



## Parkside Community Primary School

### SCIENCE POLICY

#### **Rationale**

Science is a body of knowledge built up through experiential testing of ideas. It is also methodology – a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school provides opportunities for children to develop their knowledge and understanding of the world in which they live both through practical experience and from other sources of information.

#### **Aims**

- Develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life – preparing them for life in an increasingly scientific and technological world.
- To build on pupils' curiosity and sense of awe of the natural world.
- Foster concern about, and actively care for, our environment.
- Help develop and extend our pupils' scientific concept of their world.
- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Develop understanding of the nature, processes and methods of Science through the different types of enquires that help our pupils answer scientific questions about the world around them.
- Equip pupils with the scientific knowledge - including vocabulary - required to understand the uses and implication of science today – and for the future.
- To develop pupils' use of information and communication technology (ICT) in their Science studies.

#### **Learning Outcomes**

#### **Attitudes**

- Encourage the development of positive attitudes to Science.
- Build on our pupils' natural curiosity and help them to develop a scientific approach to problems.

- Encourage open-mindedness, self-assessment, perseverance and responsibility.
- Build on our pupils' self-confidence to enable them to work independently.
- Develop our pupils' social skills to work collaboratively with others.
- Provide our pupils with an enjoyable experience of science so that they will develop a deep and lasting interest and may be motivated to study science further.

### **Skills**

- Give our children an understanding of scientific processes.
- To develop knowledge of the science contained with the programmes of study of the National Curriculum.
- To encourage pupils to relate their scientific studies to applications and effects within the real world.
- Help our children to acquire practical scientific skills.
- Develop the skills of scientific enquiry – questioning and making suggestions, observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific language/vocabulary and recording.
- Develop the use of computing in Science.
- Incorporate science activities with other areas of the curriculum.
- Develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world, including scientists from different cultures.
- Enable our pupils to become effective communicators of scientific ideas, facts and data.

### **Planning and Teaching**

In Foundation Stage, medium term planning is based on the Early Years Foundation Stage Curriculum – Understanding the World. The pupils will be supported in developing the knowledge, skills and understanding that help them make sense of the world. Their learning will be supported through offering opportunities for them to use a range of tools safely; encounter creatures, people, plants and objects in their natural environment and in real-life situations; undertake practical investigations and work with a range of materials.

In KS1 and KS2 planning for science involves all teachers to ensure that the school gives full coverage of the National Curriculum for Science. The school has adopted the Kent Primary

Science Scheme of Work (2014) - which is in line with the New Curriculum. Each unit within this scheme is developed and built on as pupils progress through the school and this is laid out in the Science Long Term Plan. Scientific knowledge, conceptual understanding and scientific enquiry are incorporated within each unit of work. Science is timetabled for at least two hours per week and is taught to the whole class with opportunities to carry out investigative work in small groups. Teachers produce a medium term plan and then plan in more detail on a weekly basis – annotating and adapting the Kent plans to meet the individual needs of their class.

All teaching staff are encouraged to develop their own knowledge and skills in the teaching of science and have the opportunity to do this through CPD including opportunities offered by the CPSP partnership.

### **Differentiation and Additional Educational Needs (AEN)**

The study of science will be planned to give pupils a suitable range of differentiated activities appropriate to their age and abilities. Tasks will be set, which challenge all pupils, including the more able. For pupils with AEN, the task will be adjusted or pupils may be given extra support. The grouping of pupils for practical activities will take account of their strengths and weaknesses and ensure that all take an active part in the task and gain in confidence. Pupils with specific learning difficulties or physical disabilities will be provided with a differentiated programme, resources and equipment to suit their needs. Teachers will refer to the pupils' statements and consult with the SENCo and Science Subject Leader if they require extra support for these pupils.

### **Breadth and Balance**

Pupils will undertake both structured activities and more open ended enquiries. These include activities using: observational skills, measuring instruments to read scales accurately, structured activities to develop understanding of concepts and open ended enquiries to allow pupils to apply their learning and develop thinking skills.

### **Enrichment Activities**

Wherever possible, the teaching and learning of Science is enhanced by educational visits – including the use of laboratories and grounds at Kings and Junior Kings – and visitors to the school. A Science Day helps to raise the profile of science in school and allows the pupils to explore a range of exciting mini projects.

### **Relevance**

Wherever possible, science work will be related to the real world and everyday examples will be used.

### **Cross-curricular Skills and Links**

Science pervades every aspect of our lives and we relate it to all areas of the curriculum. We will use cross-curricular links whenever we can. We will also ensure that pupils realise the positive contribution of both men and women to science and the contribution from those of other cultures. We will not only emphasise the positive effects of science on the world but also include problems, which some human activities can produce.

## **Continuity and Progression**

By careful planning, pupils' scientific skills and knowledge gained during Early Years and Key Stage 1 will be consolidated and developed during Key Stage 2.

Pupils in Early Years and Key Stage 1 will be introduced to science through focused observations and explorations of the world around them. These will be further developed through supportive investigations into more independent work at Key Stage 2.

The knowledge and content prescribed in the National Curriculum will be introduced throughout both key stages in a progressive and coherent way. How this is achieved, is indicated in our scheme of work for science which is linked as closely as possible to the Cornerstones topics being covered each term.

## **Equal Opportunities**

Curriculum planning will ensure that all pupils have an equal opportunity to take part in the full scheme of work and its associated practical activities regardless of their gender, background, culture, physical or cognitive development. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given. More able pupils will be given suitably challenging activities.

Gender and cultural differences will be reflected positively in the teaching materials used.

## **Health and Safety**

It is important that pupils are taught the rule of safety in science from a young age so that it becomes integral to their investigations. Material and equipment need to be treated with respect and care. Pupils are specifically taught to look for potential dangers and to plan ways to prevent accidents. As a school we have adopted the ASE's safety guidance – Be Safe!

## **Assessment Recording and Reporting**

Science assessment and record keeping is a continuous process which aids planning and teaching to ensure continuity and progression in the learning of all pupils. Before each unit the teachers will use an elicitation task to find out the pupils' prior learning and understanding of concepts to be covered. This is used to inform planning and is revisited at the end of a topic to assess the pupils' learning. Each lesson teachers use observation of pupils at work, questioning and marking to inform the following lesson's planning. Each term the teachers assess the learning of each pupil using the assessment grids in the Kent Scheme. Pupil are noted as Emerging, Expected or Exceeding within their year group. These grids are shared with the Science Subject Leader, Assessment Lead and Head of School.

## **Management and Monitoring**

Termly meetings will be held to review the needs of science. Personal development of staff and training needs will be discussed. The science leader will organise and lead these meetings.

Standards in Science across the school are monitored through lesson observations, work sampling and evaluation of planning and moderation.

### **Subject Leader's Role**

The subject leader will:

- Provide professional leadership and management for Science and will ensure that it is managed and organised so that it meets the aims and objectives of the school.
- Monitor teaching and learning
- Manage the resources for science and will maintain the stock to meet the needs of the curriculum.

Policy adopted by Governing Body on \_\_\_\_\_ 9<sup>th</sup> March 2021\_\_\_\_\_

To be reviewed on \_\_\_\_\_ 9<sup>th</sup> March 2024\_\_\_\_\_

Signed by Headteacher \_\_\_\_\_

Signed by Chair of Governors \_\_\_\_\_