



GRANGE INFANT SCHOOL **SCIENCE POLICY**

Rationale

Science teaches children about phenomena and the world around them. Science is a medium through which children develop their ability to think, hypothesise, evaluate, explain and question the world around them and the impact of science on it.

Purpose

The purpose of this policy is to describe our practice in Science and the principles upon which this is based.

Aims

Intent

At Grange Infants our science learning is linked to our overall topics and often has links to other curriculum areas. This helps children relate science to their everyday life.

We use the learning journeys from HIAS to guide our science planning. These learning journeys help us to teach children the substantive knowledge they need to begin to explore scientific ideas and the disciplinary skills to solve problems. We will foster curiosity by posing problems and creating scenarios that will enable children to see and experience different things and sometimes don't match with what they expect. As adults we will be curious and sometimes act surprised! Children will be able to wonder why things happen and will be given the opportunity to use their knowledge to solve the questions posed.

Children will be exposed to scientific vocabulary and encouraged to use this when explaining their investigations.

As it is introduced to the children, vocabulary will be displayed on working walls and in big books.

Implementation

In the Early years they are led by the new curriculum that has end of EYFS milestones. These are used to plan experiences for child initiated 'busy bee' time and group learning. These activities are recorded both on tapestry that parents have access to, and in the big floor books. These have explanations of what the children take part in and experience, pictures of the children taking part, comments the children make any other comments relevant to the tasks.

The end of curriculum milestone at Grange Infants are;

- Explore the natural world around them, making observations and drawing pictures of animals and plants
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter
- Learn about the environment and different habitats during a trip to Testwood Lakes.

We use the learning journeys with embedded key skills as developed by HIAS to develop scientific thinking. Science is taught as weekly lessons. We are also continuing to develop our learning journey books (Big floor books) to help children to recap and revise learning already taught, use and apply key skills and showcase

good examples of learning. These will also include key vocabulary to help develop children's ability to reason and explain.

The skills required to be good scientific thinkers will be taught through the learning journeys and will be explicit in the planning and teaching. Children will be explicitly taught skills where necessary and helped to plan and carry out investigations to use and apply that knowledge. Modelling and support will be more evident in Year 1 while Year 2 will begin to plan and carry out their own investigations.

KS1 learning is done in pre prepared booklets that allow children to record important key learning and show evidence of their investigations. These allow for differentiation and support where necessary. There is also opportunity for children to prove greater depth learning if they are able.

Impact

Children will understand and be able to explain what science is appropriate to their age. The science curriculum is planned for good coverage and to enable progression in knowledge and skills. Children will have the substantive knowledge to be able to investigate key problems. They will be able to retain key knowledge and vocabulary and use it to explain what they have found out through investigation. Children will be able to look back on past units in learning journey books and recall their learning.

Assessment for each unit will show which children needed support, who are on track to reach ARE and who is working at greater depth. This is also tracked as a class with the big book to show successes.

Pupil conferencing demonstrates what children know and understand in science throughout their time at Grange Infants.

Roles and Responsibilities

The Science leader is responsible for providing an overview of the subject across the school to inform staff planning and to offer advice in the ways in which the curriculum can be delivered in an effective and engaging way. They have an up-to-date knowledge of the subject requirements, updated every year by attending science network meetings and conferences. They are responsible for ensuring that an overview of the subject is available on the school website. The Science leader also has a sound knowledge of the resources, which are available within school, and ensures that resources are replenished and updated as necessary.

The Science leader is responsible for the planning and implementation of any subject specific events, which are run in the school. Individual teachers are responsible for the day-to-day planning, delivery and assessment of the Science curriculum. The curriculum governor is responsible for ensuring there is a good professional dialogue with the Science leader throughout the school year.

Provision

Science is taught weekly and in mixed ability classes. We are using the learning journeys as devised by HIAS to plan science teaching and learning, and the assessment units to check learning. The curriculum map details which areas are taught in each term and the substantive knowledge and disciplinary skills taught are tracked. The long-term planning ensures that all areas are covered and there is a balance over KS1.

A range of teaching styles are employed to engage, excite, stimulate and promote a desire to develop scientific thinking. Wherever possible, scientific investigations will be set within a real-life context.

Resources are audited annually and checked with each year group as appropriate and needed.

SEND

At Grange Infants we are committed to equality and inclusion regardless of ability, children with specific needs will be identified and provided for according to their needs; through support, scaffolding and differentiation. In accordance with the Special Educational Needs and Disabilities Policy, children with special educational needs or disabilities are included in all lessons. Class Teachers are expected to ensure that appropriate support or adjustments are in place where needed, in accordance with support plans or Educational Health and Care plans. This could include the use of visual prompts or PECS where appropriate, breaking down tasks into smaller steps, the use of alternative recording methods e.g., adult scribed or additional adult support. Children with special educational needs or disabilities must be given every chance to demonstrate their knowledge in order to reach their full potential in Science.

Health & Safety

The health and safety policy is adhered to in all lessons, but where there are specific issues it is highlighted within the planning and additional guidance is given. The Safety in science documents provided by HIAS are used and referenced in planning. A simple risk assessment will be carried out for any practical activities any perceived hazards/risks will be reported to the School's Responsible Manager, Miss Myers, who will determine the appropriateness of such activity. Science health and safety audit is completed annually.

Assessment, Recording and Reporting

All lessons have clear learning objectives, which are shared and reviewed with the children effectively. A variety of strategies, including questioning, discussion, marking, feedback and summative assessment documents are used to assess progress. The information is used to identify what is taught next. The subject of Science will be an on-going assessment of the children's skills, knowledge and understanding. Teacher assessment is used for each unit and to record final levels at the end of Key stage One. Progress and achievement in science is reported to parents in annual reports and at parent evenings.

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