Through wisdom, compassion and endurance, we endeavour to make the best decisions possible for our children

SCIENCE POLICY

Whaddon Church of England first school, Whaddon, Milton Keynes, MK17 0LS
Head: Mrs Selina Davies B Ed (hons)
T 01908 501719 E office@whaddon.bucks.sch.uk
whaddon.eschools.co.uk

SCIENCE POLICY

Vision

Science is a process through which we can achieve a greater understanding of the chemical, physical and biological factors affecting the environment in which we live. It is a way of working which allows children, through practical first hand experiences and secondary sources, to develop their knowledge and understanding of the world in which they live. These experiences allow children to observe, investigate, make sense of and communicate and evaluate their findings. Science is an enjoyable experience for children of all ages and abilities, guiding them towards making sense of their immediate environment, the wider world and beyond.

Aims

We want the children:

- To develop scientific knowledge and understanding
- To develop scientific enquiry skills
- To ask questions about the world they live in and make simple predictions about what might happen if...
- To look carefully at the world around them and use their 5 senses to say what it is like
- To be able to use observations to sort and measure things
- To record their findings in drawings, charts, words and tables
- To say what happened and explain trends in their results
- To have an everyday working knowledge of Science so they can apply it to their everyday lives
- To make use of ICT, Literacy and Numeracy skills
- To work safely

Objectives

To enable children to:

- develop their hypothesising, observation and recording skills through scientific experiments and investigations
- use both first-hand experience and secondary sources (including ICT) to obtain and present information
- work on an individual and co-operative basis using a variety of approaches;
- select and use materials and equipment safely
- relate their work to scientific processes in the wider world.
- consider the fact of life, growth, decay and death and how different organisms are dependent upon each other.

Spiritual, Moral, Social and Cultural Development

Science provides spiritual, moral, social and cultural development opportunities for children to:

- reflect and wonder at the fact of order, regularity and pattern in the natural and physical world, the vastness of the universe and variety of life and consider the question of the possibility of a Creator.
- develop an awareness of the role of science in society and the implications of scientific developments past, present and in the future
- promote an awareness of the effect that scientific processes have upon the environment and foster a caring attitude towards it

• develop a questioning and reflective mind by providing a range of interesting and enjoyable activities.
• develop an awareness of the role of science in society and the implications of scientific developments past, present and in the future;
• develop enquiring minds which continue to ask, "why"?
• relate their work to scientific processes in the wider world.
• consider the fact of life, growth, decay and death and how different organisms are dependent upon each other.
• discuss and communicate their learning with peers, teachers and sometimes other adults.
• find out information through scientific enquiry and present an informed argument. This skill should be taught and developed in every science topic.
• teach Science in a wide, broad and global historical context using the widest possible perspective and including the contributions of people of many different backgrounds

The attitudes we want to foster are:

- Enjoyment
- Always do your best (high expectations)
- Independence and confidence
- Treat each other with respect (sharing, listening to each other, listening to the teacher)
- Cooperation and collaboration
- Curiosity and imagination
- Treat the world around them with respect (being aware that living things are alive and need care and that the place we live in is important
- Self motivation

Teaching and Learning

We use a variety of teaching and learning styles in science lessons to engage all pupils. We share the learning objection which is skills based with the pupils by stating it clearly at the beginning of each lesson. Our main aim is to develop children's scientific skills, knowledge and understanding through challenging, motivating activities that extend the pupils learning. This can be through whole class teaching, small group work, paired work or independent learning.

KS1 & 2

We teach the national curriculum for science.
The long term plan identifies the science topics to be taught each term to each year group. The medium term plans identify the science objectives for the block of work for that term. Science skills are taught continually and are identified in teachers' short term planning.

Foundation Stage

We teach science through Knowledge of the World (Foundation Stage Curriculum). The emphasis is on using the children's interest in the world around them to explore the outdoor environment and teach aspects of science.

The planning is monitored by the Science subject leader to ensure curriculum coverage and an emphasis on practical exploration and investigation.

Differentiation
We differentiate by:

- Dialogue
- Giving extra time to some groups
- Setting up one task that has a variety of levels associated with it
- Asking different level questions to match ability
- Giving different tasks to different groups
- Varying the level of adult support given to groups

Assessment
We assess by:

- Talking to the pupils and asking questions
- Discussing the work with the pupil
- Looking at the work and marking against the learning objective
- Observing the pupils carrying out practical tasks
- Pupils self evaluation of their work

We monitor the pupils' progress in skills by keeping an ongoing record during each topic covered. We plan for further development based upon what we have observed.

In Years 1, 2 and 3, a Science skills sheet is completed at the end of each unit of work. At the end of an academic year a Science skills sheet is completed for the class and passed onto the next school.

At the end of Foundation stage the children are assessed against the progress descriptors in their Foundation Stage Profile. At the end of KS1 the children are assessed using teacher assessments.

Equal Opportunities
We are committed to equal opportunities for all. We will ensure access to the Science curriculum by providing learning opportunities for every child regardless of their ability level, gender, race and cultural background. The content of lessons and the resources available ensure that all pupils are valued equally. Provision is made for children with Special Educational Needs so that they can fully participate in the curriculum.

Health and Safety
Children are taught to use materials and equipment safely and in accordance with the school's Health and Safety policy and the County requirements. It is the responsibility of individual class teachers to check equipment before use and that all helpers (TAs, parents etc.) are aware of safety implications connected with any science activity they are undertaking.

Resources
Resources are stored in a central area. The school library is also well resourced for Science books.

Monitoring and Evaluation

Class teachers are responsible for monitoring and evaluating the lessons they deliver in their classes. The Headteacher and Science Co-ordinator are responsible for monitoring the effectiveness of science teaching and learning throughout the school. This includes monitoring to ensure;

- Teachers' planning is in line with Curriculum Framework
- Planning highlights specific scientific skills to be taught as well as the knowledge
- Children are given the opportunities to carry out investigations
- Children's books shows a variety of work, recorded in a range of ways
- Work is marked with reference to the learning objective
- Pupil achievement in Science is at least in line with National Average (end KS1 and EYFS)

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