



## **Wibsey Primary School**

### **Science Policy 2016**

#### **Rationale**

To ensure a complete and progressive coverage of the New National Curriculum for Science working with the guidelines of the recommendations for Key stage 1 and 2 and for Foundation.

From September 2014, a New National Curriculum was put in place. The staff at Wibsey Primary School have reviewed and adapted the Science curriculum in light of these changes.

1. Develop knowledge and understanding of the important skills, processes and ideas and relate them to every day experiences.
2. Enable the children to acquire and refine practical skills needed to investigate questions effectively and safely.
3. Develop the skills of predicting asking questions, making inferences, recording, concluding and evaluating.
4. Encourage children to think creatively and to enjoy trying to make sense of phenomena.
5. To practice the necessary literacy and numeracy skills to be able to record and analyse their work.
6. To provide opportunities for cross-curricular links whilst delivering the content of each unit of study.
7. To provide equipment to enable the effective delivery of science.

#### **Working scientifically**

The most significant change in the New National Curriculum is the emphasis on working scientifically. This means that every unit of work should be taught through the scientific skills where possible.

#### **Key stage 1**

During Years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions (Year 2 only).

### **Lower Key Stage 2**

During Years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions
- setting up simple practical enquiries, comparative and fair tests
- making accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

### **Upper Key Stage 2**

During Years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning enquiries, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models

- reporting findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions
- presenting findings in written form, displays and other presentations
- using test results to make predictions to set up further comparative and fair tests
- using simple models to describe scientific ideas
- identifying scientific evidence that has been used to support or refute ideas or arguments.

### **Inclusion**

Activities are to be planned to encourage active participation by all the children and to meet their diverse needs.

### **Differentiation**

At our school we teach science to all children, whatever their ability. Science forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Science teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. We use a range of strategies to support pupils.

- The use of appropriate vocabulary at varying levels of difficulty during lessons
- Modified text passages as expected in other curriculum areas
- Different levels of written or oral questions for pupils investigating photographic or other visual material
- Careful use of support for pupils with English as an additional language.

### **For our more able pupils we will expect:**

- Teachers to provide teaching and learning experiences that encourage pupils to think creatively, explore and develop ideas, and to try different experiences.
- Greater independence in working
- Provide real-life research and presentation opportunities, for example carrying out interviews with local people and using the results to inform design process.
- Provide opportunities for pupils to develop their skills in other areas, such as intrapersonal skills (for example, using initiative) and interpersonal skills (for example, leadership).

### **Equal Opportunities**

Through the teaching of science to have a commitment to:-

- Equal opportunities for all children.
- Understanding the importance of background, cultural values and beliefs.
- Equal emphasis is given to the roles of men and women in society.

## **Computing**

We use computing in science teaching where appropriate. Children use computing in science to enhance their skills in data handling and in presenting written work, and they research information using the Internet. Each teacher ensures it is used as a teaching tool where appropriate, and provides opportunities for children to also use it.

- Opportunities for use of I.C.T. within science include:-
- Research
- Recording data in graphs and spreadsheets.
- Presentation of information,
- Use of interactive programmes.
- Use of data loggers

## **Planning**

In Key Stage One and Key Stage Two teachers plan together using the new National Curriculum framework with reference to the year group's programme of study (statutory requirements) and the notes and guidance

Early Years Foundation Stage follow the Development Matters in EYFS guidance. All aspects of Science are covered with particular reference working scientifically. All teachers plan detailed and differentiated weekly plans. An overview of topics covered and tests used can be obtained from yearly curriculum maps. New weekly planning documents reflect key changes made to the curriculum as of 2014.

## **Assessment**

Assessment for Learning opportunities are to be taken through out each unit of work to inform planning. At the end of each unit of work the science record sheet for that topic and the record sheet for working scientifically should be marked to show the skills attained in that unit for each child

## **Resources and Equipment**

Resources are monitored, evaluated and updated as necessary to ensure appropriate provision. Educational visits, where appropriate, enhance the curriculum.