

# WELFORD SIBBERTOFT AND SULBY ENDOWED SCHOOL

## POLICY FOR SCIENCE

### Primary Science Statement

- A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.
- Science is a core National Curriculum subject.

### This Science Policy refers to,

- Our aims for Science;
- Equal opportunities;
- Time allocation;
- Teaching and learning in Science;
- Inclusion
- Assessment, recording and reporting;
- Resources;
- Monitoring and review;
- Health and Safety

### Aims for Science

The aims for Science, which help deliver the wider school aims, are:

- to provide appropriate and stimulating scientific experiences which encourage pupils to make sense of the world around them;
- to develop a positive attitude to scientific enquiry and an awareness of the influence of Science in everyday life;
- to deliver activities that meet the requirements of the national curriculum in a way that is appropriate to the needs and interests of all pupils and which challenge them to fulfil their potential;
- to develop children's scientific knowledge and understanding;
- to develop children's investigation skills;
- for pupils to apply their scientific knowledge and skills to solve problems in a wide variety of contexts;
- to develop children's explanatory and communicative skills;
- for pupils to be able to work both collaboratively and independently on scientific tasks;
- for pupils to develop a caring attitude to the environment and living things;
- for pupils to develop an understanding of safe ways of working and to take increasing responsibility for managing their own investigations safely;
- to use scientific contexts to develop and consolidate the basic cross curricular skills of English, Maths and Computing.

### Equal Opportunities

All pupils, irrespective of ability, gender or ethnic origin are entitled to an education that will provide the opportunity for them to develop, to the best of their abilities, a competence in all aspects of Science. Staff provide a variety of experiences / activities during a unit of study and during a lesson, employing teaching



methods and resources that allow all pupils to have equal access to Science and to experience success and enjoyment in their work.

### **Time Allocation**

In Key Stage 1 and 2 approximately one hour per week is spent on discrete Science teaching, with additional Science coverage where appropriate through whole school topics. This should equate to approximately 1 ½ hours of Science per week in Key Stage 1 and 2 hours in Key Stage 2 when balanced over the whole year.

### **Learning**

Pupils will be provided with a range of learning experiences. These will include first hand experience of:

- exploratory play to gain experience of a situation or article and to develop their own ideas;
- experimentation to try out ideas and find out what happens;
- investigation to test ideas or hypotheses in an increasingly systematic way;
- focused observation to develop the ability to notice detail and changes that take place over time;
- focused practical tasks to promote understanding of a concept or skill;
- sorting and classifying to group things by observable characteristics;
- discussion and debate of ideas and conclusions to consolidate understanding and develop the ability to explain clearly;
- gaining respect for evidence and appreciating the views of others;
- working collaboratively and independently;
- using secondary sources to widen experiences, enhance understanding and provide evidence; providing opportunities for individual and group research; providing examples and illustrations from wider contexts than those possible in the classroom and immediate environment; providing examples and illustrations requiring the use of specialised technology e.g. DVDs , CD ROMS and the Internet;
- presenting the results of their work in appropriate and varied ways, including verbal reports and discussions; drawings, diagrams, charts and graphs; written work in a variety of styles and for different audiences; artistic and dramatic presentations; using IT.

### **Teaching**

- Foundation stage 'Science' learning will have a strong emphasis on developing basic enquiry skills and high quality observations as set out in the early learning goals, developing knowledge and their understanding of the world around them.
- Investigation skills are developed through planned instruction of skills appropriate to the age and ability of pupils.
- Key vocabulary will be displayed pertinent to each topic and pupils will be encouraged to use the technical vocabulary in all levels of communication.
- There will be frequent opportunities for pupils to make choices and take decisions both collaboratively and independently.
- Enrichment opportunities are planned for both within the school day and in after school activities; for example Science days, partnered work across classes, Mad Science assembly and after school club.
- Teachers plan their Science using the National Curriculum programmes of study and the Early Learning Goals, and wherever possible links are made to the whole school curriculum theme being covered .covered.
- A wide range of resources are available to support planning.
- Teachers in key stage 1 and 2 track the coverage of National Curriculum objectives so that all objectives are covered within a Key Stage, and progression of skills is ensured by referring to the Attainment Criteria grids and APP documents. for their year groups, following a 2 year rolling



programme so that Key Stage 1, Lower Key Stage 2 and Upper Key Stage 2 objectives are covered over 2 years.

- Medium term planning highlights the NC objectives to be covered in a topic, and weekly planning includes the specific learning intentions and activities for that lesson.

### **Inclusion**

We teach Science to all pupils, whatever their ability. Science forms part of the school's curriculum policy to provide a broad and balanced education for all, and activities are planned to provide learning opportunities for the range of scientific abilities within a class. We achieve this in a variety of ways by:

- Planning open-ended tasks which can have a variety of responses;
- Planning tasks of increasing difficulty;
- Taking into account the targets set in Individual Education Plans and providing the necessary support for those children to access the activities;
- Having special awareness of those identified as more able, gifted and talented and planning opportunities for them to extend their thinking and experiences to deepen their understanding..

### **Assessment, Recording and Reporting**

- Informal assessments are made through observation and discussion in lessons.
- Work will be marked regularly against lesson objectives shared with pupils and in accordance with the school's marking policy. Comments will identify strengths and weaknesses and provide targets for future work.
- Where possible children will be encouraged to review their own progress.
- A sample of children from each year group will be assessed regularly against AWL end of year expectations to gain an understanding of the progress and ability of high, middle and low attainers in each year group. Termly investigations are carried out in each class, mapped against the long term curriculum map, and are moderated as a whole school. A portfolio of assessed work will be kept for reference and guidance.
- Progress against end of year expectations will be recorded using iTrack as a result of teacher assessment, at three assessment points throughout the year.
- Assessment in EYFS informs everyday Understanding the World planning and is based on on-going observational assessment of each child's achievements, interests and learning styles. Formative assessment may take the form of anecdotal observations, focused observations, baseline assessment, other focused assessments, annotated examples of work, photographs, video footage and information from parents. Most evidence is collected electronically using the Tapestry App on the Ipad but each child has an individual Early Years Foundation Stage (EYFS) Profile folder in which this evidence is printed and collated. The EYFS Profile summarises all of the formative assessment undertaken and makes statements about the child's achievements against the 'World' aspect of 'Understanding the World.' It summarises children's progress towards the early learning goals. It is completed at the end of each term by the class teacher. The teacher also undertakes local cluster group moderation.

### **Resources**

- Science resources are stored in the Resource Room and are clearly labelled in red drawers.
- Reference resources for staff can be found in the Science section on the shelves in the Resource Room.
- The resource area will be regularly checked.
- Staff should check availability of resources prior to the start of a topic and any resource shortages should be notified to the subject leader.
- The school grounds and locality, which include trees, grass areas, farm land and a pocket park containing a pond, are to be used throughout the year to aid the delivery of the Life Processes and Living Things section of the NC and Understanding the World section of the EYFS curriculum..



## **Monitoring and Review**

The Science subject leader:

- is responsible, with the head teacher, for monitoring the standards of children's work and the quality of teaching in Science, identifying any underperforming and high attaining groups, and devising ways to support them.
- is responsible for supporting colleagues in the teaching of Science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.
- has allocated time to carry out their role.
- is responsible for ordering and maintaining resources.
- is an appointed member of staff.

## **Health and Safety**

The school has a health and safety policy which is followed. Teachers are responsible for assessing the risk before all activities in order to determine where close supervision may be required, suitable group size, suitability for whole class participation, where personal protective clothing or levels of hygiene are required. Teachers will familiarise themselves with all the risks which might arise from the tools, equipment, materials and processes they plan for children to use and take appropriate action to minimise risk.

**Policy Reviewed: May 2017**

**Next Review Date: May 2019**

