SCIENCE POLICY

FOR SHAKESPEARE PRIMARY SCHOOL

To be reviewed: every 2 years

To go to: Curriculum Committee

Approved by Governors: January 2023

Amended and Reviewed: September 2025

RATIONALE

This policy reflects the school values and philosophy in relation to the teaching and learning of science. It sets out a framework within which teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment.

The policy should be read in conjunction with the National Curriculum Programme of Study for science which sets out in detail what pupils in different year groups will be taught.

AUDIENCE

This document is intended for all teaching staff, school governors, parents, inspection teams and LEA Advisers/Inspectors. Copies are provided to all class teachers and can be available to others from the Head teacher.

Science is a CORE subject within the National Curriculum.

Intent

At Shakespeare, we want our children to become confident, curious, inquisitive scientists. We believe that every child deserves a broad and balanced Science curriculum which enables them to confidently explore and discover their surroundings, so that they gain a deeper understanding of the world around them. To do this we follow the Developing Experts scheme of work, which aligns with our curriculum vision, school ethos and children's needs whilst encompassing the National Curriculum Programme of Study. With a high- quality science curriculum, children will be taught substantive knowledge that will go hand in hand with disciplinary knowledge. The curriculum is sequenced to ensure that pupils know 'the science': they also know the evidence for it and can use this knowledge to work scientifically.

The aims of Science are:

1. To encourage children to, enquire explore and observe so that they can ask questions about living things, materials and phenomena.
2. To encourage children to work together to collect evidence to help them answer questions and to link this to simple scientific ideas. They will also begin to make links between ideas and to explain things using simple models and theories.
3. To encourage children to test, experiment and investigate in order to answer questions. Children will also evaluate evidence and consider whether tests or comparisons are fair.
4. To encourage children to share their ideas and communicate them using scientific language, drawings, charts and tables according to their age and ability.
5. To encourage children to draw conclusions from their work.

These aims are consistent with our school philosophy and take account of the LEA Curriculum Policy, National Curriculum Non-Statutory Guidance and the Curriculum Guidance for Foundation Stage and the Developing Experts Scheme.

The subject comprises Programmes of Study and Level Descriptions. These are divided into Key Stages and organised into levels of increasing challenge. For Foundation Stage the subject is taken from the areas of Learning, following the Stepping Stones leading to the Early Learning Goals.

Our pupils will work at the levels appropriate to their ability. It is expected that most children will achieve end of Key Stage 1 descriptions by the end of Year 2 and Key Stage 2 by the end of Year 6.

In learning Science, children will have the opportunity to:

1. Ask questions
2. Evaluate
3. Interpreting and communicating data
4. Make predictions
5. Observe and measure
6. Record data
7. Set up tests

The symbols on the right are used to highlight when the children are working scientifically. The children are familiar with these symbols. They are discussed in lessons and are displayed in school.

CURRICULUM AND SCHOOL ORGANISATION

The school provides a creative curriculum within which scientific skills are developed and encouraged across a variety of topics.

To achieve the aims the Developing Experts Scheme of work is used. Developing Experts uses a story telling approach supported with science experiments. These are designed to develop learners' understanding through a variance theory approach, enabling learners to explore each concept taught through several ways.

In Shakespeare Primary, Science has a co-ordinator who is currently Miss Hickson.

The Scheme of Work is allocated to year groups and timetabled on a weekly basis. Science teaching is planned so that within a week 1.5 hours of teaching time is allocated for every child.

The co-ordinator has a great link with a local cluster group. The group meets on a regular basis to discuss ideas, planning and assessment. This groups also completes CPD together.

Shakespeare takes part in a yearly 'science day' challenge. Pupils from Fleetwood High School visit school and assist the children. Year 5 GDS children are also given the opportunity to compete in a Science Quiz at Fleetwood High School. This is the evening of Science Day.

PLANNING

Planning is used to:

1. set clear, achievable goals.
2. ensure work is matched to pupils' abilities, experience and interests;
3. ensure progression, continuity and concept coverage throughout the school;
4. provide criteria for evaluation of teaching and learning.
5. develop independent use of previously used scientific skills

The planning of Science is completed using the framework 'Developing Experts' and it is the teacher's responsibility to ensure all skills are covered by the end of the academic year. Topics are developed with input from the children. Plans are available to the Head teacher, co-ordinator and all teachers on the network.

CLASS ORGANISATION AND TEACHING STYLE

Within classes pupils are taught in groups or as a class according to the various resources. Teachers provide the children with engaging lessons which allow the children to think and work scientifically. The children complete a weekly 'mission assignment' and teachers will provide practical activities where possible. Teachers will also discuss key vocabulary (rocket words) during sessions. These words are great for expanding children's knowledge.

ASSESSMENT

Assessment is used to:

1. provide diagnostic information about individuals/groups
2. plan future teaching and learning
3. provide summative information for teachers
4. provide information for parents
5. contribute to each pupil's curricular record. Assessment techniques used include:
    - teacher assessment of pupils' performance on tasks
    - teachers' observation of pupils when working
    - teacher – pupil discussion and teacher questioning

Teachers assess children on completion of each Science topic area. KS2 also assess vocabulary before the topic begins. Teachers implement a Developing Experts test at the end of each topic. Teachers then input the results onto our school sonar tracker, so that teachers can clearly see whether a child is working towards or at the expected level for the Science learning objectives. Children who are working at greater depth are highlighted as GDS on the tracker and challenged further in science lessons.

RECORD KEEPING

Records of pupil achievements are kept to:

1. plan pupils' future learning
2. report progress to parents
3. maintain a written record of pupils' learning
4. provide a curricular record for each pupil

The records are intended for use by teachers in school, support staff, relevant outside agencies i.e. OFSTED, parents and teaching staff of transfer school. The children have science/topic books and folders which all their goes in through the year. End of topic assessments stored in books/folders too. The science co-ordinator checks these books and folder when necessary.

REPORTING

Reporting to parents is intended to give a clear and helpful picture of pupils' progress.

Parents of pupils in Foundation Stage, KS1 and KS2 receive a written report each year in July. This report complies with statutory requirements and provides parents with information regarding academic achievement in each subject, progress in school and other skills and abilities. The reports are completed by class teachers and signed by the Head teacher.

Parents are invited to attend Parents' Evenings in October and February of each year to discuss their child's progress, and formally or informally at any mutually convenient time by arrangement with the Head teacher or teacher concerned.

CO-ORDINATOR ROLE

The role of the Science co-ordinator is described in the relevant job description in the Staff Policy Folder.

In planning, the co-ordinator should review and contribute to teacher planning where appropriate, prepare a policy and Scheme of Work and develop this with staff.

The co-ordinator will assist staff by planning/leading INSET activities, providing consultancy/advice, specifying and ordering all resources, co-ordinating staff requests for resources and monitoring and maintaining the condition and availability of resources.

The co-ordinator's responsibility for monitoring and evaluating includes consulting with teachers, analysing pupils' access to science and leading curriculum review meetings.

The co-ordinator's professional development will include personal reading and access to external INSET/Advisory Teachers.

The co-ordinator visits and observes Science lessons, when possible, which gives an insight into what Science looks like in each year group.

The co-ordinator also attends regular cluster meetings with other schools in Fleetwood including Fleetwood High School. This time is used to share planning, implementing and assessment ideas and tools.

The co-ordinator plans and implements 'science day' on a yearly basis. This takes place during 'science week. It allows children to plan and implement a science experiment. The children share their findings with their year group/whole school.

INSET PROVISION

Needs are identified through Performance Management, curriculum review/evaluation, inspection/external advice and school development planning. They are recorded and prioritised by the staff development planning team. Individual needs are considered as part of the Staff Development Policy.

Staff/school needs are considered and planned for by the school development co-ordinator and SDP processes. Potential providers include own school staff, LEA Advisory Teachers or external INSET. The effectiveness of INSET on the teaching and learning will be reviewed by the staff development co-ordinator.

EQUAL OPPORTUNITIES

It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability, including gifted pupils', ethnicity and social circumstances, have access to the curriculum and make the greatest progress possible.

SPECIAL EDUCATIONAL NEEDS

All pupils should have access to a broad, balanced curriculum, which includes Science and should make the greatest progress possible.

Provision for pupils with SEN in Science is the responsibility of the class teacher, curriculum co-ordinator and the SEN co-ordinator.

The effectiveness of the policy and arrangements for SEN pupils' in science will be reviewed by the class teacher and SEN co-ordinator.

Talented children have opportunities for extension through more open-ended investigations and open - ended questioning. More able children may have the opportunity to lead a group in planning and carrying out investigations.

HEALTH AND SAFETY

The National Curriculum health and safety statement applies to science and states:

When working with equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils should be taught:

1. about hazards, risks and risk control
2. to recognise hazards, assess consequent risks and take steps to control the risks to themselves and others
3. to use information to assess the immediate and cumulative risks
4. to manage their environment to ensure the health and safety of themselves and others
5. to explain any steps they take to control risks

The responsibilities of the science teacher include:

- complying with the guidelines laid down by the education authority and school.
- adhering to the recommended health and safety practices and procedures, including consulting the school's appropriate model risk assessments;
- reporting any deficiencies and defects in administering the procedures.

Science teachers can help the children they teach to take appropriate responsibility for health and safety by explaining dangers and encouraging them to act safely. For example:

Very young children can be taught:

- to sweep up sand and mop up water (on which people might slip);
- not to leave equipment and materials on the floor where people can trip over them;
- always to wash their hands before handling food or equipment.

Older children can formulate their own safety rules. For example:

- if substances are to be heated in the classroom, the children can identify the dangers;
- they can say how to avoid dangers, with the teacher drawing attention to anything they omit;
- health and safety issues can provide useful opportunities for personal, social and health education.
- Teachers can teach safety by example. In some lessons, teachers can build in time for teaching the children about safety or make explicit the reasons why you are taking certain precautions.
- Risks can be minimised by careful organisation and storage of equipment and materials.

The safety of children during science lessons is the responsibility of the class teacher.

CROSS PHASE/SCHOOL TRANSFER

Teachers will have opportunities to liaise with colleagues from the transfer school. Meetings will be as required, and the purpose of the meetings will be to transfer details of individual pupil's progress and needs and to facilitate curriculum developments and continuity.

CROSS EVALUATION

Evaluation is carried out to enhance teaching and learning and is the responsibility of class teachers. Evaluation will focus on/include:

1. content, in conjunction with the National Curriculum
2. pupils' progress and factors influencing progress through teaching, resources and teaching methods
3. organisation and teaching methods
4. effectiveness of INSET

Evaluation methods will include:

1. assessing pupils' work and achievement
2. reviewing coverage of Programmes of Study
3. analysis of teacher planning
4. staff discussion
5. external inspection/advice

This will be conducted when deemed appropriate by the class teacher.

Policy updates
H. Hayton and T. Armer March 2004
Agreed by Governors 28/02/05
Revised March 2007 H.Hayton
Approved by Governors 12/03/07
Revised March 2008 L.Neale
Approved by Governors 10/03/08
Revised December 2008 H.Hayton
Approved by Governors 10/03/09
Revised March 2017 by L.Hickson
Approved by Governors June 2017
Revised March 2019 by L Hickson
Revised April 2021 by L Hickson
Revised January 2023 by C Helsby
Revised September 2023 by L Hickson
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