Hoole St. Michael Church of England Primary School

Science Policy

Member of staff responsible: A. Mesghali
Date policy written: April 2021
Date approved by the full Governing body: Summer Term 2021
Date to be reviewed: April 2022

Vision Statement

Christ's love is in everything we do at Hoole St Michael. Our high-attaining and creative Church of England Primary School is safe, loving and supportive. We encourage the building of good relationships and friendship through respect, tolerance and understanding. Within our Christian family, where parents are our partners in all aspects of school life, we aim to inspire a love for learning within each and every child.

Achieving excellence within the light of God
I can do all through Christ who strengthens me. Philippians 4:13

Overall Intent

We encourage our children be bold and courageous in their learning, willing to take risks within a supportive, caring Christian ethos. Our Christian Values underpin everything we do at Hoole St Michael. Hoole St Michael children develop confidence, resilience and a thirst for knowledge to prepare them for the future. As a small Christian family, children build strong relationships, learn to work together and support each other through life's celebrations and challenges. Growth Mindset and Sumo principles teach our children to approach all areas of learning positively. Our children are active learners who thrive when learning outdoors; we provide outdoor learning and Forest School sessions on a weekly basis. Although we are a village school, we reach out to develop meaningful partnerships within the local community and wider world. We provide enrichment activities regularly for our children to broaden their experiences and love of learning.

This science policy document was adopted by the staff of Hoole St Michael's school. This policy outlines the guiding principles by which this school will implement science in the national curriculum.

Intent in Science:

At Hoole St Michael we strive to make science fun and exciting. Our curriculum is designed with the schools' vision and ethos at the centre: 'achieving excellence in the light of God.'

Science at Hoole St. Michael is taught by giving our children the chance to test, make mistakes and improve using the curriculum driver of Growth Mindset. Science within our school builds knowledge and skills developing children's understanding of the world through first-hand experience and exploration while building up an extended specialist vocabulary.

We support our children in working scientifically through spotting patterns, understanding what they have found out, talking about their learning and asking questions. We aim to provide an environment where children are willing to take risks when trying out ideas and are given the opportunities to develop their scientific enquiry and conceptual understanding.

We want to inspire and challenge our pupils to become independent thinkers who use their understanding of the constantly changing world in which they live.

We aim to ensure that our children can learn about how science impacts upon and underpins much of our lives in today's society, while practical activities should stimulate their curiosity and develop their enthusiasm and love for science.

Implementation in Science:

To ensure that high standards of teaching and learning occur in science, we implement a curriculum that is progressive throughout the whole school. Planning for science begins with the 'National Curriculum 2014 Programmes of Study for Science,' and 'Understanding the World' in the Early Years Foundation Stage. Where possible, science learning is interwoven within the topics being taught in order to provide a creative scheme of work, which reflects the skills and knowledge needed. Science teaching at Hoole St. Michael Primary School involves adapting and extending the curriculum to match all pupils' needs. We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence. Due to Covid-19, we are ensuring that we have a recovery curriculum for Science in place which addresses gaps in our children's learning.

Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.

Impact in Science:

At Hoole St. Michael the children are enthusiastic about science. There is a clear progression of children's work and teachers' expectations in our school. The children's work shows a range of topics and evidence of the curriculum for all science topics. Children within our school are becoming increasingly independent in science, selecting their own tools and materials in order to lead their own investigations. The use of correct scientific vocabulary is celebrated. We aim for our children to leave us ready to take on the challenges of science learning with a firm foundation in concepts, skills and independence in their learning

Inclusion
We aim to provide for all children so that they achieve as highly as they can in science according to their individual abilities.

The National Curriculum for science is our starting point for planning a science curriculum that meets the specific needs of individuals and groups of children. We meet these needs through:

- setting suitable learning challenges;
- responding to children's diverse learning needs;
- overcoming potential barriers to learning and assessment for individuals and groups of pupils;
- providing other curricular opportunities outside the National Curriculum to meet the needs of individuals or groups of children.

Equal opportunities
All children are provided with equal access to the science curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background.

Time
Science teaching in the school is about excellence and enjoyment. We adapt and extend the curriculum to match the unique circumstances of our school.

- Foundation stage teachers plan and teach through continuous provision activities alongside adult initiated activities through the Understanding of the World strand.
- KS1 teachers should be teaching science for a minimum of one hour each week
- KS2 teachers should be teaching science for a minimum of two hours per week.
- In KS 1/Foundation stage, a minimum of one third of lessons overall should include practical scientific enquiry.
- In KS2, a minimum of 50% of lessons overall should include practical scientific enquiry.

Teaching and learning style

- We actively teach science skills, and reinforce learning with selected enquiry simulations.
- We encourage children to ask and answer their own questions as far as practicable.
- Children complete at least two full enquiries each term, taking increasing responsibility for their planning, carrying them out and recording/interpreting the results.

Planning, continuity and progression
Planning for science is a process in which teachers are involved to ensure that the school gives full and equal coverage of the national curriculum objectives. A Recovery Curriculum has been planned due to Covid-19. Teachers use ASE Planning Matrices alongside Lancashire's 'Inspiring Science.'

Resources,
Resources are in place for the topics that each class is to teach. We ensure that a broad and exciting choice of resources enhance the children's learning and give them opportunities to investigate with equipment and materials that they may not ordinarily come in to contact with.

Assessment.
We use a range of assessment techniques to find out what our children understand and what we need to teach to promote further development. Topics commonly begin with an assessment of what children already know.

- Teachers level science attainment using TAPs

- We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve. Activities during, and at the end of, each topic record achievement and celebrate success.
- We mark each piece of work positively, using the school's marking policy.
- Children's work is compared with model answers to determine its level – using TAPs on shared drive
- Teachers assess children's levels of attainment at the end of the Foundation Stage using the early learning goals.
- Teachers assess children's levels of attainment at the end of the KS1 and KS2 programme of study. This teacher assessment is based on assessment records, work samples and use of interim assessment frameworks for KS1 and KS2.

The school science coordinator monitors progress through the school by sampling children's work at regular intervals. Children who are not succeeding, and children who demonstrate high ability in science, are identified and supported.

This science policy with be reviewed by the science curriculum leader and the senior management team.

Signed…… Date…… *(Chair of SEC)*

Signed…… Date:……. *(Headteacher)*