



## **Science Policy Update – Academic Year 2021 - 2022**

### **Subject Leader – Jane Meacham**

#### **Purpose**

This policy is a statement of the aims, principles, strategies and procedures for the teaching of Science within Stepping Stones Short Stay School.

The document is intended for:

- All staff with teaching responsibilities
- Senior Management
- School Governors
- Parents
- Inspection teams

#### **Introduction**

Science is taught to all of our full-time pupils at Stepping Stones. A high quality science education 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 level. The school's policy for science is based on the 2014 Curriculum for Key Stages 1 and 2.

#### **Aim(s):**

The aims of science at Stepping Stones are:

- To encourage pupils to ask and answer scientific questions.
- To plan and carry out scientific investigations, using equipment, including computers, correctly.
- To provide opportunities to experience scientific concepts first hand using practical work.
- To develop their understanding of and interests in the world around them, including a respect for the local environment.
- To develop a safe and structured approach towards practical work.
- Predict an outcome, evaluate evidence and present their conclusions clearly and accurately.

## **Teaching and Learning Style**

We use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. We encourage the children to develop these areas through practical approaches, where children are able to carry out investigations and support in discussing through the key concepts throughout this subject. These activities are planned through either a whole class approach or in smaller groups. We recognise that in all classes children have a wide range of scientific abilities, and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

## **Planning**

We understand we have learners with varied needs and of differing scientific abilities. With this in mind we ensure that we provide suitable learning opportunities for all pupils by matching the challenge of the task to the ability of the child. As we have mixed-age classes, we do our medium-term planning on a two-year rolling programme. In this way we ensure complete coverage of the National Curriculum without repeating topics. We plan the topics in Science so that they build upon prior learning. We ensure that there are opportunities for pupils of all abilities to develop their skills and knowledge in each unit. In some cases we combine the scientific study with work in other subject areas. At other times the children study science as a discrete subject.

## **Working Scientifically**

'Working scientifically' encompasses the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. There are 5 areas of scientific enquiry:

- observation over time
- research
- pattern seeking
- identifying, classifying and grouping
- fair and comparative testing

Where possible, lessons should start with children's questions and should be child-led. Pupils should discuss how to investigate these questions and seek to answer them through observation, collecting, analysing and presenting data. The observation can be done very simply or in a more complex way.

## **'Scientific' language**

Children will be introduced to precise scientific language. Children will be encouraged to respond using the language they have learned with teachers acting as role models in the learning process. This integrated approach is a strong model for teaching and learning, giving children opportunities to use and develop their language for communicating in real-life contexts. Children will be asked to explain their reasoning in their own words too.

## **Early Years Foundation Stage**

The Early Years Foundation Stage curriculum is followed to ensure continuity & progression from Nursery, moving on to Reception Class & then through to the Science National Curriculum in KS1 & KS2. Science is covered through the Prime areas of Communication and Language and the Specific areas of Mathematics, Literacy and Knowledge and understanding of the world. Pupil provision is related to attainment, not age. Children learn through play, speaking and listening activities, teacher modelling, group work and self-direction. Children will experience some aspects of a formal Science lesson alongside continuous provision.

## **Curriculum organisation**

The amount of time spent on the Science Curriculum should ensure the coverage and development of age related skills. This in general will be up to one and a half hours every week.

## **Inclusion**

All children have equal access to the science curriculum and its associated practical activities. The Class Teachers and TAs at Stepping Stones are responsible for ensuring that all children, irrespective of gender, learning ability, physical disability, ethnicity and social circumstances, have access to the whole curriculum and make the greatest possible progress. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given.

## **Assessment**

Learners are formatively assessed continuously in Science by teachers in the course of their teaching, through observation, questioning and analysis of work. Feedback is given to the children through discussion about their work and marking, which is in line with the marking policy.

Each half-term, class teachers review the pupils' knowledge and understanding within Science; and progress against the key statements is recorded. (*new systems for all Foundation subjects and Science to be in place by end of Autumn term 2021*).

Evidence of pupil's knowledge and understanding is carried out in a number of ways – verbal feedback with a pupil; annotated photographic evidence; Class Big Books; individual Science books; annual Science theme day(s).

## **Resources**

The school has a wide range of resources to support teaching and learning in Science. Some resources are kept within the shared area and some are centrally stored in the PE cupboard. All centrally stored resources should be returned after use, and children should be encouraged in the correct care and handling of all school resources.

## **Health and safety**

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. Risk assessments are in place for equipment with identified potential hazards.

## **Role of Subject Leader**

The Science Subject Leader is responsible for:

- Coordinating all aspects of Science provision for learners throughout the school
- Developing the Science Policy, in consultation with teachers, the Head teacher and the Governing Body (The Committee)
- Modelling good practice in the teaching of Science
- Advising and supporting teachers and support staff in relation to Science, including contributing to in-service training
- Monitoring Science, in conjunction with the Head teacher, through discussion with staff, by checking the Medium Term Planning of individual teachers to ensure coverage and progression; by monitoring the learning environment, through interviews with children, through observations of teaching and learning and through analysis of learners' work
- Purchase and organisation of Science resources
- Keeping up-to-date with developments in Science teaching and learning, and disseminating information to colleagues as appropriate

## **Monitoring and Review**

The Science Subject Leader will carry out monitoring in the following ways:

- Learning Walks
- Pupil and Staff interviews
- Book audits
- Audit of resources
- Collating data re: pupil attainment across the whole school and feeding back to staff in order to inform next steps for teaching and learning; in order to ensure appropriate pupil progress within Science

## **Review of Policy:**

**Whole staff: Staff Meeting XXXX 2021**

**Ratified by the Governing Body - The Committee: XXXX 2021**



## Addendum to the above policy (Academic year 2020-21)

When our pupils returned to school in September 2020, we planned to focus the pupils on key skills in Science – please see attached document: **Science Key Skills for post COVID-19 Recovery Curriculum.**

As the Autumn term 2020 drew to a close, it was planned to gradually extend and broaden Science planning to include further knowledge and skills from the Curriculum.

However, due to the January – March 2021 National Lockdown, we continued with a focus on key skills in Science, alongside knowledge which linked appropriately with the each class' topic for that term.

This was in main due to the fact that we continued to have a number of families on home-learning - even though we as a school were fully open. We also needed to be mindful of possible class closures during this time if there were infections within school, either within the pupil or staff population.

This approach continued into the Summer term, with a view to a return to the full science Curriculum for Autumn 2021.

J Meacham  
Subject Leader Autumn 2021