SCIENCE POLICY
September 2024

Subject Leader: Jasmine Castles

Review Date: September 2025

Rationale
Science stimulates and excites children's curiosity about phenomena and events in the world around them and is able to satisfy this curiosity with knowledge.

Aims
Through the learning and teaching of science we aim to:

- develop the child's natural curiosity about the world
- enable children to appreciate the relevance of science in everyday life
- enable children to develop scientific knowledge, understanding and skills
- encourage children to use their imagination, think creatively and question
- help children value and respect the environment
- help children understand how to keep themselves and others safe and well
- enable children to be effective communicators of ideas
- enable children to learn through first-hand experience

Teaching Strategies and Planning
Across the school we currently follow the progression grids provided for by the science subject leader, to ensure all topic and working scientifically statements are embedded. This year changes have been made to account for mixed age classes. Retrieval practices take place from the previous year and terms learning. Planning takes into account topic areas that are relevant to the teaching of the children at the relevant times of the year. Where possible links will be made across the curriculum and only brought into a theme of a term/half term when appropriate or relevant. Termly KS1 knowledge organisers are used to ensure meaningful links with other subjects. The main focus of science across all year groups is to teach skills to help the children think and work scientifically. This incorporates the teaching of the following types of enquiry outlined in the National Curriculum:

- Asking questions and recognising that they can be answered in different ways
- Observing closely using simple equipment
- Performing simple tasks
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions

These skills will allow the children to use their natural inquisitiveness to discover and learn about the world around them. They will be taught as an integral part of plants, animals including humans, everyday materials, uses of everyday materials, living things and their habitats and seasonal changes.

Each year there is a planned STEM week with an agreed focus on learning skills to think and work scientifically, which is the main focus of all science teaching.

Children in EYFS are given opportunities to develop their scientific understanding through planned continuous provision and adult led activities such as cooking, sand and water play, senses work, working with magnets and construction toys, forest school as well as through child-initiated experiences. They are also involved in the overarching topic focus in STEM week each year, as well as any other workshops or experiences the school offers.

ICT plays an important part in developing understanding and enquiry skills. Children investigate living things and their environment using digital cameras, I- Pads, computers and specific science programs.

Special Needs
Work is differentiated to meet the needs of particular children, including challenge and scaffolding. Provision will be in line with the school's SEND Policy and the Learning and Teaching Policy.

Health and Safety
Health and safety should be considered prior to starting an investigation and instructions should be followed when using equipment from the Science cupboard in the staffroom.
When working with science resources children should be taught;

- to recognise risks and hazards
- how to be pro-active in controlling these

Assessment and Record Keeping
Assessment of Science is carried out according to the school's Assessment Policy.
Pupils should be involved in assessing their own work by having opportunities to discuss how they have completed the learning objective. This helps them to recognize the skill sets they have learnt and how they can apply them in the future. We also encourage children to ask for additional repetition of the task, processing time help if they need it and for adults to be proactive in recognising this.

In KS1 teachers use Target tracker to assess the children against a set of expected knowledge based and working scientifically skills they should meet at the end of each topic. This is consistent with the assessment approach used in all other core subjects. Children will be assessed at the end of each term to be working within a given year group at

- Beginning
- Beginning+
- Working within
- Working within+
- Secure
- Secure+

Assessment from EYFS will be based upon related statements from the Early Years Foundation Stage framework as part of The Natural world and Managing Self Early Learning Goals. This is assessed through documented observations and recorded.

A Key Stage One Science book begins in Year One and follows the children through to Year Two. This will allow teachers to effectively monitor progress throughout Key stage 1. At the end of each academic a gap analysis audit is used to help monitor the effectiveness of retrieval from the year prior and planning is adjusted accordingly to account for where this may be needed in the coming year.

Termly monitoring of statements will indicate the step that the children are working at. At the end of the year the expectation is that the majority of children will be working at ARE 'W+' or above in each topic as well as working scientifically. Termly Data reports will track gap analysis to inform future planning. Mastery statements will also be monitored to provide appropriate challenges particularly in mixed age classes.

During Key Stage 1, children's progress is monitored with a final statutory teacher assessment being made at the end of year 2. This overall judgement takes all attainment targets into account but is designed to place emphasis on working scientifically. A selection of work from across each year group is also moderated each term in year group teams to ensure judgements are consistent. This is conveyed to the Local Authority and to the appropriate Key Stage 2 setting to assist further learning.

In the Foundation Stage children's progress in science is monitored through the statutory framework for the Early Years Foundation Stage under The Natural world and Managing Self. At the end of Foundation Stage

children will be assessed upon whether they have achieved the Early Learning Goal which is conveyed to the Local Authority and to the appropriate Key Stage 1 teacher to assist in future planning.

Resources

It is a whole school expectation that all year groups will provide an available 'Science station / STEM table' to allow the children to explore science in a wholly physical and interactive manner. This can be an indoor or outdoor activity. This adheres to the expectations of the working scientifically core principles.

Science resources and experiences are monitored by the Science subject leader and include class investigation activities, topic related activities, a science section in the library, science visitors and a range of ICT resources. There is a specific science cupboard of additional resources to support the teaching of individual topics.

This curriculum policy should be read in conjunction with our;

Learning and Teaching Policy
Foundation Stage Policy
SEND Policy
Behaviour Policy
Inclusion Policy
Health and Safety Policy
Equal Opportunities Policy
Assessment Policy