

Our Science Provision

Intent

At Plympton St. Maurice Primary School, we want children to

- Develop their scientific knowledge and conceptual understanding through the disciplines of Biology, Chemistry and Physics.
- Develop an understanding of the nature, processes and methods of science through different scientific enquiries that help them to answer questions about the world around them.
- Use a range of practical scientific methods which include observing over time; pattern seeking; identifying, classifying, and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.
- Develop a sense of excitement and curiosity about natural phenomena.

Implementation

Implementation:

Science is taught weekly in each year group based on the National Curriculum objectives with learning revisited to allow the children to move their knowledge into their long-term memory. Learning is inclusive for all learner, where differentiated activities or teacher/TA support is planned to ensure all children make progress. Lessons are rich in questioning to develop a deeper understanding of concepts while being engaging and exciting. Children will be given opportunities to reason, explain and demonstrate their learning through practical activities and questioning. All lessons will be purposeful and inject a sense of excitement and anticipation while focusing on the knowledge objectives and the working scientifically skills. Where possible links to real life should be made and children should be working as scientists to promote independence in problem solving and thought processes. Children will have opportunities to pose questions and have time to find the answers to these questions for themselves – deciding what line of enquiry they need to take.

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
In Reception, science is taught through Understanding the World. Children are encouraged to make sense of the world around them by making observations of animals, plants, and changes in the environment.	Children in year 1 will be able to: <ul style="list-style-type: none"> • Identify, name, and describe a variety of plants. • Identify and name a variety of common animals. • Identify and name a variety of carnivores, 	Children in year 2 will be able to: <ul style="list-style-type: none"> • Observe and describe how and what plants need to grow. • Make associations between animals and their habitats. • Describe simple food chains. 	Children in year 3 will be able to: <ul style="list-style-type: none"> • Identify and describe the function of different parts of plants. • Explore the life cycle of a plant. • Investigate how water is 	Children in year 4 will be able to: <ul style="list-style-type: none"> • Use classification keys to group a variety to living things. • Describe the digestive system. • Construct a variety of foods chains. 	Children in year 5 will be able to: <ul style="list-style-type: none"> • Describe different types of lifecycles. • Describe the changes as humans develop to old age. • Group everyday materials based on their properties 	Children in year 6 will be able to: <ul style="list-style-type: none"> • Identify and name the main parts of the circulatory system. • Explain how water and nutrients are transported around the body.

	<p>herbivores, and omnivores.</p> <ul style="list-style-type: none"> Name and label parts of the body and talk about the senses. Distinguish between objects and the materials that they are made from. Describe seasonal changes. 	<ul style="list-style-type: none"> Describe how humans stay healthy. Compare differences between things that are living, dead and have never been alive. Identify and compare the suitability of some materials and discuss how changes to the shape of some solids can occur through manipulation. 	<p>transported in plants.</p> <ul style="list-style-type: none"> Know why humans and so other animals have skeletons. Know that animals, including humans need to get their nutrition from their food. Group and compare different types of rocks and describe how fossils are formed. Recognise that light is needed to see and that light from the sun can be dangerous. Explore the effects different forces have on objects. 	<ul style="list-style-type: none"> Compare and group materials based on their state. Observe changing states of matter. Explore the water cycle. Identify how sounds are produced. Identify common appliances that run on electricity. Construct and label electrical circuits. 	<p>and responses to magnets.</p> <ul style="list-style-type: none"> demonstrate an understanding of reversible and non-reversible changes. Describe the movement of the Earth. Moon and other planets. Identify the effects that gravity has. Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<ul style="list-style-type: none"> Know the impact of diet and lifestyle on the body. Recognise how living things have changed over time, using the information provided by fossils. Recognise that living things produce offspring of the same kind but are not identical. Recognise that light travels in straight lines and use this information to explain shadows. Give reasons for variations in the effectiveness of components in brightness of bulbs, loudness of buzzers and the on/off position of switches.
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Impact

Each year group's programme of study sets clear objectives which state what children are expected to have learnt, this includes enquiry skills, working scientifically and subject specific vocabulary. Evidence of learning will be gathered from a wide range of sources including pupil conferencing, learning walks, practical activities and book looks.