# St Elizabeth's Catholic Voluntary Academy

## Science Curriculum Map 2020-2021

| | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Autumn (1) | **Understanding the World:**<br>• Comments and ask questions about the natural world<br><br>**The World:**<br>• Looks closely at similarities, differences, pattern and change | **Seasonal change**<br>• Name the seasons and know about the type of weather in each season | **Animals including humans**<br>• Know the basic stages in a life cycle for animals, (including humans)<br>• Know why exercise, a balanced diet and good hygiene are important for humans | **Animals including humans**<br>• Know about the importance of a nutritious, balanced diet | **Animals including humans**<br>• Identify and name the parts of the human digestive system.<br>• Know the functions of the organs in the human digestive system.<br>• Identify and know the different types of human teeth.<br>• Know the functions of different human teeth.<br>• Use and construct food chains to identify producers, predators and prey. | **Earth and Space**<br>• Movement of the Earth and the planets<br>• Movement of the Moon<br>• Night and day | **Light**<br>• Know how light travels<br>• Know and demonstrate how we see objects<br>• Know why shadows have the same shape as the object that casts them<br>• Know how simple optical instruments work e.g. periscope, telescope, binoculars, mirror, magnifying glass etc. |
| Autumn (2) | **Understanding the World:**<br>• Shows care and concern for living things and the environment<br><br>**The World:**<br>• Looks closely at similarities, differences, pattern and change | **Everyday Materials**<br>• Know the name of the materials an object is made from<br>• Know about the properties of everyday materials | **Animals including humans**<br>• Know the basic stages in a life cycle for animals, (including humans)<br>• Know why exercise, a balanced diet and good hygiene are important for humans | **Rocks and Soils**<br>• Compare and group rocks based on their appearance and physical properties, giving reasons<br>• Know how soil is made and how fossils are formed<br>• Know about and explain the difference between sedimentary, metamorphic and igneous rock | **Electricity**<br>• Identify and name appliances that require electricity to function.<br>• Construct a series circuit.<br>• Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers).<br>• Predict and test whether a lamp will light within a circuit.<br>• Know the function of a switch.<br>• Know the difference between a conductor and an insulator; giving examples of each. | **Earth and Space**<br>• Know about and explain the movement of the Earth and other planets relative to the Sun<br>• Know about and explain the movement of the Moon relative to the Earth<br>• Know and demonstrate how night and day are created<br>• Describe the Sun, Earth and Moon (using the term spherical) | **Electricity**<br>• Compare and give reasons for why components work and do not work in a circuit<br>• Draw circuit diagrams using correct symbols<br>• Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer |

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| **Spring (1)** | **Understanding the World:**<br>• Comments and asks questions about where they live<br>• Be interested in families and talk about their own family<br><br>**The World:**<br>• Children know about similarities and differences in relation to places, objects, materials and living things | **TO BE COMPLETED OVER SPRING 1 AND 2**<br>**Animals, including Humans**<br>• Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds<br>• Know and classify animals by what they eat (carnivore, herbivore and omnivore)<br>• Know how to sort by living and non-living things | **Everyday Materials**<br>• Know how materials can be changed by squashing, bending, twisting and stretching<br>• Know why a material might or might not be used for a specific job | **Forces**<br>• Know about and describe how objects move on different surfaces<br>• Know how a simple pulley works and use to on to lift an object<br>• Know how some forces require contact and some do not, giving examples<br>• Know about and explain how magnets attract and repel<br>• Predict whether magnets will attract or repel and give a reason | **States of Matter**<br>• Know the temperature at which materials change state.<br>• Know about and explore how some materials can change state.<br>• Know the part played by evaporation and condensation in the water cycle. | **Animals including Humans**<br>• Changes as humans develop from birth to old age.<br>• Create a timeline to indicate stages of growth in humans. | **All living things and their habitats**<br>• Classify living things into broad groups according to observable characteristics and based on similarities and differences<br>• Know how living things have been classified<br>• Give reasons for classifying plants and animals in a specific way |
| **Spring (2)** | **Understanding the World:**<br>• Talk about why things happen and how things work<br><br>**The World:**<br>• They talk about the feature of their own immediate environment and how environments might vary from one another | | **Everyday Materials**<br>• Know how materials can be changed by squashing, bending, twisting and stretching<br>• Know why a material might or might not be used for a specific job | **Animals including Humans**<br>• Know how nutrients, water and oxygen are transported within animals and humans<br>• Know about the skeletal and muscular system of a human | | **All living things and habitats**<br>• Know the life cycle of different living things e.g. mammal, amphibian, insect and bird<br>• Know the differences between different life cycles<br>• Know the process of reproduction in plants<br>• Know the process of reproduction in animals | **Evolution and inheritance**<br>• Know how the Earth and living things have changed over time<br>• Know how fossils can be used to find out about the past<br>• Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) |

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| **Summer (1)** | **Understanding the World:**<br>• Developing an understanding of growth, decay and changes over time<br><br>**The World:**<br>• They make observations of animals and plants and explain why things occur | **Animals including humans**<br>• Know the name of parts of the human body that can be seen | **Plants**<br>• Know and explain how seeds and bulbs grow into plants<br>• Know what plants need in order to grow and stay healthy (water, light & suitable temperature) | **Light**<br>• Know that dark is the absence of light<br>• Know that light is needed in order to see and is reflected from a surface<br>• Know and demonstrate how a shadow is formed and explain how a shadow changes shape<br>• Know about the danger of direct sunlight and describe how to keep protected | **Sound**<br>• Know how sound is made, associating some of them with vibrating.<br>• Know how sound travels from a source to our ears.<br>• Know the correlation between pitch and the object producing a sound.<br>• Know the correlation between the volume of a sound and the strength of the vibrations that produced it.<br>• Know what happens to a sound as it travels away from its source. | **Properties and changes of materials**<br>• Compare properties of everyday materials<br>• Soluble/ dissolving<br>• Reversible and irreversible substances<br>• Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets<br>• Know and explain how a material dissolves to form a solution<br>• Know and show how to recover a substance from a solution<br>• Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating)<br>• Know and demonstrate that some changes are reversible and some are not<br>• Know how some changes result in the formation of a new material and that this is usually irreversible | **EVOLUTION AND INHERITENCE cont.**<br>• Know how animals and plants are adapted to suit their environment<br>• Link adaptation over time to evolution<br>• Know about evolution and can explain what it is |

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| **Summer (2)** | **Understanding the World:**<br>• Developing an understanding of growth, decay and changes over time<br><br>**The World:**<br>• Children know about similarities and differences in relation to place, objects, materials and living things.<br>• They talk about the features of their own immediate environment and how environments might vary from one another.<br>• They make observations of animals and plants and explain why some things occur and talk about changes. | **Plants**<br>• Know and name a variety of common wild and garden plants<br>• Know and name the petals, stem, leaves and root of a plant<br>• Know and name the roots, trunk, branches and leaves of a tree | **Habitats**<br>• Classify things by living, dead or never lived<br>• Know how a specific habitat provides for the basic needs of things living there (plants and animals)<br>• Match living things to their habitat<br>• Name some different sources of food for animals<br>• Know about and explain a simple food chain | **Plants**<br>• Know the function of different parts of flowering plants and trees<br>• Know how water is transported within plants<br>• Know the plant life cycle, especially the importance of flowers | **All Living Things and Their Habitats**<br>• Use classification keys to group, identify and name living things.<br>• Know how changes to an environment could endanger living things.<br>• Group materials based on their state of matter (solid, liquid, gas. | **Forces**<br>• Gravity<br>• Friction<br>• Forces and motion of mechanical devices.<br>• Know what gravity is and its impact on our lives<br>• Identify and know the effect of air and water resistance<br>• Identify and know the effect of friction<br>• Explain how levers, pulleys and gears allow a smaller force to have a greater effect | **Animals including humans**<br>• Identify and name the main parts of the human circulatory system<br>• Know the function of the heart, blood vessels and blood<br>• Know the impact of diet, exercise, drugs and lifestyle on health<br>• Know the ways in which nutrients and water are transported in animals, including humans |

RED – PHYSICS

ORANGE – CHEMISTRY

GREEN – BIOLOGY