

RIVERVIEW INFANT SCHOOL



Author	Shona Hathway
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**Riverview Infant School
Science Policy**

Vision

‘Growing together for the future’

Ethos & Common purpose

‘All children will reach their academic and personal potential irrespective of gender, race, disability or background’

Rationale for Science

Science teaches an understanding of natural phenomena. It aims to stimulate a child’s curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global levels. The principal focus of science teaching in key stage 1 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information.

Aims

The national curriculum for Science aims to ensure that all pupils by the end of Key Stage 1, know, can apply and understand matters, skills and processes specified in the programmes of study.

Key Stage 1

Pupils should be taught about:

- Asking relevant questions and using different types of scientific enquiries to answer them.
- Setting up practical enquiries, comparative and fair tests.
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, a range of equipment, including thermometers and data loggers.
- Gathering, recording, classifying and presenting data in a variety of ways to help in the answering of questions.
- Recording findings using scientific language, drawings, labelled diagrams, keys, 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 conclusions, make predictions for new values, suggest improvements and raise further questions.
- Identify differences, similarities or changes related to scientific ideas and process.
- Using scientific evidence to answer questions or to support their findings.

Teaching and Learning

Science is taught as both a standalone subject as well as having links within the school's own Creative Curriculum. The school uses a variety of teaching and learning styles in science lessons. We do this through a mixture of whole-class teaching and individual or group activities. Within lessons, we give children the opportunity to work both on their own and into collaborate with others, listening to other children's ideas and treating these with respect.

It is important that the teacher identifies the most appropriate teaching strategy to suit the purpose of the particular learning situation and should use their flair, enthusiasm and professional judgement to identify the most sensible, enjoyable and safe methods for the work being conducted. There are a variety of ways in which the teaching may be effective and our school aims to encourage learning through investigation, with an emphasis on first-hand experience. Science lessons have no imposed formal structure but should typically contain some of the following elements: Discussion: what they already know from experience, what they have learnt so far, what they will be finding out next. Where necessary, mind mapping and question boards are appropriate methods for recording these discussions if desired.

Teaching: directly to the whole class or through group or individual work. Focused teaching will be applied where possible, all adults in the room utilised so no minute of learning is wasted.

Practical tasks or investigative work: working within groups or individually, practising scientific skills, finding out answers, being encouraged to think scientifically. Where groups are required, the teacher should consider which type of grouping will best suit the needs of the children.

Recording: writing about what they have found out, drawing charts, tables, and diagrams, using the computer and other media to record what they have done or found out about.

Communicating: sharing ideas, predictions, knowledge, and what they have found out with each other, the teacher, other classes and adults as appropriate.

Resources provided for lessons should include ICT, photographs, books, a vast array of scientific equipment including consumables. The school holds a central bank of teachers' resource books, consumable and frequently used resources including hand lenses, magnets, thermometers and measuring equipment. Children are encouraged to choose from a range of equipment and are trained in the safe and considerate use of animals, plants and consumable materials. Expensive and less frequently used items are also kept within the central cupboards.

Assessment for Learning

Teacher assessment takes place throughout each topic. At the end of each unit, assessment against specific criteria are completed within Sonar. The children's performance and achievement is measured as Below, Just At, Securely At, Above or significantly above. This assessment is recorded three times a year but formative assessment is on-going. (See Assessment Policy).

Assessment is carried out using:

- Observations of pupils as they work
- Discussion as they work
- Oral questioning to encourage discussion

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- Self-evaluation of written work
- Title pages highlighted

Differentiation

In all classes there are children of differing abilities and age. We recognise this fact and provide suitable learning opportunities for all children (including those who may be academically more able (AMA) or those who have additional needs (AEN) by matching the challenge of the task to the ability of the child. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability. All adults in the room will be used to ensure children are learning from their starting points.

Monitoring

The science subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in Science. The subject leader 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. Monitoring opportunities for the science subject leader are provided by:

- 1) Work Scrutiny
- 2) Scrutiny of planning
- 3) Analysis of assessments
- 4) Moderation of work
- 5) Lesson observations
- 6) Looking at displays/photographs etc.
- 7) Discussions with staff
- 8) Any other means deemed appropriate by the subject leader.