St Mary's Primary School

Science Curriculum Guide

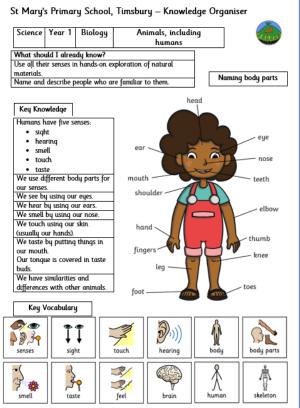
We follow the Programmes of Study found within the Science National Curriculum and our teaching and learning in this subject is built around these three key aims:

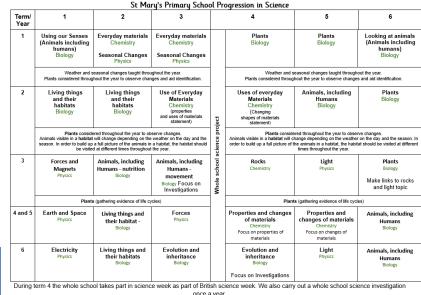
- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, todav and for the future

Our yearly overview shows the teaching sequence of key blocks for each year group.

Sequences of lessons are carefully planned to build on prior knowledge.

Our detailed long term overview includes prior knowledge children should know, sticky knowledge, key vocabulary and links to key scientists. Teachers carefully plan to ensure gaps are addressed.





Science at St Mary's is taught through weekly lessons.

We teach activities that match the objectives listed in the National Curriculums Statutory Requirements.

Ideas for these activities might come from:

- 1. The 'Notes and guidance (non-statutory)' section for that key block within the Programmes of Study
- 2. The BBC Bitesize and/or BBC Teach
- 3. TAPS
- 4. Plan
- 5. Other appropriate resources located elsewhere

Our aim is to provide activities which encourage deep independent thought and purposeful explanation.



St Mary's has its own Knowledge Organiser for each key block within the Programmes of Study. These are used as title pages in Science books and are referred to throughout units of work and to support recall.

Lesson structure

We believe that it is vital we provide opportunities to revisit and recap essential knowledge from previous key blocks. Every lesson begins with a quick retrieval of prior learning. Questions for these might come from the long-term plan, Explorify, BBC Bitesize, quizziz.com or the teachers own ideas. We also use regular quadrant quizzes which have been created for all year groups.

New learning follows the retrieval and this forms the main part of the lesson. Lessons finish with a form of quiz to check understanding of the days learning. The planned sequence of lessons needs to provide opportunities for the pupils to cover all of this essential key knowledge. Our planned lessons also aim to:

a) ensure pupils are familiar with, and can use, technical terminology accurately and precisely, and can build up an extended specialist vocabulary.

b) allow pupils to apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.

c) be taught within the wider school curriculum, using different contexts to maximise pupils' engagement with and motivation to study science.

We teach pupils to know about the unique processes of enquiry in science. Our' Big Ideas' for Working Scientifically (disciplinary content) are:



Investigation logos are used throughout the school. We have progressive formats for recording investigations when working scientifically.

We also use planning boards to enable fair testing

and independence.

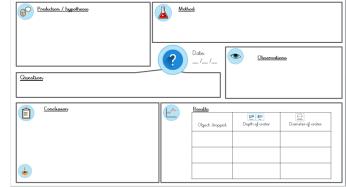


Every class has a science working will with key vocabulary, the enquiry types, our investigation logos and current learning.



Several lessons within the planned sequence will cover key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

Ideas for these lessons focusing on scientific enquiry could come from our enquiry overview, TAPS assessment, PLAN resources.



Teachers provide regular feedback for pupils and give them opportunities to respond with their Purple Pen of Progress. We believe it essential that pupils address any misconceptions and that they correct mistakes in the spelling of key scientific vocabulary.

Our school organises special events for our pupils to take part in and we promote science capital throughout the year. Some ways we do this include;

- 1. Trips such as we the curious
- 2. Visitors (dentists, vets, astronomers)

3. Whole school events (National Tree Week, British Science Week,

Great Science Share)

Links with other schools

5. After school clubs

Our science curriculum is enriched with outdoor learning links. Each class has 3 terms of Outdoor Learning every year.

Assessment

At the start of each unit teachers elicit pupils current knowledge, they also find out what pupils want to learn more about to tailor the learning.

At the end of each unit pupils complete a summative Head Start assessment. This gives a standardised score.

Working scientifically skills are assessed throughout the unit and by using the TAPS focussed assessment plans.

The teaching sequence for each term's key block finishes with the completion of the Midsomer Norton Schools Partnership's End of Unit Task