



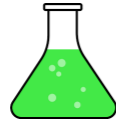
# Science One Page Overview

## Intent:

**Discover:** Children will have the scientific knowledge and a secure understanding of scientific method to be able to hypothesize, analyse and make sense of the world around them.



**Challenge:** Children will develop a sense of deep curiosity and a love to investigate and deepen their understanding of how the natural world works.



**Flourish:** Children will learn to become critical thinkers and approach scientific enquiry with an understanding of the different variables and biases that can influence results.



***Our children come from a wide area of different social and economic backgrounds. We have therefore developed a science curriculum that inspires a deep love of science and raises children's aspirations and understanding regardless of ethnic origin, gender, class, aptitude or disability. We aim to ensure that all children are equipped with the scientific skills required to understand the uses and implications of science, today and for the future and foster an awareness of the different pathways that can lead to a career in science.***

- Every child receives a minimum of 1 ½-2-hours high quality science teaching per week.
- Science is taught accurately and systematically both within and across each year group and key stage so that new knowledge is built upon the secure foundation of established understanding.
- Science Teaching is underpinned by pedagogical knowledge of how teacher questioning can guide learners.
- We will ensure continuous assessment, intervention and development within science through the use of pre-topic assessments and end of unit assessments.
- To ensure developmental feedback is consistently high quality throughout the school and extends and develops pupils' ability to link new knowledge into existing understanding.
- To develop a vocabulary-rich and investigation-rich science curriculum which allows pupils to apply their theoretical understanding to a range of experiments and understand how different variables can affect their results.
- To provide the opportunity for each year group to study the work of prominent scientists and appreciate their contribution to world around them, raising the profile of science in society.

## Implement:

### **Coverage through Science curriculum & extra-curricular:**

- Class teachers ensure that every pupil receives at least 1 ½-2 hours of high-quality science teaching every week.
- A whole school science overview is followed by all year groups to ensure that the national curriculum is covered thoroughly and systematically and that knowledge and understanding that has been acquired in previous year groups is deepened and built upon in subsequent ones.
- The Switched-on Science/Hamilton schemes of work are available to all teachers to assist with planning and subject knowledge. Teachers are also encouraged to develop bespoke lessons based on their deep understanding of the curriculum and the specific needs of their individual classes.
- Regular science weeks take place each year. Each of these weeks inspire our pupils to engage more deeply with science, increases science capital and raises the profile of the subject.
- Science enrichment is encouraged, which includes school trips and visitors to raise the profile of the subject.
- Science feedback occurs regularly and is easy to see, this feedback tackles misconceptions or gives children to reinforce their understanding.

### **Assessment:**

- Science Lessons are evidenced in Science books every week - ongoing assessment within lessons
- End of unit assessments inform teacher assessment and half termly data inputted into the subject assessment matrix (in house assessment system)
- Concise learning objectives (skills focussed) and success criteria are used to enhance learning for children.

### **Monitoring:**

- Regular staff feedback used to establish levels of confidence
- Learning walk/drop-ins scheduled
- Pupil Voice
- Work scrutiny – to ensure high quality teaching is taking place in every year group every week and ensure systematic coverage of the science curriculum.

## Impact:

- The impact of our science curriculum is that children have been introduced and exposed to challenge within most lessons. This enables them to apply the taught skills in a range of new concepts. It is evident that children are accessing a wider range of challenge and are expected to reason more using correct vocabulary.
- School expectations are high and books are monitored both internally and externally with our federated school.
- Our science books show evidence of a range of activities and investigations.
- Tracking at end of the Key Stage indicates positive value added for most children.
- Pupil voice indicates high levels of engagement and enjoyment in science.

### **Teacher CPD/monitoring:**

- Collaborative planning and teaching of science activities developed between teachers and the calculations team.
- Review of units covered to identify any misconceptions that have arisen.
- Subject leader to provide CPD to increase staff confidence in teaching science where needed.
- Team leaders to attend training opportunities.

### **Family/community:**

- Work created by the children can be shared on websites and other online portals.

### **Current priorities/Next steps:**

- Analysis of assessment.
- Create bank of resources to support key scientific skills (fair test and experiment planning)