# SCIENCE POLICY

| Document Status | |
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| Approval Body | SLT |

**This policy and procedure is subject to The Equality Act 2010 which recognises the following categories of individual as Protected Characteristics: Age, Gender Reassignment, Marriage and Civil Partnership, Pregnancy and Maternity, Race, Religion and Belief, Sex (gender), Sexual orientation and Disability.**

**Our Principles for Science**

- The whole school community is enthusiastically engaged in the learning of Science.
- Investigative learning is child led, practical and exciting.
- Science is fun, leaving children wanting more.
- Learning is purposeful and rooted in real life.
- Children have the vocabulary to confidently discuss Science.
- A well planned Science curriculum encompasses different learning styles.
- Science inspires and develops curiosity about the world.
- Teachers are knowledgeable and confident in teaching Science.
- Science learned at Greenleas will be the foundation for Science in Middle and Upper School.

All children have regular access to Science, appropriate to their age and stage of development. Emphasis is given to Science as a 'core' subject with learning opportunities which follow and build upon the National Curriculum.

**AIMS**

Programmes of work are planned to enable children to develop concepts through a broad range of experiences. Children are taught in ways appropriate to their abilities and in contexts suitable for their age. Science is taught discretely, as well as contributing towards other areas of the curriculum and is embedded within the school's creative curriculum planning. Science teaching is made relevant by building on children's own experiences and using contexts from their local environment and the wider world.

Subject Leaders ensure a broad and balanced curriculum for all children and, whenever possible, opportunities will be provided to develop skills and gain an understanding of scientific concepts through first-hand experience. Teachers use a mix of exploring, research, identifying and classifying, observing over time, pattern seeking and fair testing.

Particular attention is given to planning the Science curriculum to make it equally relevant to all children, regardless of race, creed, gender or ability.

**Intended outcomes**

- In the Early Years Foundation Stage, Science is covered within 'knowledge and understanding of the world'.
- At Key Stage 1, the foundations of recording are laid by presenting information through speech and writing and in a variety of ways, including drawings, diagrams, tables and charts.
- At Key Stage 2, children will build on previous skills by beginning to use standard units of measurement and include graphs and tables to record, present and interpret information.

Children will be given opportunities at KS1 and KS2 to:

- Develop their understanding through systematic scientific investigation and enquiry using both first hand experiences and secondary sources as appropriate.
- Use Computing as appropriate.
- Relate their work in Science to everyday life.
- Consider simple scientific ideas and evidence for them and at KS2, also to collect evidence to test scientific ideas in a variety of ways.
- Communicate scientific ideas and observations using specific and appropriate scientific vocabulary. Flow charts demonstrating these processes are displayed in each KS1 and KS2 classroom (see Appendix).
- Consider health and safety in the context of their Science work and take action to control risks.

**TEACHING AND LEARNING**

**Planning**

Long term plans are developed to ensure coverage of the National Curriculum Science Curriculum. Medium/short term planning is carried out by teachers in year groups within each Key Stage and takes account of differentiation, progression and challenge to meet the needs of all children. Full coverage of the programmes of study is planned in an annual cycle. Coverage is ensured using the National Curriculum (Science Curriculum learning objectives) and Key Skills document. This is supplemented by using published schemes of work, such as Inspiring Science and Science Questions. Various Computing applications are also included.

The amount of time devoted to Science is approximately 1.5 hours per week in each Key Stage. Additional time is planned throughout the year during such times as Science Week and Forest School.

The Subject Leaders are responsible for overseeing long and medium term planning and have an overview of coverage in each year group. Staff are updated on developments by the Subject Leaders who attend INSET courses as appropriate. The Subject Leaders are available to offer advice to staff on suitable equipment and published materials at appropriate levels for their classes and to select and order new equipment as appropriate. New materials and resources are introduced to staff and their use demonstrated. Whole school INSET is used when appropriate and relevant and at least once per academic year.

Health and Safety – All staff are conversant with the Health and Safety Policy and relevant regulations and plan accordingly. Science activities that carry a risk are risk-assessed by the individual teacher. These assessments are made by teachers and are carried out during lesson planning in order to ensure the smooth running of lessons where an element of risk might be involved.

**Resources**
The School is well equipped at both sites. It continues to develop appropriate resources for Science teaching, including the building up and renewing of collections of materials and objects of scientific interest (e.g. stones, shells, wood etc.). Consumable resources are funded from year group budgets.

Science books have been ordered to build a stock for each related topic. At Derwent Road, practical equipment is stored in the central Science unit (KS2 corridor) or the Science cupboard. At Kestrel Way, practical equipment is stored in the Science cupboard. All equipment should be returned to the correct place, clean and tidy and checked in and out. The school sites are constantly being developed as an educational resource. At Derwent Road the main areas include a woodland walk, a large pond, allotment, central courtyard and nursery garden. Suitable equipment and resources facilitate good usage of the site. At Kestrel Way similar areas are being developed.

Educational visits include opportunities to study the local environment, both urban and rural. Visits are directly linked to on-going work in the classroom.

**Marking**
The marking of children's work is in line with the school marking policy. Learning questions and Steps to Success are shared and reviewed during lessons.

**ASSESSMENT**
Assessment is used to help inform future planning, to inform children of their progress and next steps, to inform parents, other teachers and governors, to motivate children and to maintain records. Assessment is completed through observations of children at work, questioning, discussions or oral presentations and children's written, graphical or pictorial work.

**REPORTING**
The school reports at parents' consultations during the autumn and spring terms, and also in the summer term through a written report. SATs results are available to parents at the end of Key Stage 1 and are used to inform assessment. The outcomes at the end of Year 4 are communicated to the Local Authority and shared with the children's next school.

**MONITORING AND EVALUATION**
Greenleas Science Policy reflects current practice. This policy is monitored by the Headteacher and Subject Leaders and is reviewed by the Governors, Headteacher, Subject Leaders and staff at formal meetings. New members of staff are introduced to the policy by one of the Subject Leaders.

We will judge the success of our Science teaching by:
- The motivation and interest displayed by our children.
- The development, over a period of time, of children's understanding of scientific concepts and process.
- Children's ability to apply their understanding in a variety of new situations.

**ADDITIONAL NEEDS**

- The SENDCO, Subject Leaders and Phase Leaders provide advice for teachers on supporting individuals with Special Educational Needs, including More Able and Talented children
- Children's individual needs are addressed through in-depth planning and the provision of resources which support learning. Targets identified in children's Educational Health Care Plans and Provision Maps are included in teachers' planning

**APPENDIX**