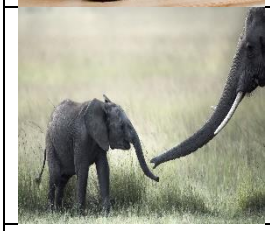
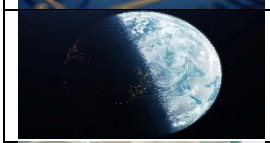
Lower Halstow and Newington CEP Schools Federation

Science Curriculum

Science Overview

	Autumn	Spring	Summer
Year 1	Everyday Materials Material Investigations Seasonal Change	Animals including humans Plants Seasonal Change	Plants Seasonal Change
Year 2	Uses of everyday materials Materials investigations	Animals including humans Living things and their habitats	Plants
Year 3	Rocks Forces and Magnets	Animals including humans Light	Plants
Year 4	States of Matter Electricity	Sound Animals including humans	Living Things and their habitats Pringle Challenge
Year 5	Forces Properties and Changes of Materials	Earth & Space Living Things and their habitats	Animals including humans
Year 6	Evolution and inheritance Living Things in their environment	Animals including humans	Light Electricity

Core Scientific Threads

Core Concept:		Definition:	Where?
	Plants	• Varieties • Structure • Conditions for growth • Reproduction	**Year 1** **Year 2** **Year 3**
	Animals including Humans	• Classification • Study of the human body • Growth • Reproduction • Basic needs	**Year 1** **Year 2** **Year 3** **Year 4** **Year 5** **Year 6**
	Materials	• Properties • Solids, liquids, gases • Variety • Materials • Reversible and irreversible changes • Rocks and soil	**Year 1** **Year 2** **Year 3** **Year 4** **Year 5**
	Forces	• Magnets • Friction • Gravity • Air resistance • Water resistance • Lever, pulleys, gears	**Year 3** **Year 5**
	Light, Sound	• Dangers • Shadows • Parts of the ear and eye • Reflection and refraction • Vibration, pitch and volume	**Year 3** **Year 4** **Year 6**
	Living Things and Their Habitats	• Classification • Characteristics • Life cycles • Reproduction • Environments • Food chains	**Year 2** **Year 4** **Year 5** **Year 6**
	Electricity	• Components • Symbols • Circuits • Common Appliances	**Year 4** **Year 6**
	Earth and Space	• Movement of planets • Moon • Rotation of the Earth	**Year 5**
	Evolution and Inheritance	• Adaptation • Fossils • Off-spring	**Year 6**

How do we show progression and application of scientific knowledge?

WOW! Science

https://newingtoncep.sharepoint.com/:x:/s/SCIENCEFEDERATION/EXk-XynT5q5BgoeBsdO9z24BwnROeBmsVS1PgJwWhDcCGA?e=grhhAh

These are termly experiments and challenges designed to inspire children's love for science. Some reflect and revisit curriculum content while others are designed to inspire awe and wonder; generating questions about the scientific world around them. They focus on practical science skills such as prediction, theorising, identifying patterns, problem solving and collaborating. Each year group benefits from and range of activities covering all areas of science; chemistry, physics, biology and STEM.

Progression in Science

Progression is ensured through a number of documents and practices. Topic and Year group progression documents are followed by all teachers listing previous learning and future learning. Floor books focusing on recording working walls, pupil voice, misconceptions and main learning questions from medium term plans follow each class through the school and are recorded electronically or as a physical book to ensure reviewing previous learning is class specific and easy to access for the whole class. Please find these in the Science Team or in relevant classrooms. Further useful links for innovative planning ideas and video links can be found:

Primary Resources Science | Reach Out CPD
Primary-STEM Padlet

Assessment in Science

Every topic begins by looking through previous learning; either electronic or physical floor book. This is to remind children of their learning and to bypass reteaching. The beginning of each lesson will link to the previous one with reference to the Working Wall or a quiz. This over-learning will ensure that the children are revisiting key language and linking their new knowledge to existing concepts. At the end of each unit, there will be a consolidatory activity, such as a quiz, based on the identified key learning. Overlearning and recapping will continue throughout the year in varying forms such as games, quizzes, Wow science, trips or visitors.

Recording in Science

We use Notebook and Working walls within the classroom to record our learning. These have been set up, so that classes can refer to previous learning of concepts. The expectation is, that during every lesson, something is recorded in Notebook or working wall – this could be photographs, diagrams, children's voice. This Notebook will follow the class up through the school and is titled the year they joined (eg 2022 Year 5 is Science Notebook 2016). If using the working wall throughout the topic, this record of learning will be transferred to Notebook/Floor Book. KS1 exclusively use a Floor Book to record their learning. KS2 use a combination of Floor Books and individual exercise books; gradually increasing the amount in individual books as the children move from year 3 through to year 6. Emphasis is placed on children being able to understand and use scientific language to communicate their ideas, ask questions and formulate their theories.