

### Intent

At Winthorpe Primary School, we recognise the importance of science in our everyday lives and have designed our science curriculum to develop a sense of excitement, curiosity and fascination about the natural world. We want children to gain an understanding of scientific processes and an awareness of the uses and implications of science, today and for the future. From EYFS to Year 6, our pupils will build a foundation of key knowledge and concepts as well as develop skills in scientific enquiry and questioning.

We intend to:

- Create a positive attitude to science through a **happy and healthy** ethos and build 'science capital' by reinforcing the expectation that all children are capable of achieving high standards in science.
- Develop a natural **curiosity**; children are encouraged to ask questions **confidently** and be curious about their surroundings.
- Increase pupils' knowledge and understanding of the world by nurturing a **hardworking and ambitious** atmosphere.
- Develop skills associated with scientific enquiry to build a foundation for future learning.
- Encourage **respect** for living organisms and the physical environment and **understand** how to work safely with materials and equipment.
- Encourage perseverance, resilience and an acceptance that mistakes are an important part of science and can provide opportunities to evaluate and improve.

### Implementation

To ensure high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the school. We provide our children with a broad and balanced curriculum that is delivered through a 2-year rolling programme of exciting topics that are topic-based, where possible. These encompass the scientific disciplines of biology, chemistry and physics and are revisited and developed throughout the school.

		Autumn		Spring		Summer	
Year 1 and 2	Cycle A	Y1 Seasonal Changes	Y1 and Y2 Plants	Y1 and Y2 Animals, including humans		Y1 and Y2 Plants	Y2 Living things and their habitats
	Cycle B	Y1 and Y2 Everyday Materials		Y1 Seasonal Changes	Y1 and Y2 Animals, including humans	Y1 and Y2 Everyday Materials	
Year 3 and 4	Cycle A	Y4 Electricity	Y4 Sound	Y3 Rocks		Y4 States of Matter	Y4 Living things and their habitats
	Cycle B	Y3 and Y4 Animals, including humans	Y3 Forces and Magnets	Y3 Light		Y3 Plants	
Year 5 and 6	Cycle A	Y5 Living things and their habitats	Y6 Evolution and Inheritance	Y6 Electricity		Y5 and Y6 Animals, including humans	Y6 Living things and their habitats
	Cycle B	Y6 Light	Y5 Properties and changes of materials	Y5 Earth and Space	Y5 Forces	Y5 Properties and changes of materials	Y5 Animals, including humans

As a school, we aim to create an inquisitive learning environment within classrooms and reinforce an expectation that all children are capable of achieving. Well thought out science lessons focus on thinking, discussing and trying things out thereby encouraging children to work confidently, creatively and independently as inquisitive young scientists.

Scientific enquiry will form a common thread throughout the curriculum and will be developed using:

- Comparative and fair testing
- Observations over time
- Pattern seeking
- Identifying, grouping and classifying
- Research using secondary sources

Within each topic, teachers will plan a sequence of lessons that promote progress through the topic using a variety of methods. Scientific enquiry will be used as much as possible, encouraging the children to design their own investigations to answer their questions.

### Impact

Science is assessed using a combination of formative and summative assessments. Continual formative assessments take place during lessons using targeted questioning and discussions individually, in groups or as a class.

Teacher assessments are completed at the end of each term against National Curriculum objectives; these are completed using a combination of end of topic tests and formative assessments in the classroom. These tests help us to monitor progress and identify gaps, enabling teachers to adapt planning if appropriate. If necessary, interventions can then be organised to support children further.

At the end of each year, children complete a progress test to assess their learning for that particular cycle.

Children will:

- have a better understanding of the world
- retain prior-learning and explicitly make connections between what they previously learned and what they are currently learning
- have a wider variety of skills linked to both scientific knowledge and understanding and scientific enquiry/investigative skills
- have a richer vocabulary that will enable them to articulate their understanding of taught concepts
- be confident and curious learners and will develop a love for science