



St Edmund's and St Thomas' Catholic Primary School

Science Curriculum Statement

Subject Leader – Anne Greaney

Intent

At St. Edmund's and St. Thomas' Catholic Primary School, it is our intention to provide a high-quality science education that provides children with the foundations they need to recognise the importance of Science in every aspect of daily life. We aim to distil a lifelong love and appreciation for science within our pupils and we want them to be excited and curious about the science that surrounds them every day, developing a deep understanding of the world around them.

Through well planned lessons based on an enquiry led approach we aim for all our children to develop both their substantive and disciplinary knowledge. At St. Edmund's and St. Thomas', we will ensure that all the children are exposed to high quality teaching and learning experiences. These experiences will hook the children's interest and encourage them to ask questions about natural phenomena and the world around them.

The skills of working scientifically will underpin the teaching of science lessons. The pupils of St. Edmund's and St. Thomas' will recognise and identify the skills they are using and developing within a lesson by highlighting them on the 'Enquiry Wheel' that they have stuck in the front of their science books or on display within their classroom. They will understand that the development and implementation of these skills enables them to learn new scientific knowledge and strengthen their understanding of existing knowledge.

Implementation

A positive attitude to science learning is present within all our classrooms and there is a clear expectation that all children are capable of achieving high standards in science. At the start of each new topic children's prior learning and understanding is ascertained through discussion, partner talk and quick quizzes. They are encouraged to ask questions about their new topic and these will be answered and investigated as their learning journey progresses.

We use our unique geographical location as a resource for as many of our science lessons as possible. Situated directly on the North West coastline we are in the privileged position to give our children the opportunity and experience of learning on the beach. By working directly within their own locality pupils develop their sense of place. They develop an understanding of how important it is to look after our own environment and not only are they engaged and motivated within their lessons but they become invested in them too. By interacting with the physical world around them it helps our children to develop their ideas. Their learning is placed within every day, real life contexts which helps them to make the science more recognisable and accessible.

A clear focus has been placed on understanding and recognising our pupils' 'scientific journey' as they make their way from EYFS through to year 6 and beyond. Through the science we teach and explore we want our pupils to develop a life long interest and respect and provide them with a skill set that will take them through to KS3 and beyond. The progression of scientific knowledge had been carefully considered. Due to our mixed aged classes our curriculum is planned on a 2-year cycle. Scientific learning and knowledge within some programmes of study e.g. Year 1&2 plants, has been merged so as to ensure progression. To avoid simple repetition of objectives, knowledge is revisited and applied through practical investigation.

With the launch of our curriculum redesign and the development of phase group identities the organisation of science topics has been carefully considered. We have 4 clear phase identities:

EYFS: The Inventors of our Learning

Year 1 & 2: The Authors of our Learning

Years 3 & 4 : The Engineers of our Learning

Years 5 & 6: The Architects of our Learning

The establishment of these phase group identities has resulted in different weightings of subjects being attached to different phase groups. Lower Key Stage 2 being identified as 'The Engineers' of our school now has a heavier weighting of science. Therefore, some programmes of study that had previously and more commonly been taught in Upper Key Stage 2 were now being introduced within the children's journey as Engineers.

Science Medium term plans have been developed using resources from PLAN science assessment. These plans have been adapted to meet the needs of our school by including sections that identify missed learning as a result of the pandemic, links with Literacy and significant scientists.

New Scientific vocabulary is introduced, explained and displayed at the start of each new topic. With the aid of knowledge organisers pupils are given points of reference when discussing or reporting on scientific concepts.

Assessment

Science is assessed on a termly basis in line with our 2-year cycle of planning. A knowledge-based assessment is carried out at the end of 1 chosen topic each term using a Headstart Science topic test and in addition to this an assessment of the children's working scientifically skills is also carried out. For each enquiry assessment only 1 strand of working scientifically will be the focus of assessment so that over a 2-year rolling cycle each child will be assessed in all 7 areas of the working scientifically skills that are identified within our 'working scientifically wheel'

- Asking questions & making predictions
- Setting up tests
- Observing and measuring
- Recording data
- Interpreting and communicating results
- Evaluating

Children's results will be inputted and tracked using our schools i-tracker assessment tool.

Impact

- Our children will be excited and motivated within science lessons.
- They will be able to discuss their learning and retrieve key scientific facts.
- They will show the progression in their scientific skills, knowledge and understanding.
- Coverage of the National Curriculum objectives will take place within all phase groups.
- Staff will enjoy teaching Science and look forward to taking the children onto the next step in their scientific journey.
- Children will use and apply correct scientific vocabulary.
- Children will recognise the science that takes place around them every day and be inspired to ask questions.
- Children will question what they read and hear and wonder if phenomena can be scientifically proven.
- They will become confident in forming their own scientific conclusions.
- Our children will be independent learners, able to access the next step in their scientific journey through our school and beyond
- Our children will be inspired to look at future careers in science.