

St John's Science Policy - Academic Year ending 2018

Rationale: (adapted from the National Curriculum):

- A high-quality science education provides the foundations for understanding and studying the world as it is through the specific disciplines of biology, chemistry and physics.
- Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena.
- Through our teaching, we will endeavor to build our children's Science Capital and therefore the confidence and enthusiasm to question the world around them.
- Children should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, analyse causes and consider its use in solving some of the world's pressing issues (such as the UN's Global Goals.)

Aims: (from the National Curriculum)

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Core principles: These seven principles were developed as part of the science PSQM using both teaching staff and child input. They should underpin science teaching and learning in our school and help us achieve the aims set out above.

- 1. Use of the progress ladders when planning to provide the science skill learning objectives and to allow teachers to plan up and down from year expectations to ensure all children are included.*
- 2. Use of models for visual and practical understanding to support all learners including EAL and SEN. The four models are energy transfer (electricity, light, sound, heat), force arrows, particle theory (for all solids, liquids and gases) and 'Big Picture' models i.e. life cycles.*
- 3. Use of science displays in every classroom to support learning and keep science at the forefront of children's thinking.*
- 4. Science to be taught every week in order to ensure children are exposed to the full curriculum and have time to explore it.*
- 5. Ensure science has children's enquiry at the centre and, at least once every half-term, allow children to lead on an experiment and present their data.*
- 6. Where relevant, use science trips and visitors to help children's understanding and experience.*
- 7. Broaden children's understanding of what a scientist is (to include themselves) by continuing to link science to other subject areas and making the links explicit. This understanding will be planned for on the mantle webs under the heading; As STEM thinkers and doers we can...*

Equal Opportunities:

As a school, we are dedicated to ensuring all children are able to access science curriculum, build their Science Capital and actively challenge issues affecting this.

Health and Safety:

When planning for science activities and investigations, we will accept that sometimes there are risks involved but that we will plan for these responsibly. We will also ensure that children are aware of these risks and are also able to plan for these when designing their own experiments.

Monitoring:

Science will be monitored termly as per the school policy.

Assessment:

Children's understanding of science will be assessed through the Learning Challenge Curriculum, which allows teachers to use their own judgement as to how children are progressing. The assessment tool covers understanding science and science knowledge.

Staff Professional Development:

Staff are encouraged to attend relevant science courses. It is the role of the science coordinator to keep up to date with current CPD opportunities.

Role of the Science Lead:

- *Develop a knowledge and interest in science in the school community.*
- *Develop science across the school focusing on learning and teaching.*
- *Develop a knowledge and understanding of standards in science across the school.*
- *Maintain the science policy and other documentation.*
- *Manage the science learning resources and ensure colleagues know of statutory requirements.*
- *Monitor science teaching and provide advice and support for colleagues.*
- *Monitor science planning and coordinate continuity and progression across the school with particular regard to SEN, EAL.*
- *Monitor science learning, collect and evaluate performance data (Learning Challenge Curriculum).*
- *Monitor and develop the use of computing in science.*
- *Monitor and develop science's contribution to the English and maths curriculum.*
- *Monitor and develop extra-curricular activities, clubs, visitors and trips to extend the range of learning opportunities.*
- *Audit and identify staff development for colleagues in science.*
- *Contribute to the target setting and development of science through the SDP. Report to Governors if required to.*
- *Represent the school in local cluster groups.*