



## St. Stephen's Junior School

### Curriculum Overview: Science

#### Curriculum Intent:

Here at St. Stephen's Junior, we want to encourage the children to become rational thinkers who are curious about themselves and their world. They should be equipped with the scientific skills to ask meaningful questions, make predictions and then collect evidence to test, evaluate and draw reasonable conclusions from. We want to help develop scientists who feel confident when using scientific equipment to explore the questions they have and want to investigate. This should all be underpinned by a good understanding of the scientific concepts taught. Science lessons should be engaging and capture the interest of the children taking part.

Our curriculum maps for science have been designed using the statutory skills and knowledge as outlined in the National Curriculum. The skills and knowledge outlined in the National Curriculum guidance have been developed into curriculum maps that stipulate clear learning objectives (and high-quality suggested activities to meet these) for each statutory unit. Science is taught weekly at St. Stephen's and a new unit is taught each term.

The importance of investigative science is very much understood at St. Stephen's, and so all year groups have plans that suggest practical lessons whenever possible to enrich the learning of the children. Where an investigation is not possible, illustrative science ideas are often provided instead. The scheme "Outstanding Science" has been purchased for each year group. This provides lesson ideas as well as practical activities for every area of the Science curriculum.



### **Progression in learning:**

“The National Curriculum objectives for science are designed for progression of knowledge and scientific concepts. The St Stephen’s curriculum maps ensure a planned progression for the scientific knowledge and skills as outlined in the National Curriculum for science. To prevent an overlap of concepts being taught between year groups, a clear ‘progression of knowledge’ document highlights what scientific knowledge should be taught in each topic as the children move through the school. Equally, a ‘progression of skills’ document demonstrates how investigative skills can be facilitated in a more complex fashion as the children move through the different year groups.

Examples of this progression are shown in the pages that follow:

**Year 4:**

**Year 6:**

**Electricity:**

- \* Identify common appliances that run on electricity by learning to distinguish between appliances that use and do not use electricity, about the different types of electricity and identifying how to stay safe when using electricity.
- \* Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- \* Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery by visualising and testing circuits to see if the circuit is complete.
- \* Recognise some common conductors and insulators, and associate metals with being good conductors by testing different materials as part of circuit to see whether or not they conduct electricity.

- \* Know the **scientific symbols** for electrical components.
- \* Be able to **draw** a series circuit using the internationally recognised scientific symbols.
- \* Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
- \* Understand how to stay safe when using electricity.