

Curriculum Statement for Science

Curriculum Intent

The intent of Pensby Primary's Science curriculum is to ensure that all children are taught age appropriate science subject knowledge as laid out by the National Curriculum (and supported in detail using PLAN documentation). It is our intent to encourage children to be inquisitive and ambitious when learning about the world, nurturing their innate curiosity and enabling them to develop a range of scientific skills that are useful across the whole curriculum.

Implementation

At Pensby Primary school, we make the learning of science interactive and engaging through the use of correct scientific resources and activities. It is carefully planned, following the long term plan, to ensure progression of learning and knowledge in each year group, particularly for those subject areas such 'Animals including Humans' and 'Materials' which are covered in several consecutive year groups. Progression of skills when 'working scientifically' are similarly specified to ensure that all these skills are taught, practised and progressed throughout a child's primary education.

PLAN (from The Association of Science Education) is used as the basis for our planning and assessment in Science to enable teachers to have a clearer understanding of National Curriculum planning and assessment. In addition TAPS (Teacher Assessment in Primary Science) 'Why and How' resources from Bath Spa University are used to provide a framework of focused activities and assessments for all 'Working Scientifically' progression throughout the school.

Each year group teaches science as a minimum fortnightly and mainly weekly throughout the academic year following the long term plan for Science. The organisation of age appropriate content and technical vocabulary enables pupils to discuss, investigate and evaluate in all areas of science and long term plans have been devised to enable children to easily see the link between their science learning and other curriculum areas.

In line with our remote learning policy, the skills and knowledge in Science are taught through Seesaw and will include activities, videos and on line resources to support the subject. It may be necessary to amend the order that individual subject areas are taught to ensure maximum access for all children whether they are learning at school or at home. Experiments requiring specialised equipment will form part of the recovery curriculum as required.

Aims

Our curriculum aims to ensure that all children:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics;
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them;
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future;
- develop an enthusiasm for science and are ambitious in their enquires, both of which will lay the foundations for future study at Key Stage 3.

Impact

The impact of Science at Pensby Primary is that we ensure our children progress to secondary school with the enthusiasm to want to know more about the world and the skills to enable them to work scientifically at a deeper level. We provide children with the foundations and knowledge for understanding the world, aiming to

ignite their interest in a range of science-based subjects, promoting STEM subjects so that children learn about the possibilities for future careers in science.

EYFS

In EYFS, children begin their Science learning journey by following the Early Learning Goal:

- Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes

Key Stage One and Key Stage Two

The Science Long Term Plan below gives an overview of the subjects covered. In every KS1 & KS2 year group science is to be taught weekly (or fortnightly in exceptional circumstances), following the LTP of topics and the PLAN and TAPS documentation for unit planning. Further details of this documentation can be found in the year group and Science Lead files. PLAN documents give the key learning, key vocabulary and evidence collection for each unit. TAPS documents and activities are to be completed for each unit, where applicable, to ensure 'working scientifically' is covered appropriately in every year group and progressed effectively throughout the school.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Animals including humans (Animals)	Seasons	Animals including humans (Humans)	Materials	Materials cont. Plants	Plants
Year 2	Animals Including Humans	Materials	Living Things and Habitats	Living Things and Habitats	Plants	Plants
Year 3	Rocks	Animals including Humans	Plants	Light	Forces and Magnets	Working Scientifically
Year 4	Animals, including humans	Materials	Electricity	Sound	Working Scientifically Living things and their habitats	Working Scientifically Living things and their habitats
Year 5	Earth and Space	Earth and Space/ Materials	Materials	Forces	Living Things and their habitats	Animals, including humans
Year 6	Electricity	Light	Evolution & Inheritance	Evolution & Inheritance	Animals inc Humans	Living Things/Habitats

Cross Curricular Links

Scientific links are made in all areas of the curriculum to ensure children see how scientific knowledge and skills are integrated into all areas of the curriculum so that Science supports the skill development of other subjects whilst also maintaining its integrity.

Integration

Small supported groups of children from Stanley Special School are welcomed into Science curriculum lessons if the staff from Stanley School consider it is appropriate for them. Pensby staff work with the Integration Lead from Stanley Special School to ensure the appropriateness of the lesson material and the health and safety of everyone.

Enrichment Opportunities

The science curriculum is enriched in a variety of ways including:

- Online resources: Discovery Education (Espresso), Busy Things, BBC Bitesize science
- Visits to Pensby High School (Years 5 and 6);
- Science books linked to English study and reading areas.
- Science Under The Stars annual event at Heswall Primary School
- Visits to scientific venues during the school year (e.g. Catalyst Centre)

Progression and Assessment

EYFS

Regular observations and assessments of learning are recorded using an on-line journal (Seesaw) and contribute to a summative assessment at the end of EYFS using the Early Years Outcomes.

KS1 and KS2

Formative assessments of children's learning are made and assessed through observations and classwork and shared as evidence on SeeSaw. These assessments contribute to a summative judgement at the end of each term against the science statements supplied by the science lead and found on Classroom Monitor. PLAN documents are used to assess against the expectations of the knowledge statements for each topic from each year of the science National Curriculum and summative data entered for Year 2 and Year 6 as required nationally using the 'Exemplification of Standards in Science' to inform judgement.

