



## POLICY

### Science Policy

#### INTRODUCTION

*Park Grove Primary Academy recognises that science should be exciting and encourage each child's natural curiosity about themselves and their environment. Science will be accessible to every child, making the world progressively more understandable throughout the primary years. All pupils will be taught the essential aspects of the knowledge, methods, processes and uses of science. They will be encouraged to understand how science can explain what is occurring, predict how things will behave, and analyse causes.*

#### AIMS

The aims of science at Park Grove are:

- To meet the National Curriculum requirements for science.
- To develop children's confidence and interest in science by encouraging curiosity, willingness to tolerate uncertainty, persistence, co-operation and an awareness of safety for themselves and others.
- To build a broad bank of scientific knowledge, to understand a wide range of concepts and apply this understanding in appropriate ways, particularly in answering scientific questions about the world.
- To develop skills of sorting, classifying, planning, predicting, questioning, inferring, concluding and evaluating through investigative activities with increasing independence.
- To promote cross curricular links by practising skills within real contexts:
  - Developing mathematical skills of counting, ordering numbers, measuring, drawing and interpreting graphs and charts.
  - Developing effective ways of thinking, finding out about and communicating scientific ideas and information, including ICT.
  - Developing language skills through talking about work and presenting ideas using writing of different kinds and using scientific vocabulary accurately.
  - Developing children as active citizens who understand the uses and implications of science, today and for the future.

#### OBJECTIVES

Pupils should:

1. Experience a variety of teaching styles to include:
  - Whole class teaching
  - Group work
  - Individual work
  - Paired work
  - ICT, maths, design and technology and art elements
2. Experience science lessons have no imposed formal structure but may contain the following:
  - Discussion: what they already know from experience, what they have learnt so far, what they will be finding out about next.
  - Teaching: directly to the whole class or through group or individual work.

- Practical tasks or investigative work: working in groups or individually, practising scientific skills, finding out answers, being encouraged to think scientifically, sorting and classifying, observing etc.
  - Recording: writing about what they have found out, drawing charts and tables and diagrams, using the computer and other media to record what they have done or found out about.
  - Communicating: using scientific vocabulary, sharing ideas, knowledge and what they have found out about with each other, the teacher, other classes and adults as appropriate.
3. Be provided with challenging work appropriate to their abilities.
4. Have access to a wide range of resources to include:
- Practical resources
  - Published materials
  - ICT including the internet

## **GENERAL CONTEXT**

### **Planning**

All year groups follow the Park Grove Primary curriculum, which allocates specific areas of science, thus ensuring continuity and progression throughout the school and thorough coverage of the National Curriculum. Regular pre and end of topic self and teacher assessments will be linked to areas taught and end of year assessment levels will be tracked as the children progress through the school.

### **Teaching and Learning**

- Science will be taught as an independent subject with cross-curricular links made as appropriate. Particular attention will be given to links with ICT, maths, design and technology and art.
- Children will be taught in both ability and mixed ability groups as appropriate. Differentiated work will be provided to ensure that all children reach their maximum potential.
- A variety of teaching methods will be followed; using whole class, group, paired and individual teaching as appropriate to support different learning styles.
- 2 hours of the timetable per week will be allocated to science in Key Stage 2 and at least 1 hour per week in Key Stage 1.
- Scientific enquiry skills will be taught throughout the biology, physics and chemistry units that children study.

### **Monitoring and Assessing**

Teacher assessment is used to inform planning. Prior to starting a new science unit, prior knowledge will be assessed. This will be re-visited at the end so that children are aware of progress made and their next steps.

The biology, physics and chemistry units (SC2-4) will be assessed at the end of each unit by the teacher indicating if the child has met the learning objectives for the unit. This information will be used at the end of the year to inform whether the child has achieved the expectation for their year group or not. At the end of each Key Stage (in Years 2 and 6) this is also assessed as 'met' or 'not met'.

Children will be continuously assessed for SC1 (practical work) when the teacher deems this appropriate in a particular unit. Children will be aware of what they need to be able to do for each school phase so that they know their next steps in SC1.

### **Special Educational Needs**

Access is created for all our children by the teachers devising imaginative and innovative learning programmes so that no student, whatever their level of difficulty or ability, is denied access to the curriculum. Where possible, technology is used to ensure the curricular access of pupils who would otherwise have difficulty accessing particular areas of work.

### **Equal Opportunities**

It is an important principle at Park Grove Primary School that pupils have the right to equal access to the curriculum whatever their gender, race or disability.

### **Health and Safety**

All members of staff follow the guidance given in Park Grove's Health and Safety Policy and are very aware of the need to keep their children safe. Although it is not always possible to predict all the problems which might occur in science activities, staff must accustom themselves to risk assessment, backed up with the information given in the A.S.E. booklet, 'Be Safe', and CLEAPPS documents. If further information is required, teachers, teaching assistants and other staff will consult the Science Subject Leader.

### **Monitoring and Evaluation**

Implementation of this policy will be monitored by the Science Subject Leader via:

- Book and planning scrutiny
- Pupil voice
- Lesson observations and learning walks

### **LINKED POLICIES**

Marking Policy

Assessment Policy

Homework Policy

**REVISED BY: M. Orr and V. Hearson**

**DATE: October 2019**

**NEXT REVIEW: October 2020**