St Laurence Church of England Primary School.

Science Policy

Rationale

Science is about developing an understanding and making sense of our environment, primarily through first-hand experience, exploration, interaction with scientific phenomena and developing scientific language. It is a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills.

Aims

- To develop attitudes of curiosity, originality, co-operation, perseverance, • open mindedness, self-criticism, responsibility and independence in thinking.
- Providing our children with an enjoyable experience of science, so that they will develop
- a deep and lasting interest and may be motivated to study science further. • To develop pupils' understanding of the effects of their actions on the
- Environment and of how we can develop sustainable communities.
- Delivering all the requirements of the National Curriculum in relation to science and covering major scientific concepts.
- Ensuring science lessons are purposeful, accurate and imaginative.
- Helping pupils develop the skills of prediction, hypothesising, experimentation, investigation, observation, measurement, interpretation and communication.
- Making pupils aware of and alert to links between science and other school subjects, as well as their lives more generally.
- To promote a 'heathy lifestyle' in all pupils.

Objectives

- To develop the child's ability to observe and find patterns in observation, raise questions, experiment and investigate, reason systematically and logically, solve problems and communicate.
- To develop manipulative skills using appropriate equipment.
- To complement other areas of the curriculum.
- To ensure that pupils know how to access relevant scientific information
- To develop the ability to work in a variety of ways including, working together in groups, independently, in partners and as a whole class.
- To follow the programmes of study at each Key Stage of the National Curriculum, including the Early Learning Goals for the Foundation Stage, in order to develop scientific skills, knowledge and understanding.
- To provide a scientifically stimulating environment.
- To build of pupils curiosity and sense of awe of the natural world.

Children's Experiences and Learning Environment

- To assist with learning, all lessons should have clear learning objectives which are effectively communicated to students at the beginning of the lesson.
- A variety of learning strategies should be employed in the classroom to help keep all pupils engaged and inspire them to want to investigate the world around them. This should include group discussions, presentations, demonstrations, practical explanations, experimental work and instruction from the teacher, as well as child-led instruction where this is possible and appropriate.
- Activities should focus on developing pupils' ability to enquire, observe, locate sources of information, plan investigations, select appropriate equipment and use this safely, measure and record results, analyse and communicate findings.
- The classroom should display items which are visually appealing and relevant to science.
- A variety of resources should be available in the classroom (whether at all times or for specific lessons) which pupils' can use to engage them with different aspects of science.
- Lessons should make links to other school subjects and the natural world generally, including aspects of pupils' own lives.
- A variety of strategies should also be used to assess the progress of pupils. These should include:

questions, discussion, marking and portfolios.

The school will provide these scientific experiences through:

- The Foundation Stage curriculum and the early learning goal – understanding the world;
- At KS1 and KS2: A scheme of work developed under the 'I can' statements which encompasses all areas of the National Curriculum and make cross-curricular links where appropriate and suitable to their stage of development.
- Making science an integral part of the school experience.
- Using and applying science in practical, real-life and problem-solving situations using the appropriate scientific language.
- Visiting specialists from outside organisations to provide enrichment activities.
- Use of the local and wider environment to undertake study and research

Planning and Assessment

We use assessment to inform and develop our teaching.

- The 'I can' statements provided for each year group are to be used to inform the planning, set the topic areas and assess against.
- Staff should familiarise themselves with both learning objectives and the attainment targets.
- Assessment is continually under review to ensure that an accurate level is obtained regarding achievement. • Staff to complete assessment grids at the end of each unit of work and then at the end of term the information to be transferred onto itrack.
- Topics commonly begin with an assessment of what children already know; Assessment 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.
- Teachers will use progression grids and progression of skill documents to plan science.
- Every half term each teacher will use Focused Assessment for Working Scientifically (TAPS) to ensure that a range of skills are being taught across the school.

Management (Monitoring)

- The science subject leaders monitor progress through the school by reviewing teacher assessments, monitoring of planning and through scrutiny of work.
- Children who are not succeeding, and children who demonstrate high ability in science, are identified and supported or challenged accordingly.
- Reports to parents are made verbally through parent/teacher consultations, and a written report is given in the summer term.

Marking

It is important that work is marked clearly and marked in accordance with the marking policy.

Health and Safety

- The children's safety is paramount and therefore all risks during lessons are assessed and demonstration lessons may be appropriate for some lessons where particular risk is involved, rather than practical hands-on experience.
- In all instances where there is potential risk, a risk assessment should be completed and provided to the relevant person, before experiments are carried out.
- Any 'new' experiments which a teacher has not used in class before should be trialled prior to being performed with pupils in class time.

At the beginning of any experiments, the teacher should outline the purpose of the experiment to the class and all hazards and safety precautions must be thoroughly outlined.

Spiritual, Cultural, Moral and Social Values

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

To successfully meet the five outcomes of the **Every Child Matters** agenda through instilling positive attitudes and promoting respect for both living and non-living things and physical phenomena.

- We ensure that all our children have the opportunity to gain Science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- We draw examples from other cultures, recognising that simple technology may be superior to complex solutions.
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.
- In our teaching, science is closely linked with literacy, ICT and mathematics.
- We recognise the particular importance of first-hand experience for motivating children with learning difficulties.
- We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them.
- We promote **British Values**; encouraging mutual respect and understanding.
- All efforts will be made to ensure that cultural and gender differences will be positively reflected in all lessons and teaching materials used.

The Subject Leader

The Subject Leader will have a number of responsibilities, including for:

- **Professional leadership and management**

This means ensuring professional leadership and management is properly managed and organised, ensuring that it meets the school's objectives.

- **Teaching and learning**

The subject leader will monitor teaching and learning in line with the schools monitor calendar and initiate reviews of the scheme of work.

- **Resources**

This entails managing resources and maintaining stock to meet curriculum needs.

BACKGROUND DOCUMENTATION

This policy was informed by reference to National Curriculum documentation 2014.

REVIEW

This policy will be reviewed by the Headteacher and all the staff on an annual basis and amendments presented to the Governing Body.

Date of last review : September 2021

Sara Hobbins.