



Respectful, Responsible, Resilient Learners.

Science Policy

Subject Lead: Miss Charlotte Walton

Policy Updated: March 2023

Intent

At Abingdon Primary School, we recognise how science impacts every aspect of daily life, and without science humankind would not have made progress throughout history. As one of the core subjects taught at primary level, we give the teaching and learning of science the prominence it deserves.

Learning science is concerned with increasing pupils' knowledge of our world, and with developing skills associated with science as a process of enquiry. Our science curriculum develops the natural curiosity of each child no matter their demographic, encourages them to have respect for living organisms, and instill in pupils the importance of caring for the natural environment.

Throughout the programme of study, the children acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. We ensure that the working scientifically skills are built-on and developed throughout children's time at the school. Working Scientifically at Abingdon involves five types of enquiry:

- observation over time
- pattern seeking
- identifying, classifying and grouping
- comparative and fair testing
- research using secondary sources

Science Lessons

Science lessons at Abingdon Primary School include reviews of previously taught skills, knowledge and vocabulary and we promote an importance of an investigative approach through regular 'hands on' experiences, deepening the children's familiarity with the five types of enquiry.

Using the requirements of the Science National Curriculum as our guide, our Science lessons offer opportunities for children to:

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.

- Formulate their own questions about the natural world.
- Foster the confidence to 'be wrong' when it comes to making predictions and postulating their own theories.
- Promote an awareness of the importance of teamwork in scientific experimentation.
- Practically investigate their questions using various methods of enquiry.
- Gain competence in the science skills of planning scientific investigations, gathering and analysing data and critical evaluation of investigations across the disciplines.
- Use a range of methods to gather data from investigations and secondary sources
- Present data in a variety of methods including tables, bar charts, line graphs, pictograms and pie charts.
- Produce comprehensive science reports that demonstrate their proficiency in the scientific method.
- Have care for the safety of all individuals in lessons by developing knowledge of the hazards of the materials and equipment they handle, along with mitigating these hazards.
- Develop an enthusiasm and enjoyment of scientific learning and discovery.

Implementation

Provision and delivery

Science is taught weekly at Abingdon Primary School to ensure engagement for the subject is sustained throughout the school year. Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children can achieve high standards in science. We use the scheme PZAZ to support teachers with delivering the science curriculum. Science is taught in a practical context where appropriate and high-quality resources are used to support teaching and learning. Each new unit includes a review of previous learning to allow children to make links with any new learning.

Mixed age classes learn science on a two year cycle to ensure full coverage of the curriculum. More able learners are challenged through questioning and the methods of recording used. All children are encouraged to be inquisitive and to articulate the scientific skills which they use in each lesson e.g. classification, fair testing, research etc. This is promoted through the use of standardised symbols specific to KS1 and KS2. In Early years, science is taught through the children learning by play in continuous provision.

Planning

The progression map sets out the science knowledge including subject specific vocabulary which is to be taught throughout each year group and ensures that the requirements of the National Curriculum are fully met. This is monitored by the science subject lead.

Specific teaching cycles for mixed age classes has been planned and communicated by phase leaders. This is also monitored by the science lead to ensure full coverage is met.

The progression grid also outlines the progression of skills across the year groups and these are planned so they are achieved by the end of each phase (i.e. KS1, LKS2, UKS2)

Impact

Subject Leader Role

- To review and develop the science policy
- To support teaching and support staff through staff meetings, training sessions, 1:1 support for planning, CPD provision and the provision of quality resources.
- To monitor the quality of teaching and learning in science across the school through the scrutiny of children's work, assessment data and observations
- To maintain a good knowledge of current thinking in science through CPD, research, attending subject leader meetings and science network meetings.
- To monitor the impact of the PZAZ scheme by assessing and tracking pupil progress

Assessment

At Abingdon Primary School, we ensure that skills and knowledge from previous learning is revisited through metacognitive activities. This enables children to build on their learning which is particularly important in science due to the way the curriculum is outlined. For example there is two years before electricity is revisited in KS2 and thus it is imperative that previous learning is secure before progressing to teaching any new knowledge or skills. Formative assessment is used throughout units to inform planning and build on children's knowledge and skills.

We use TAPS (Teacher assessment in Primary Science) at Abingdon Primary School as a means of summative assessment that includes the assessment of the working scientifically skills.

Monitoring

Science is monitored rigorously throughout the school year to observe and improve standards. This is done through lesson observations and/or learning walks with a specific focus, pupil voice which gathers feedback from learners, and book looks to ensure consistency and progression across the school. Standards and overall outcomes are reported to SLT regularly.

SEND and Inclusion.

Using the SEND code of Practice, Local and National guidance to inform our curriculum structure, our curriculum enables personalisation and equitable delivery of learning for all children regardless of need. Teachers adapt planning to suit the needs of SEN children.