



# **Rosehill Junior School**

## *Science Policy*

*September 2022*



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## **1. Introduction**

### **Statement of Intent**

Science stimulates and excites pupils' curiosity. We encourage this inquisitiveness and develop pupils' interest and enjoyment of science by building on their interest with activities that inspire our pupils to experiment and investigate the world around them. We excite their enquiring minds by helping them to raise and pose their own questions such as "Why.....?", "How...?" and "What happens if...?" We ensure that the working scientifically skills are built-on and developed throughout the school so that pupils can apply their science knowledge when using equipment, conducting experiments, building arguments and explaining concepts confidently. Across the school, pupils learn about a wide range of living things, materials and physical phenomena. They make links between ideas and, with a broadening scientific vocabulary, explain things using simple models and theories.

### **Statement of Implementation**

We will use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. Sometimes, we will do this through whole-class teaching, while at other times, we will engage the children in an enquiry-based research activity. We will encourage the children to ask, as well as answer, scientific questions. They will have the opportunity to use a variety of data, such as statistics, graphs, pictures and photographs. ICT will be used in science lessons because it enhances learning. Pupils will take part in role-play and discussions, and they will present reports to the rest of the class. They will engage in a wide variety of problem-solving activities. Wherever possible, we will involve the pupils in real scientific activities, e.g. investigating a local environmental problem, or carrying out a practical experiment, discussing and analysing the results.

We recognise that in all classes, children have a wide range of scientific abilities, and we will ensure that we provide suitable learning opportunities for all children by matching the challenge of the



task to the ability of the child. We will achieve this in a variety of ways:

- Grouping children in mixed ability groups to share skills setting 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 in the room, and setting different tasks for each ability group
- Providing resources of different complexity, matched to the ability of the child
- Using classroom assistants to support the work of individual children or groups of children.

## **2. Teaching and Learning**

Our teaching in Science should:

- Stimulate enjoyment and pleasure
- Help children acquire key subject knowledge
- Develop a child's self-confidence and independence • Provide a feeling of achievement and satisfaction
- Promote spiritual, moral, social and cultural development
- Promote key skills of communication, application of number, ICT, improving own learning and performance, problem-solving
- Offer opportunities for problem-solving in creative work
- Help our children to acquire practical scientific skills.
- Make links between Science and other subjects such as Mathematics and ICT.
- Offer skilful open and closed questioning and accurate teacher explanations.
- Develop the use of scientific vocabulary, language, recording and techniques.
- Develop the skills of investigation – including observing, measuring, predicting, hypothesising, experimenting, interpreting, explaining and evaluating.

Pupils will have the opportunity to work individually, in pairs and in groups. 'Pupil talk' is a central feature of our teaching to ensure that we encourage 'enquiring minds' and shared 'creativity'.

Science books will be used to record observations and to develop concepts. Examples of how pupils can be encouraged to ask 'why' in science lessons. Pupils will be encouraged to think about 'Big Questions' each lesson and provide their own answers to these. Pupils will have the opportunity to



engage in 'hands – on' practical elements to each Science lesson and use a wide variety of resources including ICT for enquiry work, such as ipads, cameras and laptops.

### **3. Curriculum planning**

The science curriculum at Rosehill Junior School covers the National Curriculum Programmes of Study in science., as stipulated in the science National Curriculum 2014 document. Learning is planned by the class teachers to ensure units in their year group are covered at the most appropriate point of the year and make links to other curriculum areas wherever possible.. Teachers use the medium-term plans to deliver the learning opportunities as individual lessons ensuring they cover the skills and knowledge outlined in the National Curriculum.

On average, teachers will teach a minimum of an hour of Science each week. Some teachers may choose to block their Science lessons and this is acceptable practice if the whole amount of teaching time is the same as weekly lessons for the term.

### **4. Social, Moral and Culture**

Science teaching will offer children many opportunities to examine some of the fundamental questions in life, e.g. the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children will develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children will have the opportunity to discuss, for example, the effects of taking drugs, and the moral questions involved in this issue. Pupils will be given the chance to reflect on the way people care for the planet, and how science can contribute to the way in which we manage the Earth's resources.

### **5. Assessment**

Formative assessment is used to identify a child's progress in each aspect of Science. It involves determining what each child has learned and what, therefore, should be the next stage of learning. Formative assessment is mostly carried out during the course of day to day teaching and through marking and feedback to pupils. There is no statutory assessment for Science at the end of Key Stage Two. At the end of each unit taught, objectives that have been covered are highlighted on the subject progression map. On the progression map, names are recorded of pupils not yet achieving the objects and any pupils having exceeded the objectives. The subject leader uses this information, alongside scrutiny of work and pupil interviews to complete feedback and action to share with year group teams. This review allows year groups to adapt future planning.



## 6. Subject leader

Monitoring of the standards of children's work and of the quality of teaching in science is the responsibility of the subject leader. The work of the science subject leader also involves supporting colleagues in the teaching of science, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.

The science lead, Mr MacDonald, is responsible for the overall monitoring of the quality of science provision.

We monitor science in the curriculum through subject reviews and self-evaluation in order to provide an accurate perspective on how it is being delivered and how it can be further improved.

Science is monitored and evaluated through:

- Lesson observations
- Monitoring of lesson planning
- Monitoring of equipment
- Pupils Assessment data
- Feedback from staff
- Pupil voice questionnaires
- Pupil records of participation, focusing on different groups