Curriculum Overview Curry Mallet Church of England Primary School

Curriculum Area: Science

Our curriculum approach to science reflects our vision and values statement:

'We live life in all its fullness'

Intent

Children will develop an understanding of the nature, processes and methods of science through different types of scientific enquiries that will help them to answer scientific questions about the world around them. We recognise the importance of Science in every aspect of daily life; give the teaching and learning of Science the prominence it requires; increase children's knowledge and understanding of the world around them; develop children's scientific skills, through a process of enquiry; develop children's curiosity and encourage respect for all living organisms and the physical environment around them.

Implementation

All children study science weekly with great emphasis on 'working scientifically'. All children are supported in their understanding through the use of resources and technology. We offer all children the opportunities to explore their interests further through additional STEM activities: exploring science topics that are also linked to Technology, Engineering and Mathematics.

Impact

At each stage children develop secure and deep understanding of scientific concepts and usethe correct vocabulary when working scientifically through experimentation. Children enjoy exploring the science topics and can apply problem-solving skills across the curriculum.

Planning

We teach to the objectives set out in the National Curriculum for each year group. Planning of the curriculum is deliberately sequential so that children can make links and can logically build knowledge and understanding of the world and their place in it. Links to previous and later learning are carefully planned and made explicit to the children to enhance learning. We ensure teaching and learning provides opportunities for cross-curricular activities.

The school website has links to our yearly overview planning, which shows the science for each class throughout each term. This helps us plan and ensure progression with lessons increasing in depth of understanding and range of knowledge throughout the primary years.

Knowledge and skills progression through the school

KS1 science skills and knowledge will be developed through each phase of learning by building on previous levels of understanding.

In Key Stage 1 this will involve pupils:

- Asking simple questions and recognising that they can be answered in different ways

- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.
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- **In Lower Key Stage 2 knowledge and skills will be further developed to involve:**
- Asking relevant questions and using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations
  of results and conclusions
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identifying differences, similarities or changes related to simple scientific ideas and processes
- Using straightforward scientific evidence to answer questions or to support their findings.

In Upper Key Stage 2 knowledge and skills will be further developed to involve;

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Using test results to make predictions to set up further comparative and fair tests
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- Identifying scientific evidence that has been used to support or refute ideas or arguments.

- **Recording**
  Children record their science in books. This is marked in line with the school marking policy. Not all children will complete written evidence when working on an experiment.
- **Assessment**
- **Reporting**
  On our annual reports, which are given to parents at the end of the year, a judgement will be made regarding their child's attainment in science relating to the national curriculum for their year group. Emerging/secure/ developing.
- **Monitoring**
  Leaders of Learning will monitor planning and work in books alongside leaning walks and pupil voice to understand what the children have learned, enjoyed and the progress they have made.

Review

- April 2023