love the journey

Curriculum Implementation 2023-24

Primary

LCA Strand	Science
Subject	Science

What are the key concepts taught?	In EYFS, the science curriculum focuses on developing key skills that will be needed to progress in science, including observation skills and sorting based on characteristics and learning about how their bodies work. In Key Stage 1, the science curriculum is focused on developing the children's understanding of the world around them and beginning to develop key scientific skills. Pupils are taught to develop skills such as observation, communication of ideas and critical thinking skills. Pupils in lower Key Stage 2 will build on the skills taught in Key Stage 1, progressing by exploring, asking and answering questions and gaining new knowledge through practical experiments. Pupils will be working scientifically and using the correct scientific vocabulary. Pupils in upper Key Stage 2 will focus on developing a deeper understanding of a wide range of scientific ideas and will use a range of methods to develop their knowledge. These include taking measurements, using a range of scientific equipment, planning their own enquiries to answer questions, controlling variables and concluding their experiments to see if their predictions were correct or not.

What is the sequencing of units?	**EYFS** Michaelmas 1- Autumn Michaelmas 2- Everyday Materials Lent 1- Animals Lent 2- Human Life Cycle Summer 1- Plants Summer 2- Animals and their Habitats **Chapter 1** Michaelmas 1- Seasonal Changes

	Michaelmas 2- My Body Lent 1- Everyday Materials Lent 2- Identifying Plants Summer 1- Identifying Animals Summer 2- Exploring Forces **Chapter 2** Michaelmas 1- Living in Habitats Michaelmas 2- Exploring Everyday Materials Lent 1- Growth and Survival Lent 2- Growing Plants Summer 1- Super Scientists Summer 2- Awe and Wonder **Chapter 3** Michaelmas 1-Plants Michaelmas 2- Science of Rocks Lent 1-Science of Light Lent 2- Animals including humans P3 Summer 1- Forces and Magnets Summer 2- The Bee Project **Chapter 4** Michaelmas 1- States of Matter Michaelmas 2- Animals including humans P4 Lent 1- Science of Sound Lent 2- Living things and their habitat Summer 1- Electricity Summer 2- The History of Science **Chapter 5** Michaelmas 1- Science Properties and changes of materials Michaelmas 2- Animals including humans P5 Lent 1- Forces Lent 2- Living things and their habitats Summer 1- Earth and Space Summer 2- The Scientific Method **Chapter 6** Michaelmas 1- Living Things and Their Habitats Michaelmas 2- Science of Light *Lent 1- (titles not yet released by Opening Worlds scheme)* *Lent 2-* *Summer 1-* *Summer 2-*

How do we encourage pupils to see the links between different units and concepts?	The spiral curriculum allows pupils to revisit key scientific concepts throughout their education to build on previous knowledge. Working scientifically is built upon from key stage 1 to upper key stage 2. Pupils start with basic observations in EYFS and progress to looking at cause and effect, gradually advancing to more detailed conclusions based on observations and conducting their own experiments where they can manipulate their own variables to record results.

What are the planned opportunities for adaptive teaching, including for SEND, the more and able and disadvantaged pupils?	Equipment is available to model to pupils an abstract concept, allowing pupils to visualise a concept they may struggle to understand. The focus is ensuring that we maintain our same high expectations for the successful completion of experiments by all pupils, with scaffolding where necessary.
What are the planned opportunities for retrieval and reflection by pupils?	Pupils have quiz questions at the start of each lesson, providing opportunities for pupils to retrieve knowledge previously taught. At the end of each unit, pupils have an assessment task to bring together knowledge from the whole unit and apply it to a particular activity. Assessments are 'spaced' meaning that information from earlier units is included in assessment tasks.
What are the opportunities for feed forward by the teacher post assessment outcomes?	Following on from each assessment point, pupils have opportunities to answer questions from past topics that they have not mastered previously. Pupils are encouraged to link their knowledge from previous topics, both from the same academic year and previous academic years.
What are the planned opportunities for developing Reading?	In science pupils have the opportunity to answer five comprehension questions linked to the current topic. The use of the booklets allows pupils to search for their own information when answering questions for their own work, therefore allowing pupils time to practise scanning techniques when finding information.
What are the planned opportunities for developing literacy, numeracy, oracy and SMSC?	**Literacy:** Pupils are answering questions in full sentences and are working towards a cohesive piece of text when writing up their experiments and reporting on research that they have carried out. **Numeracy:** Pupils have the opportunity to read graphs, interpret data that they have collected and that others have collected. **Oracy:** Pupils have many opportunities to demonstrate their understanding when giving short presentations, for example on their knowledge of the water cycle. They are given times to vocalise their ability to use scientific vocabulary in explanations for certain topics. **SMSC:** Pupils of all years have opportunities to think about living things and their habitats, focusing on the moral decisions in science and asking questions such as 'is it right if a human

	destroys a creature's habitat?'. They are encouraged to be responsible when carrying out investigations and being considerate of their environment. Pupils have many opportunities to work together to develop their social skills; children need to discuss ideas and understand that others may have a different theory.