SCIENCE

INTENT

Our curriculum intent for Science reflects the purpose and aims of the National Curriculum by helping our pupils to develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics. It develops understanding of the nature, processes and methods of science, through different types of science enquiries that help them to answer scientific questions about the world around them. Pupils are equipped with the scientific knowledge required to understand the uses and implications of science today and for the future. The curriculum breadth is adapted to the context of our school by ensuring the progression of scientific knowledge and enquiry, from our youngest children in Early Years, through to our oldest children in Year 6, is planned for and delivered through high quality provision, lessons and opportunities.

Our curriculum is shaped by our curriculum drivers:

- Culture
- Community
- Equality

We promote exposure to ambitious ideas, experiences and learning that our curriculum broadens the children's knowledge and understanding of the world. It is with a particular emphasis on female and ethnic minorities in science that we hope to promote equality through non-stereotypical role models within this curriculum area and to develop an awareness of the diverse nature of the UK and global populations and the contributions different societies, communities and individuals have made to human understanding in science.

The curriculum is sequenced in long and medium term plans to help pupils build cumulative knowledge towards agreed milestones and expected standards. The most important subject content is organised through threshold concepts which organise new knowledge systematically and ensure a logical progression.

Recovery Curriculum

During the recovery period, we intend to maintain the breadth of the school curriculum. The need to prioritise supporting children's mental health, assessment and closing gaps necessitates a focus on key knowledge. Focus will be on the key threshold concepts:

- Work scientifically
- Understand plants
- Understand animals and humans
- Investigate living things
- Understand evolution and inheritance
- Investigate materials
- Understand movement, forces and magnets

- Understand the Earth's movement in space4
- Investigate light and seeing
- Investigate sound and hearing
- Understand electrical circuits

School Closure/ Remote Learning
In the event of a further partial or full closure, teachers will continue to teach the national curriculum remotely including through the use of live sessions within the constraints of of our current technology . Priority will be given to daily maths and English lessons. In Science, teachers will use end of year revision materials to ensure that key knowledge and threshold concepts continue to be developed.

We develop children with the following essential characteristics to help them become scientists:

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.
- Confidence and competence in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations.
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings.
- High levels of originality, imagination or innovation in the application of skills.
- The ability to undertake practical work in a variety of contexts, including fieldwork.
- A passion for science and its application in past, present and future technologies.

<u>IMPLEMENTATION</u>

As part of the planning process, teachers refer to the following documents:

- The National Curriculum
- Knowledge Organisers
- Chris Quigley Essentials – Threshold Concepts and Milestones (End points)

Teachers plan a cycle of lessons which makes links to previous learning; outlines the knowledge and vocabulary to be taught; plans for progression and depth; includes frequent low stakes quiz opportunities to develop deep long-term learning; helps SEND pupils to catch up and keep up and includes challenge for all pupils to apply their learning.

<u>IMPACT</u>

Our Science curriculum is high-quality, well taught and is planned to demonstrate progression. We use the Milestones to measure the impact of our curriculum through:

- Proof of Progress (POP) tasks
- Pupils' discussions about their learning

- A celebration of work through displays