



Whitstone Community Primary School

Science Policy

Whitstone C.P. School

Science Policy

This policy outlines the purpose, nature and management of the Science taught in Whitstone C.P. School.

Aims

At Whitstone C.P. School we aim to ensure that all pupils:

- 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.

Scientific activities in the Foundation Stage

Scientific aspects of the curriculum for the Foundation Stage are found under the heading 'Understanding the world' in the Early Years Foundation Stage (EYFS) Curriculum.

Requirements

There are seven areas of learning and development that must shape educational programmes in the Foundation Stage. All areas of learning and development are important and inter-connected. Three areas are particularly crucial for igniting children's curiosity and enthusiasm for learning, and for building their capacity to learn, form relationships and thrive.

Whitstone C.P. School will also support children in four specific areas, through which the three prime areas are strengthened and applied. Understanding the world is one of these specific areas:

Understanding the world involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment.

Aspects of Understanding the world and The Early Learning Goals

The Early Learning Goal states that by the end of the Foundation Stage children should be able to:

People and communities:

children talk about past and present events in their own lives and in the lives of family members. They know that other children don't always enjoy the same things, and are sensitive to this.

They know about similarities and differences between themselves and others, and among families, communities and traditions.

The world:

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.

Technology:

children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Foundation Stage Planning Learning and development at Whitstone C.P.School will be implemented through planned, purposeful play and through a mix of adult-led and child-initiated activity.

Adult-led activities for the scientific aspects of the planned curriculum are organised into different themes, which fit into Class One's themed curriculum for the term and the School's long term planning for Science.

Key Stage 1 & 2

Planning

In Key Stages one and two staff at Whitstone C.P. School follow the National Curriculum 2014.

The National Curriculum for Science has been divided into three programmes of study:

- Key Stage 1
- Lower Key Stage 2
- Upper Key Stage 2

The programmes of study for science are set out year by year for key stages 1 and 2. However, as the school's classes are made up of mixed aged groups, staff have followed the National Curriculum guidance when devising its rolling programme,

'Schools...are only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage if appropriate.'

When designing its rolling programme staff have ensured that children receive full curriculum coverage and that progression has been planned for (For further details on the objectives covered in each class, see the school's rolling programme.)

Teaching Strategies

Staff at Whitstone School will use a variety of teaching strategies to develop children's scientific skills.

These may include:

- Whole class teaching;
- Group/ paired discussions;
- Carrying out practical experiments;
- Independent research;
- Opportunities to explore the local environment;
- Use of secondary sources;
- Visits from specialists;
- Opportunities to visit science museums;
- Use of ICT in lessons.

Equal Opportunities & Inclusion

We recognise that in all classes children have a wide range of scientific abilities, and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses;
- grouping children by ability in the room, and setting different tasks for each ability group;
- providing resources of different complexity, matched to the ability of the child;
- using classroom assistants to support or extend the work of individual children or groups of children;
- giving children different ways to record their ideas.

At Whitstone C.P. School, children with special educational needs and disabilities are supported in participating fully. Teachers will work with the school's SENCO to ensure that their lessons are adapted appropriately. Where children's have IEPs, strategies that have been identified may also be used (see the school's policy on SEN for further details).

Assessment

Teachers use a variety of strategies to assess pupil progress, including: observations, marking and discussions. Children are also encouraged to assess their own learning and teachers will share learning objectives to support them in doing this.

All pupils will be assessed against the objectives found in the 2014 Curriculum.

Reporting Progress to Parents

We use annual reports and meetings to report on a child's progress to parents.

Currently, schools are also required to report on the children's attainment in Science at the end of Key Stage 1 & 2. Teacher assessments are used to do this and parents will be informed of their child's progress, in line with government guidelines.

At the end of Key Stage 2, the government also selects a sample of schools to take part in Science assessments to moderate teacher assessment results.

Transition

Teachers will share assessment data when pupils move to a new class. The school also ensures that information is shared with secondary staff, through attending transition meetings, as well as by sharing teacher assessments.

Resources

At Whitstone C.P. School teachers have access to a wide range of resources that can be used to support lessons. The majority of the school's resources are stored in the Elliot building and in the science cupboard (opposite the cloakroom). The school also has Science themed books in the library and teachers may use Pearson planning to support teaching.

ICT

The school website will be used to make parents aware of the school's programmes of study, in line with government guidance. Through the school website, staff also provide links to useful websites, to promote learning outside of the classroom. In addition, staff may use ICT to support learning in Science lessons, for example, by asking children to use computers to carry out their own research and to analyse data. Teachers may also use ICT to support them in making records for assessment purposes.

When doing this staff will follow the guidelines found in the school's e-safety policy on image use.

Health and Safety

Class teachers will carry out risk assessments where it is deemed appropriate and note any safety issues identified on their planning.

They will ensure that children are taught to use equipment safely and that they are given adequate supervision when carrying out activities such as experiments.

Trips may be used to support learning and when doing this teachers will carry out risk assessments and follow the school's policies relating to health and safety.

Cross-curricular Links

When teaching Science teachers may choose to link learning to class topics, to contextualise lessons and engage pupils. In Science lessons members of staff will also ensure that pupils will have opportunities to develop their skills from other areas of the curriculum.

For example, pupils may:

Use mathematics skills to take measurements;

utilise ICT to support them in making observations and analysing results.

Extra-curricular Activities

Teachers may organise school trips, such as a visit to Bristol Science Museum at the end of Key Stage 2, to support learning. Staff may also invite guest speakers to the school. When doing this, members of staff will follow the school's policies for 'health and safety' and 'child protection'.

Policy to be updated:

October 2019