

# Wootton Bassett Infants' School



## Science Policy

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## Introduction

Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national and global level.

## Aims and Objectives

Science at Wootton Bassett Infants' aims to enable children to:

- Be observant, curious and caring about our environment;
- Work individually and cooperatively, listening to, and valuing, the opinions of others;
- Can observe, question, hypothesise, plan, measure, construct a fair test, evaluate and communicate conclusions;
- Begin to know and understand the life processes and living things;
- Begin to know and understand materials and their properties;
- Begin to know and understand physical processes.
- Communicate their knowledge and understanding in a variety of ways
- Use the outdoors as a resource for scientific investigations and enquiry.

## Science Curriculum Planning

Science should be taught weekly and as appropriate to the age and needs of the children. This is sometimes as a discrete lesson but usually as an integrated element of the on-going topic work. All children will be provided with a wide variety of opportunities and contexts in which to develop their science skills as well as extending their capabilities in other areas of the curriculum. They will be using and developing language, using mathematical skills such as measuring and data handling, and may involve many other areas such as art, drama, music, technology and ICT. Opportunities for children to apply their learning outside the science lessons are encouraged and cross curricular links are made wherever possible. Purposeful speaking and listening in science is encouraged.

In reception science is studied as part of UW within cross curricular topic work throughout the year. Children develop their skills of observation, prediction, investigation and discussion, which will come in useful not only in science, but in subjects such as geography, history and computing. Working with the reception teachers, we have created a long-term plan which includes the strands of UW to cover in each term. The teachers are constantly adapting this plan to keep within the children's interests. These plans can also be found on our curriculum map as well as

reception medium term plan. The reception teachers have been adapting their continuous provision to ensure UW is readily available for child-initiated learning.

Children will experience using materials to build, explore plants and how they grow, look at how animals and humans look like and change. They will engage in water and sand play to aid their understanding of scientific aspects. Teachers will also make sure scientific vocabulary is displayed when engaging in a science activity.

In KS1 children are taught through 'Collins Connect' as the primary scheme. This works within our school because it shows progression through year 1 and 2. It allows ambitious and exploratory learning. To engage more scientific enquiry, teachers may use 'Hamilton Trust' for ideas of other investigations children can participate in. Teachers endeavour to link science learning within their topic for that term.

### Teaching and Learning Style

We use a variety of teaching and learning styles in our science lessons. Our principal aim is to develop children's knowledge, skills and understanding. Sometimes we do this through whole class teaching, while at other times we engage children in an enquiry based research activity. We ask children to ask as well as answer scientific questions.

We recognise that there are children of widely different scientific abilities in all classes and we provide suitable learning opportunities for all children matching the challenge of the task to the ability of the child. We achieve this in a variety of ways by:

- Setting common tasks which are open-ended and can have a variety of responses.
- Setting tasks of increasing difficulty (we do not expect all children to complete all tasks).
- Grouping children by ability and setting different tasks for each ability group.
- Providing different resources, matched to the ability of the child.
- Using TAs to support the work of individual children or groups of children.

### Assessment and Recording

We use formative assessment throughout the lesson to assess our children by talking to them and asking questions (open and closed). We look at their work and observe children carrying out practical tasks. At the end of each scientific strand, KS1 teachers will make a judgement using an assessment sheet which use a 'best fit' approach to judge where the children are at. We use the vocabulary of 'Working Towards', 'Expected' and 'Greater Depth'.

At the end of KS1, Year 2 teachers have to submit a teacher assessment. Even though there is no statutory guidance for greater depth in science, we feel that we do not want to limit what our children can learn and so have created what we want a greater depth child in science to look like. In EYFS, class teachers assess their children against Understanding the World early learning goal and record their attainment in the Foundation Stage Profile.

### **Resources and Equipment**

Within school resources and equipment are continuously being developed and extended. The resources for science are stored centrally in the new build. There are also a number of science topic books in the library to support research. All classrooms have science software installed and all laptops and classroom computers can access the internet for on-line resources.

### **Equal Opportunities in Science**

Scientific work of an appropriate level will be made available to each child, without prejudice, whatever the age, ability, sex or ethnic origin.

Teaching methods and styles take account of the diversity of pupils.

Our multicultural policy ensures that the principles and practice of diversity and race equality are integrated into teaching and learning.

### **Health and Safety**

Teachers are aware of risks involving:

- Handling glass
- Hot water and hot objects to be handled with care
- Knives and scissors handled with care
- Children with food allergies

For full details refer to the schools Health and Safety document.