC) COVERAGE: NATIONAL CURRICULUM YEAR 3**

<p align="center"><b>AUTUMN 1</b> <b>AMAZING BODIES</b></p> <p align="center"><b>BIOLOGY</b> <i>(Animals, including humans)</i></p>	<p align="center"><b>AUTUMN 2</b> <b>ROCK DETECTIVES</b></p> <p align="center"><b>CHEMISTRY</b> <i>(Rocks)</i></p>	<p align="center"><b>SPRING 1</b> <b>HOW DOES YOUR GARDEN GROW?</b></p> <p align="center"><b>BIOLOGY</b> <i>(Plants)</i></p>	<p align="center"><b>SPRING 2</b> <b>THE POWER OF FORCES</b></p> <p align="center"><b>PHYSICS</b> <i>(Forces and magnets)</i></p>	<p align="center"><b>SUMMER 1</b> <b>CAN YOU SEE ME?</b></p> <p align="center"><b>PHYSICS</b> <i>(Light)</i></p>	<p align="center"><b>SUMMER 2</b> <b>STEM AND SCIENTISTS</b></p>
<ul style="list-style-type: none"> <li>Survival.</li> <li>Eating to stay healthy and nutrition.</li> <li>They get nutrition from what they eat.</li> <li>Skeletons and muscles.</li> <li>Support, protection and movement.</li> </ul> <p>CST – Human Dignity, Common Good Look after ourselves and others.</p> <p>British Values –Respect. British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>Different types of rocks: appearance and physical properties.</li> <li>Uses of rocks.</li> <li>Changes of time.</li> <li>Soil: rocks and organic matter.</li> <li>Fossils: things that have lived are trapped within rock.</li> <li>Mary Anning.</li> </ul>	<ul style="list-style-type: none"> <li>Plants, roots, stem/trunk, flowers and leaves: functions of the different parts.</li> <li>Plants need: air, light, water, nutrients from soil, and room to grow.</li> <li>Each plant varies.</li> <li>Water: transported within plants.</li> <li>Life cycle of flowering plant including pollination, seed formation and seed dispersal.</li> <li>Bees.</li> </ul> <p>British Values –Respect.</p>	<ul style="list-style-type: none"> <li>Making things move.</li> <li>Sliding on different materials.</li> <li>Magnets and magnetic materials.</li> <li>Forces need contact between 2 objects</li> <li>Magnetic forces can act at a distance</li> <li>Attract or repel</li> <li>2 poles.</li> </ul>	<ul style="list-style-type: none"> <li>Sight.</li> <li>Light and dark.</li> <li>Dark is the absence of light</li> <li>Reflection and mirrors.</li> <li>Shadows: making them and changing the shape and size.</li> <li>Opaque object</li> <li>Sunglasses and sun safety.</li> </ul>	<ul style="list-style-type: none"> <li>Working Scientifically skills</li> <li>Scientists: Marie Curie, George Washington Carver, William Smith, Inge Lehmann</li> <li>Career inspiration e.g. gardener.</li> </ul>

**SCIENCE (THEMATIC) COVERAGE: NATIONAL CURRICULUM YEAR 4**

<p align="center"><b>AUTUMN 1</b> <b>HUMAN IMPACT</b></p> <p align="center"><b>BIOLOGY</b> <i>(Living things and their habitats)</i></p>	<p align="center"><b>AUTUMN 2</b> <b>IN A STATE</b></p> <p align="center"><b>CHEMISTRY</b> <i>(States of matter)</i></p>	<p align="center"><b>SPRING 1</b> <b>GOOD VIBRATIONS</b></p> <p align="center"><b>PHYSICS</b> <i>(Sound)</i></p>	<p align="center"><b>SPRING 2</b> <b>WHERE DOES ALL THAT FOOD GO?</b></p> <p align="center"><b>BIOLOGY</b> <i>(Animals, including humans)</i></p>	<p align="center"><b>SUMMER 1</b> <b>SWITCHED ON</b></p> <p align="center"><b>PHYSICS</b> <i>(Electricity)</i></p>	<p align="center"><b>SUMMER 2</b> <b>STEM AND SCIENTISTS</b></p>
<ul style="list-style-type: none"> <li>• Changes to environments posing danger to living things.</li> <li>• The impact of humans locally.</li> <li>• Litter.</li> <li>• Broken food chains.</li> <li>• Habitat destruction.</li> <li>• Zoos.</li> <li>• Classification keys</li> <li>• Who lives here?</li> <li>• Grouping living things</li> </ul> <p>CST – Stewardship, Solidarity Looking after our world.</p> <p>British Values –Respect.</p>	<ul style="list-style-type: none"> <li>• Properties: solids, liquids and gases.</li> <li>• Changing state.</li> <li>• Heated and cooled.</li> <li>• Degrees Celsius (°C).</li> <li>• Thermometer.</li> <li>• Water cycle: evaporation, condensation and temperature.</li> </ul> <p>CST – Stewardship, Solidarity Looking after our world.</p>	<ul style="list-style-type: none"> <li>• Sounds: how they are made, louder and quieter, moving away from the source.</li> <li>• Vibrating.</li> <li>• Sound travel.</li> <li>• Hearing and ears.</li> <li>• The pitch of a sound.</li> <li>• Volume of a sound and the strength of the vibrations that produced it.</li> <li>• Distance from the sound source.</li> </ul>	<ul style="list-style-type: none"> <li>• Human digestive system.</li> <li>• Human teeth: different types, functions and looking after our teeth.</li> <li>• Food chains: producers, predators, prey.</li> </ul>	<ul style="list-style-type: none"> <li>• Common appliances that run on electricity.</li> <li>• Electrical circuit: cells, wires, bulbs, switches, buzzers, lamp and battery.</li> <li>• Will the lamp light?</li> <li>• A switch opens and closes.</li> <li>• Why a circuit doesn't work.</li> <li>• Conductors and insulators.</li> <li>• Metals.</li> </ul>	<ul style="list-style-type: none"> <li>• Working Scientifically skills.</li> <li>• Scientists: Gerald Durrell, Alexander Graham Bell, Maria Telkes, Garrett Morgan, Thomas Edison,</li> <li>• Career inspiration e.g. dentist or someone who works with sound or electricity.</li> </ul>

**SCIENCE (THEMATIC) COVERAGE: NATIONAL CURRICULUM YEAR 5**

<p align="center"><b>AUTUMN 1</b> <b>THE EARTH AND BEYOND</b></p> <p align="center"><b>PHYSICS</b> <i>(Earth and space)</i></p>	<p align="center"><b>AUTUMN 2</b> <b>1) THE CIRCLE OF LIFE</b> <b>2) REPRODUCTION IN PLANTS AND ANIMALS</b></p> <p align="center"><b>BIOLOGY</b> <i>(Living things and their habitats)</i> <i>(Animals, including humans)</i></p>	<p align="center"><b>SPRING 1</b> <b>GET SORTED</b></p> <p align="center"><b>CHEMISTRY</b> <i>(Properties and changes of materials)</i></p>	<p align="center"><b>SPRING 2</b> <b>ALL CHANGE</b></p> <p align="center"><b>CHEMISTRY</b> <i>(Properties and changes of materials)</i></p>	<p align="center"><b>SUMMER 1</b> <b>FEEL THE FORCE</b></p> <p align="center"><b>PHYSICS</b> <i>(Forces)</i></p>	<p align="center"><b>SUMMER 2</b> <b>STEM AND SCIENTISTS</b></p>
<ul style="list-style-type: none"> <li>▪ Movement of the Earth and planets relative to the sun.</li> <li>▪ Year, seasons, day and night.</li> <li>▪ Sun helps to measure time and time around the world.</li> <li>▪ Sunrise and sunset: Earth's rotation.</li> <li>▪ Sun, Earth and moon as approximately spherical bodies.</li> <li>▪ Moon shape: movement of the moon relative to the Earth.</li> </ul> <p>British Values –Respect.</p>	<ul style="list-style-type: none"> <li>▪ Life cycles: mammal, amphibian, insect and bird.</li> <li>▪ Humans helping endangered animals.</li> <li>▪ Plant reproduction: flowering plants, producing seeds.</li> <li>▪ Animal reproduction: mammal, amphibian, insect and bird.</li> <li>▪ Comparing human and animal lifecycles.</li> <li>▪ Humans develop to old age.</li> </ul> <p>CST – Solidarity Looking after animals.</p> <p>British Values –Respect. British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>▪ Comparing and grouping materials: hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.</li> <li>▪ Solids, liquids, metals, plastics.</li> <li>▪ Uses of everyday materials: metals, woods and plastic.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Separating mixtures: filtering, sieving and evaporating.</li> <li>▪ Mixing liquids and solids: solutions and substances.</li> <li>▪ Sugar or salt dissolving.</li> <li>▪ Recover a substance from a solution.</li> <li>▪ Purify materials: drinking water from seawater.</li> <li>▪ Reversible and non-reversible changes.</li> <li>▪ Gases, Iron nails rusting, burning a candle, action of acid on bicarbonate of soda.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Measuring forces.</li> <li>▪ Air resistance, water resistance, gravity and friction.</li> <li>▪ Moving things and slowing down falling objects.</li> <li>▪ Shape of an object affecting its movement in a liquid.</li> <li>▪ Sinking and stretching.</li> <li>▪ Levers, pulleys and gears.</li> <li>▪ Lifting a heavy load.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Working Scientifically skills.</li> <li>▪ Scientists: David Attenborough, Margaret Hamilton, Eva Crane and Leonardo Da Vinci.</li> <li>▪ Career inspiration e.g. people working in transport or a factory.</li> </ul>

**SCIENCE (THEMATIC) COVERAGE: NATIONAL CURRICULUM YEAR 6**

<p align="center"><b>AUTUMN 1</b> <b><u>DANGER! LOW VOLTAGE</u></b></p> <p align="center"><b>PHYSICS</b> <i>(Electricity)</i></p>	<p align="center"><b>AUTUMN 2</b> <b><u>THE NATURE LIBRARY</u></b></p> <p align="center"><b>BIOLOGY</b> <i>(Living things and their habitats)</i></p>	<p align="center"><b>SPRING 1</b> <b><u>BODY PUMP AND HEALTH</u></b></p> <p align="center"><b>BIOLOGY</b> <i>(Animals, including humans)</i></p>	<p align="center"><b>SPRING 2</b> <b><u>EVERYTHING CHANGES</u></b></p> <p align="center"><b>BIOLOGY</b> <i>(Evolution and inheritance)</i></p>	<p align="center"><b>SUMMER 1</b> <b><u>LIGHT UP YOUR WORLD</u></b></p> <p align="center"><b>PHYSICS</b> <i>(Light)</i></p>	<p align="center"><b>SUMMER 2</b> <b><u>STEM AND SCIENTISTS</u></b></p>
<ul style="list-style-type: none"> <li>▪ Circuits: brightness of bulbs, loudness of buzzers, on/off positions of switches, number and voltage of cells used.</li> <li>▪ Drawing simple circuit diagrams with recognised symbols.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sorting and classifying animals.</li> <li>▪ Grouping vertebrates and invertebrates.</li> <li>▪ Living things – micro-organisms.</li> <li>▪ Plants.</li> <li>▪ Common observable characteristics (similarities and differences).</li> <li>▪ Scientists.</li> </ul> <p>British Values –Respect. British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>▪ Circulatory system: heart, blood vessels, valves and blood.</li> <li>▪ Water and nutrients transported.</li> <li>▪ Being healthy: diet, exercise, drugs and lifestyle.</li> <li>▪ Pulse.</li> <li>▪ Smoking.</li> <li>▪ Athletes.</li> </ul> <p>CST – Human Dignity, Common Good Look after ourselves and others.</p> <p>British Values –Rule of law.</p>	<ul style="list-style-type: none"> <li>▪ Animals and plants are adapted to suit their environment.</li> <li>▪ Changes over time.</li> <li>▪ Environment affecting plants.</li> <li>▪ Living things surviving and becoming extinct.</li> <li>▪ Fossils.</li> <li>▪ Scientific evidence for living things changing over time.</li> <li>▪ Natural selection.</li> <li>▪ Offspring.</li> </ul> <p>CST – Distributive Justice Thinking about fair trade etc.</p> <p>British Values –Respect. British Values – Individual liberty. British Values – Tolerance.</p>	<ul style="list-style-type: none"> <li>▪ Light travels in straight lines.</li> <li>▪ Light sources.</li> <li>▪ Eyes.</li> <li>▪ Objects are seen because they give out or reflect light into the eye.</li> <li>▪ Light travels from light sources to our eyes or from light sources to objects and then to our eyes.</li> <li>▪ Shapes of shadows.</li> <li>▪ Measuring and changing the size of shadows.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Working Scientifically skills</li> <li>▪ Scientists: Stephen Hawking, Libbie Hyman, Marie Maynard Daly, Alexander Fleming, Steve Jobs</li> <li>▪ Career inspiration e.g. people who work in IT or Museum or a physical therapists.</li> </ul>