# Grafton Primary School
# Science Policy 2017-2021
# Whole school teaching and learning policy, including EYFS

**The Importance of Science**

This policy outlines the aims and strategies for the delivery of Science at Grafton Primary School and has been developed to enable all children and staff to maximise their learning opportunities.

In an increasingly technological age, we believe that it is essential that children acquire the knowledge, skills and attitudes that they will need to prepare them for life in the 21st century. The main aspects of science to be studied will be determined by the programmes of study of the National Curriculum 2014. Through Science, at Grafton Primary School, children will foster a respect for the natural world and all its phenomena.

**Aims and Objectives**

Using the programmes of study from the National Curriculum it is our aim to:

- Equip children to use themselves as starting points for learning about science, and to build on their natural enthusiasm and sense of wonder about the world.
- Develop through practical work the skills of observation, prediction and interpretation, communication, questioning and hypothesizing.
- Encourage and enable pupils to offer their own suggestions, and be creative in their approach to science, and to gain enjoyment from their scientific work.
- Enable children to develop their skills of cooperation through working with others.
- Encourage children to treat the living and non-living environment with respect and sensitivity.

**Curriculum Provision**

At Grafton Primary School we have embraced the new national curriculum which is being taught throughout the school. The content of the science curriculum covers the areas set out in the National Curriculum as follows:

| Year Group | Term | | | | | |
|---|---|---|---|---|---|---|
| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| 1 | Seasonal changes | | | | | |
| | Animals, including humans | | Plants | | Everyday materials | |
| 2 | Plants | | | | | |
| | Everyday materials | | Living things and their habitats | | Animals including humans | |
| 3 | Forces and Magnets | Light | Rocks | Animals including humans | Plants | |
| 4 | Living things and their habitats | Sound | Electricity | States of matter | Animals including humans | **Living things and their habitats** |
| 5 | Earth and space | Forces | Properties and changes of materials | | Animals including humans | **Living things and their habitats** |
| 6 | Living things and their habitats | Animals including humans | Light | Electricity | Evolution and inheritance | |

Running through all topics are the core principles of working scientifically, as outlined below.

**Working Scientifically**
Working scientifically specifies the understanding of the nature, processes and method of science at Grafton Primary School. Skills are embedded into the curriculum through the following lines of enquiry:

- Observing over time.
- Exploration.
- Pattern seeking.
- Identifying, classifying and grouping.
- Comparative and fair testing.
- Researching using secondary sources.

**Planning and Organisation**
A weekly science lesson/activity is planned for all classes. For years 1-6 this is recorded either on the weekly foundation planner, in a separate science folder or using the Collins Connect SNAP Science resource. In addition to planned science sessions, teachers also incorporate science into other aspects of teaching where relevant. The use of scientific vocabulary is encourages and key words are displayed in classrooms.

**The Role of the Subject Leader**
The Subject Leader should be responsible for improving the standards of teaching and learning in Science through:

- Monitoring and evaluating pupil progress.
- The quality of the Learning Environment.
- Taking the lead in policy development.
- Auditing and supporting colleagues in their CPD.
- Purchasing and organising resources.
- Keeping up to date with changes in the subject.

**Teacher Knowledge**
The teacher must have good knowledge of the concepts, skills and facts appropriate to the differing levels of the national curriculum. Teachers must:

- Plan an enjoyable, purposeful and integrated programme.
- Present concepts in a logical order.
- Prepare carefully structured lessons.
- Provide balance, consolidation and enrichment.
- Evaluate children's learning.

**Assessment**
Formative assessment and AFL is ongoing and is an integral part of the planning, teaching and learning. Regular feedback to children about their progress is given orally, and their next steps are communicated where appropriate. Formal periodic assessments are carried out in line with the school assessment timetable.

**EYFS:** Assessments are based on observations, work samples and photographs around the six areas of learning in the foundation stage. They inform future planning for individual children.

**KS1 / KS2:** Assessments are carried out at the end of each topic. Using the combination of teacher assessment and short written assessment teachers record the attainment of the class, making note of those who are still working towards their objectives and those who are working at a greater depth.

Every year, an annotated end of year sample work for science is include in the child's profile book. This is given a teacher assessment level so annual progress can be monitored.

**Pupils with Special Educational Needs**
At Grafton, we aim to meet the needs of all children by differentiation in our science planning and teaching. Children's needs are met by the class teacher selecting engaging, exciting activities that allow them to explore scientific concepts at an appropriate level of challenge. Children have extensive, detailed plans that support their learning in school; these are referred to when planning science activities.

**More Able and Talented (MAT)**
Through the different strands of working scientifically, teachers incorporate challenge for more able and talented learners. These children are identified and monitored by the school's MAT leader throughout their time at school, and their class teachers ensure that challenge is embedded in their learning. In addition to classroom provision, pupils identified as MAT may be selected for additional out of class enrichment programmes.

**Pupils for whom English is an Additional Language**
When teaching science, teachers will consider children's needs and experiences. All children need to be engaged through an interactive and visual approach that is inclusive and exciting. Work planned is differentiated and structured appropriately to meet the specific needs of children with EAL to allow them to work independently.

**Resources**
Science equipment and resources are catalogued and ordered by topic, and can be found in cupboards on each floor of the school. The equipment is in clearly labelled boxes and inventories are attached to each cupboard. All equipment must be used sensibly and returned to the appropriate cupboard when a lesson is completed. Relevant books for topics are available in classroom book corners and the school library.

**Equal Opportunities**
Grafton Primary School has universal ambitions for every child, whatever their background or circumstances. Children learn and thrive when they are healthy, safe and engaged. Our curriculum includes a wide range of texts and other resources which represent the diversity and backgrounds of all our children.

*Revised Summer Term 2018*