



# Raynham Primary School



# Science Policy

(September 2022)

At Raynham, we want to build on our children's knowledge and understanding of the world they live in. We want to enthuse their natural awe and wonder and encourage their natural curiosity so that, by the time they leave us, they are ready to take on the secondary science curriculum with confidence and success.

We follow the National Curriculum for the teaching of science and children learn by focusing on the key scientific concepts of:

- Developing their scientific knowledge
- Using skills to work scientifically
- Scientific enquiry

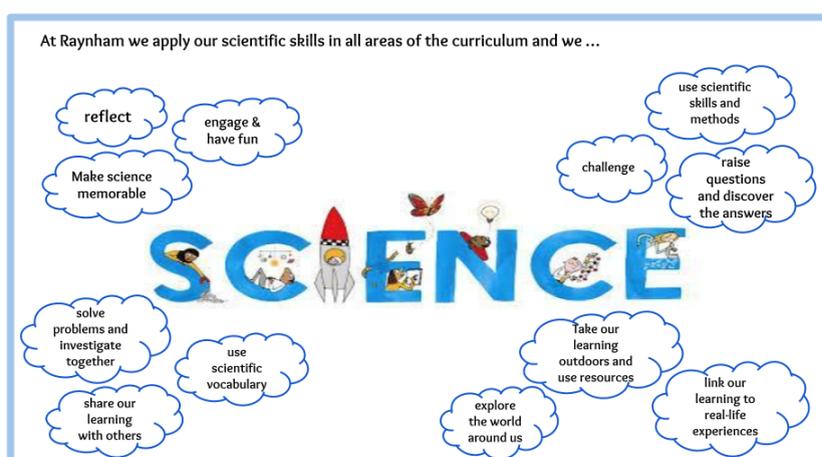
We have also built into our science curriculum, a responsibility to build 'science capital' for our children, providing experiences and learning opportunities beyond the confines of the National Curriculum and the classroom which they otherwise would not have. This includes introducing them to scientists from different times and cultures, meeting scientists in action, developing our outdoor environment and organising trips within their local area and beyond.

As the children move through the school, from Early Years to Year 6, their scientific knowledge and skills will deepen as they encounter them in more depth. Revisiting and making links to past learning is important so that children can increase their knowledge and skills in science and develop a broader understanding of the subject.

Vocabulary enrichment runs through our whole curriculum and science provides an excellent opportunity to develop vocabulary that can be used in many other subject areas.

## **Teaching & Learning**

Our science teaching is underpinned by our vision and principles shared with everyone.



The areas of study are outlined by the National Curriculum and these have been divided and allocated to Year groups, with specific content to cover. These are outlined on a long term plan, allowing an overview of the progression of Science teaching throughout the school.

Planning involves teachers using a range of resources and material to create engaging lessons. Relevant resources and equipment is used to aid understanding of conceptual knowledge. Collins Connect 'Snap Science' an online resource is used across the school to support teachers in planning Science lessons.

Activities should be planned to meet the needs of all pupils. All children should be supported and challenged to progress within Science. Differentiation enables all children to engage in the curriculum by providing learning tasks and activities that are tailored to their needs and abilities.

At the start of each topic children revisit prior knowledge. Lessons then build towards answering key questions outlined in the yearly overviews. They then show their knowledge by answering the same questions at the end of each unit.

We integrate practical science in almost every lesson, making learning engaging and fun. Children should be encouraged to predict, hypothesise, collect evidence, analyse and question the results they gather and evaluate what they have learnt. Pupils are encouraged to work in groups or individually where appropriate. In group work, children are given a role to fulfil, in order to give their own work a purpose and a focus. They use a variety of means for communicating and recording their work. Teachers take the learning outdoors whenever there is an opportunity to do so. On site we have access to our large playground, school farm, herb garden, orchard / meadow and sensory garden. We also have access to the school field. Children can clearly see things in context which promotes and fosters an emotional connection between children and the natural environment.

### **Recording in Science**

The way in which Science is recorded will vary across the school depending on age and ability. Teachers should ensure that a range of appropriate methods are used.

These may include:

- Written accounts including: instructions, reports and explanations
- Diagrams, drawings and pictures
- Annotated diagrams
- Spreadsheets (data collection)
- Charts, graphs and tables
- Model making

### **Assessment**

Children are assessed half termly in KS1 and KS2 using a variety of methods:

- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children
- Considering work / investigations produced by children together with discussion about this with them.

- Through next steps completed independently or with discussion with an adult.
- Through informal general knowledge quizzes
- In KS1 - Year 1 science is taught through continuous provision and children are encouraged to demonstrate learning through play and discussions.

Assessments are recorded half termly on Scholar Pack for KS1 & KS2. In EYFS, we assess the children using the Early Years Framework and Development Matters. Statements are completed using the online tool - Evidence me for observations and Scholar Pack to record data.

In order to support to plan and assess effectively the Science National Curriculum teachers have access to:

- Knowledge and working scientifically matrices that provide additional guidance which clarifies the statements for each year of the National Curriculum.
- Progressive scientific vocabulary for each unit.
- Annotated collections of children's work that provide examples of work that meet the expectations of the knowledge statements for each topic from each year of the science National Curriculum.
- Progression maps that highlight the links between the topics taught in different year groups and the development of working scientifically skills
- CPD resources that can be used for their personal development and effective and accurate assessments.
- Online access to Collins Connect resources and planning

### **Leadership and Management**

The science coordinator is responsible for ensuring that the aims of the Science Policy are met. The science coordinator should:

- Monitor the teaching and learning of Science throughout the school.
- Monitor the standards of children's work.
- Support colleagues in the implementation of the curriculum and the school's approach to science teaching.
- Support colleagues in their teaching.
- Keep colleagues informed about current developments in the subject.
- Provide a strategic lead and direction for science in the school.
- Coordinate assessment procedures and record keeping to ensure progression and development throughout the school.
- Organise and review all science-based resources, ensuring they are readily available and maintained. (Science resources are kept in the Mezzanine)
- Purchase new scientific resources when required.
- Organise CPD / Twilight training as appropriate.
- Review samples of children's work, training, liaising with other subject leaders from other schools and organising science week / STEAM week / STEAM Fair

### **Equal Opportunities and Inclusion**

We aim to meet the needs of all our children by differentiation in our science planning and in providing for all children according to their abilities. This involves providing opportunities for SEND/MABLE+ to develop and enhance their scientific skills and knowledge. We enable all children with learning and/or

physical difficulties to take an active part in scientific learning and practical activities and investigations.

**Safe Practice**

Children are encouraged to consider their own safety and the safety of others at all times. Teachers will provide a safe and secure environment for children to learn.

Any experiments or trips which are considered a particular risk will need a Risk Assessment Form to be completed and to consult the Science Co-ordinator and relevant SLT members prior.

**Updated September 2022**