Science intent –

At Ravensdale, we want our children to foster a great curiosity in Science which in turn will instill a love for Scientific learning and enquiry. This will mean that upon leaving, they are empowered to think like a scientist. Our children will think critically, question and enquire and make scientific links between concepts. They will be motivated by the subject and excited to learn more through a range of engaging and inspiring learning opportunities. Our children will develop a deep knowledge and understanding of Science which means they will be fully prepared for the next stage in their learning and begin to develop aspirations about a future career involving Science.

The national curriculum for Science aims to ensure that all pupils:

Lower Key Stage 2:

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through:

- Exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments.
- They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information.
- They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

Upper Key Stage 2:

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through:

- Exploring and talking about their ideas; asking their own questions about scientific phenomena.
- Analysing functions, relationships and interactions more systematically.
- They should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates.
- They should also begin to recognize that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.
- Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

See the progression maps for more detailed objectives, sequences in learning and objectives related to scientific inquiry.

The Teaching of SCIENCE at Ravensdale - **implementation**

Five units of Science are covered across each year. Typically, this is a half term dedicated to four units and one whole term dedicated to one. Units are revisited in different year groups, commonly either annually or bi-annually.

Strategies for teaching Science should include

- Eliciting prior knowledge and learning (as well as identifying misconceptions) so that lessons are planned to effectively deepen knowledge and understanding.
- Practical investigations to engage children's interest and allow them to explore concepts.
- Links to other areas of the curriculum to support deeper learning and understanding.
- Linking Science to familiar, relatable contexts therefore making concepts relevant to the children and further enhancing their understanding.

Year Group Coverage

Year 3	Year 4	Year 5	Year 6
Animals Including Humans: Keeping Healthy Rocks and Fossils Forces and Magnets Plants Light	States of Matter Electricity Animals Including Humans: Living Things and their Habitat Sound	Earth and Space Forces Properties and Changes of Materials Living Things and their Habitats - Life Cycles Animals Including Humans: Changes	Animals Including Humans: The Circulatory System Living Things: Classification Evolution and Inheritance Light Electricity

Impact of learning – teachers will observe and gather evidence of:

- Inspired curiosity for Science.
- Asking scientific questions, thinking critically, evaluate evidence and use evidence to support arguments and judgements.
- Use of scientific enquiry and knowledge application.
- Secure scientific knowledge and understanding.
- Articulated ideas using appropriate scientific vocabulary.

Teachers assess the children's progress against the intended learning outcomes for each unit of work. Children are assessed at working towards (WT) or reaching the expected standard (EX) for their year group. Parents are informed of this outcome in the annual summer report.