**Science Overview – Year Three**

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Year Three** | **Light**  \*Recognise that they need light in order to see things and that dark is the absence of light.  \*Notice that light is reflected from surfaces.  \*Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.  \*Recognise that shadows are formed when the light from a light source is blocked by a solid object.  \*Find patterns in the way that the size of shadows change.  Pupils will explore that light travels in straight lines. They will be able to explore what happens when light reflects off different surfaces. For example, mirrors, classroom tables and a white board.  They will understand the importance of protecting their eyes from natural and manmade light sources such as the sun or bright car lights.  They will understand how shadows are made and will use torches and opaque objects to measure the length, size and shape of different shadows. | **Forces and Magnets**  **(Link with Geography – making magnets for compass)**  \*Compare how things move on different surfaces  \*Notice that some forces need contact between two objects, but magnetic forces can act at a distance  \*Observe how magnets attract or repel each other and attract some materials and not others.  \*Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials  \*Describe magnets as having two poles.  \*Predict whether two magnets will attract or repeal each other, depending on which poles are facing.  Pupils will be able to understand that magnetic forces can act without direct contact. This is different to other forces where you need to push or pull.  They will explore how a positive and negative magnet works and will understand the purpose of different magnets. For example, how they are used in a scrap yard, compass and how trains use magnets to stay on train tracks etc.  Finally, pupils will explore different materials which are magnetic and non-magnetic around the classroom and will test these using bar magnets. | **Rocks**  \*Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties  \*Describe in simple terms how fossils are formed when things that have lived are trapped within rock.  \*Recognise that soils are made from rocks and organic matter.  Pupils will be able to explore and learn about different types of rocks and soils, including those in the local environment.  Pupils will use their half-termly gardening Enrichment to look at different rocks and soils in the local environment.  Pupils will learn about how fossils are made and learn about the role of archaeologists. | **Animals including humans**  \*Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.  \*Identify that humans and some other animals have skeletons and muscles for support, protection and movement.  Pupils will be introduced to the main parts of the human body associated with the skeleton and muscles. They might draw and label a skeleton diagram to describe the role of each important muscle in the body. For example, the heart, biceps, triceps etc.  They should learn about what makes a balanced diet and how you are in control of the amount of nutrients that you eat in your diet. | **Plants**  \*Identify and describe the functions of different part of flowering plants: roots, stem/trunk, leaves and flowers.  \*Explore the requirements of plants for life and growth and how they vary from plant to plant.  \*Investigate the way in which water is transported within plants.  \*Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.  Pupils should be able to identify and describe the different functions of a plant. For example: the stem, flowering part and leaves. The pupils will be able to describe their function as well.  Pupils should be introduced to how plants transport water to survive and explore the life cycle of plants.  Finally, pupils will learn about how plants have different ways to survive and grow depending on their climate. For example, a cactus in the desert, poinsettia in a warmer climate or a rose in a varied climate. | **Practical Science investigations related to the Curious Scientist programme**  **Preparation and revision for the end of KS1 Science Trust assessment** |

**Throughout the course of the year – pupils will also cover the working scientifically objectives as listed below:**

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| Ask relevant questions and use different types of scientific enquiries to answer them |
| Set up simple practical enquiries, comparative and fair tests |
| Make systematic and careful observations and, where appropriate take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers |
| Gather, record, classify and present data in a variety of ways to help in answering questions |
| Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables |
| Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions |
| Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions |
| Identify differences, similarities or changes related to simple scientific ideas and processes |
| Use straightforward scientific evidence to answer questions or to support their findings |