



D5 - Copnor Primary School

Science Policy

This policy sets out how science is taught at Copnor Primary School.

Policy Availability

This policy is available on the school website (www.copnorprimary.co.uk/information/policies) and paper copies are available upon request from the school reception.

Rationale

Science teaches children about phenomena they experience and the world around them. Science is a medium through which children develop their ability to think, hypothesise, evaluate, explain and question the world around them and the impact of science on it.

Aims

- To encourage children to question the world around them, make suggestions and explore possibilities
- To develop children's understanding of key scientific concepts
- To encourage children to be creative thinkers
- To develop each child's ability to acquire knowledge through an investigative approach
- To instil in the children due regard to health and safety within science and science experiments
- To use computing to develop skills and support knowledge where appropriate
- To make links between science and the real world, including through cross-curricular work
- To equip the children with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Provision

Hours for the teaching of science are set out in the curriculum timings. Science is taught in mixed ability classes with work differentiated according to the needs of the children. Children will be challenged dependent on their ability in order for them to achieve to the best of their abilities.

The curriculum map details which areas are taught in each term. The Key Ideas Overview details which year group and term the different key ideas are addressed in. In accordance with the National Curriculum 2014, some science topics will be covered more than once during a child's time in primary education. The medium-term planning contains learning intentions that consider the key statutory knowledge outlined in the Science curriculum alongside the skills-based learning required to develop the children's scientific thinking and understanding.

A range of teaching styles are employed to engage, excite, stimulate and promote a desire to develop scientific thinking. Wherever possible, scientific investigations will be set within a real-life context. Within most science topics, the children will have the opportunity to participate in an extended investigation which will be led as much as possible by the children.

Resources are audited annually and checked with each year group termly. They are then clearly labelled and stored in the science cupboards within the resource room located in the KS2 building.

Early Years Foundation Stage (EYFS)

The EYFS curriculum is different to the rest of the primary phase, as it is taught across seven primary areas of learning rather than in subjects. The key area where science is explored is in the area Understanding the World. The children will experience a number of opportunities to explore the natural world around them, interact with different materials, learn about the life cycle of plants and experience the birth of chicks. They will be encouraged to learn through play, with skilled practitioners developing and supporting this play to enhance the learning opportunities. Staff will ensure that the children have a range of opportunities to improve their understanding of the world around them, intervening to encourage children who have not utilised these experiences to do so.

Key Stage 1 (KS1)

The focus of science teaching in Key Stage 1 is to enable pupils to experience and observe the natural and humanly-constructed world around them. They are encouraged to be curious and ask questions about what they notice. The children are also helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information.

Lower Key Stage 2 (Years 3 and 4)

In lower Key Stage 2, the children will broaden their scientific view of the world around them. They are provided with opportunities to explore, talk about, test and develop ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They are encouraged to ask their own questions about what they observe and to make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They will draw simple conclusions and use some scientific language to explain their findings.

Upper Key Stage 2 (Years 5 and 6)

In upper Key Stage 2, the children will develop a deeper understanding of a wide range of scientific ideas. They will explore and talk about their ideas; ask their own questions about scientific phenomena; and analyse functions, relationships and interactions more systematically. They will encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. The children will also begin to recognise that scientific ideas change and develop over time. They will select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. The children will be encouraged to draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

SEND, including the more able

Children with specific needs will be identified and provided for according to their needs; through support, scaffolding and differentiation. More able children will be identified through the more able register and extended through challenging activities which promote higher-order thinking skills. Their thinking will also be challenged and they will be encouraged to prove their thinking in different ways.

Health & Safety

The Health and Safety policy is adhered to in all lessons. Where there are specific issues it is highlighted within the planning. Additional guidance is given by the subject leader and/or the Association for Science Education (ASE) at <https://www.ase.org.uk/resources/health-and-safety-resources> as appropriate.

Roles and Responsibilities

The implementation of this policy is overseen by the school's science leaders and SLT, and is monitored by the Headteacher and School Governors. Although the science leaders will support the teaching and carry out monitoring of science across the school, the Headteacher is responsible for ensuring that science is taught consistently across the school.

Staff

The school staff will support and nurture pupils' understanding and enjoyment of science. They will ensure that the children are encouraged to work scientifically and provided with relevant practical ways to support their understanding of the science they encounter. The staff will work to strengthen and build upon pupils' prior knowledge, year on year.

Pupils

Pupils are expected to apply themselves fully to the variety of scientific concepts they will be faced with throughout their time at Copnor Primary School.

Parents

Parents can support pupils' science learning at home by helping with homework, as well as highlighting the science encountered in real-life contexts (e.g. The weather, how sound travels in the home etc.).

Assessment Recording and Reporting – Please also refer to the Assessment Policy

Ongoing assessments are done through assessing against the learning intention. The achievement of individual Learning Intentions will be recorded by the class teacher by means of an Excel spreadsheet. At the end of each term, this will produce an overall attainment grade for each child. This will inform the attainment judgement that is made when formal data is recorded three times a year (end of Autumn, Spring & Summer). All judgements are made in accordance with the expectations of the National Curriculum and are based on both scientific knowledge and skills. The children are judged at the end of the year as to whether they are emerging, expected or exceeding against the end of year expectations for their year group. This information will be shared with parents via the annual academic report and at parents' evenings.

Monitoring

The day-to-day monitoring of science at Copnor Primary School is carried out by the science leaders. This is further monitored by the Senior Leadership Team through regular learning walks, book moderations and pupil conferencing.

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