

# Abbey Village primary School

## Science Policy



## **Abbey Village Primary School**

### **Science Policy**

This document should be read in conjunction with the National Curriculum (2014) and the Early Years Foundation Stage programmes of study, which sets out in detail what pupils in different classes/ year groups will be taught.

We aim to describe the purposes, nature and management of Science taught at Abbey Village Primary School.

This policy reflects the school values and philosophy in relation to the teaching and learning of Science. It sets out a framework within which teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment.

#### **Aims and Objectives:**

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st century. We, at Abbey Village Primary School believe that Science enables children to develop an interest and curiosity about the world in which they live, and fosters a respect for the environment. Through the framework of the National Curriculum, Science aims to:

- Encompass the acquisition of knowledge, concepts, skills and positive attitudes.
- Equip children to use themselves as starting points for learning about Science, and to build on their enthusiasm and natural sense of wonder about the world.
- Develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesizing, and increased use of precise measurement skills and ICT.
- Encourage and enable pupils to offer their own suggestions, and to be creative in their approach to Science, and to gain enjoyment from their scientific work.
- Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore Science in form which are relevant and meaningful to them.
- Teach scientific enquiry through contexts taken from the National Curriculum for Science.
- Encourage children to collect relevant evidence and to question outcome and to persevere.
- Encourage children to treat the living and non-living environment with respect and sensitivity.
- Stress the need for personal and group safety by the correct usage and storage of resources.
- To enable children to appreciate that we do not always know the answers and results when carrying out scientific enquiry.

#### **Curriculum and School Organisation**

In order to achieve these aims, the content of the Science curriculum is organised into a scheme of work with opportunities for integration with other subjects where appropriate, particularly at Foundation Stage and Key Stage 1, and for single subject study which is the norm at Key Stage 2. At Foundation Stage, Science learning is largely developed within the area of Knowledge and Understanding of the World.

At Key Stage 1 and 2, Science is based on the 2014 National Curriculum and delivered through lessons tailored by teachers to match each year groups National Curriculum objectives.

Within the curriculum, learning activities are sequenced to ensure progression and taught through the provision for pupils of real, first hand experiences and by direct teaching. Science is essentially a practical subject and staff members are aware that the aims and objectives of Science are met through practical activities. Educational visits and visitors are a useful adjunct to experiences within the classroom, providing input that is not available in school. Internet, computer programmes, County Library Project Loans, television programmes and film clips may all be used as appropriate to enhance curriculum delivery.

Staff may set homework to support topic work being undertaken in school; this is usually in the form of a project.

### **ICT Statutory requirements for Science:**

Key Stage 1

Scientific Enquiry- Investigative skills

2g: communicate what happened in a variety of ways, including using ICT for example in speech and writing, by drawings, tables, block graphs and pictograms.

Key Stage 2

Scientific Enquiry- Investigative skills

2f: make systematic observations and measurements, including the use of ICT for data logging.

2h: use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner.

Time Allocation

We consider it is not necessary for children to do Science at a fixed time, or for a given length of time. Sufficient time will be allocated to ensure that the National Curriculum programmes of study are covered with appropriate progression across the classes and key stages.

### **Planning**

The school recognises that planning is necessary to achieve clear, achievable goals. Planning ensures that work is matched to pupils' abilities and experiences. Planning ensures progression, continuity and subject coverage throughout the school. School recognises the potential and importance for the development of cross curricular skills of speaking & listening, literacy, numeracy and ICT through Science; these will be considered at the planning stage. Planning provides criteria for evaluation of teaching and learning and is linked to assessment procedures.

Curriculum planning is undertaken through medium-term planning which is based on termly or half-termly units and through weekly planning notes developed from detailed medium-term plans. The school uses The 2014 National Curriculum objectives as a basis for planning.

In the Foundation Stage Science concepts are taught through knowledge and understanding of the world. The activities and exploration opportunities are planned under the same theme titles covered in Key Stage 1. Each year group is expected to carry out fair- test investigations, giving the children ample opportunity for investigation and exploration. Hands on, practical Science is essential to enable children to be free to investigate, to experiment and to ask and answer questions.

### **Classroom organisation**

The class teacher is responsible for the Science teaching and groupings in each class. Within classes, children are taught through a combination of groupings as appropriate according to their age, ability and the learning task. In the foundation stage suitable opportunity is given for outdoor and indoor exploration of real-life hands-on Science.

### **Inclusion**

At our school we teach Science to all children, whatever their ability and individual needs. Through our Science teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities and those with special gifts and talents. We take all reasonable steps to achieve this. When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. We enable pupils to have access to the full range of activities involved in learning Science. Where children are to participate in activities outside the classroom, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

### **Equal Opportunities**

It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability, including gifted pupils, ethnicity and social circumstance, have access to the curriculum and make the greatest progress possible.

### **Assessment**

Assessment is used to inform future planning and to provide information about individuals throughout their time in this school. Assessment for learning is continuous throughout the planning, teaching and learning cycle. However children are assessed both formally and informally termly in KS1 and KS2 using a variety of methods:-

- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children
- Considering work/materials / investigations produced by children together with discussion about this with them.
- Children's progress is monitored and tracked regularly throughout their time at Abbey Village Primary School, to ensure children are achieving their full potential.

### **Record Keeping and Reporting**

Records of pupils' achievements are kept to:

- plan pupils' future learning
- report progress to parents
- maintain a written record of pupils' learning
- provide a curricular record for each pupil
- fulfil legal requirements

Information on a child's progress in Science will be communicated to parents in a report at the end of each academic year.

### **Subject Leader Role**

- This may include the following:
- plan work with teachers
- review and contribute to teacher planning
- prepare policy and scheme of work
- develop policy and scheme of work with staff
- prepare a subject development plan
- leading staff meetings
- plan and lead inset activities
- provide advice, skills

- in-class teaching support
- specifying and ordering resources in consultation with staff
- monitoring and maintaining condition and availability of resources
- monitoring teaching and learning in Science

**Health and Safety:**

In regard to Science work in school, reminders will be given to children about potential hazards and care of the equipment they are using. Any trips should have been planned with due regard to the school policy on taking children on outings. LEA guidance may need to be sought on trips involving farms etc. Further health and safety advice and information can be accessed through the CLEAPPs website as required.

**Resources**

Science resources are organised and stored in a central location by the Science Subject Leader. The school grounds and pond provide a rich resource that is easily accessible for all children. We are lucky to have a wide variety of natural environments around the school, such as:

- Roddlesworth woods and reservoir
- Withnell nature trail
- The West Pennine Moors
- Wheelton Plantation Forest

All are accessible and provide an even wider variety of environments.