

# *King George V Primary School*



## Science Policy

Reviewed October 2019

S.Fletcher

### **Intent:**

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st Century. We, at King George V Primary School, believe that the teaching of science develops in children an interest and curiosity about the world in which they live and fosters in them a respect for the environment. Through the framework of the National Curriculum, King George V aims to:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to write their own and answer scientific questions about the world around them
- equip pupils with the scientific knowledge required to understand the uses and implications of science, today and for the future

### **Implementation:**

- Science is taught in planned and arranged topic blocks by the class teacher and is based on the 2014 National Curriculum objectives. This is a strategy to enable the achievement of a greater depth of knowledge.
- Science lessons are rich in questioning to develop a deeper understanding of concepts, engaging and exciting.
- Through our planning, we involve problem solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children keep up.
- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.
- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts
- Learning is inclusive for all learners, where differentiated activities are planned to ensure all children make progress. Children who grasp concepts quickly will be

challenged through application activities and open ended questions and/or tasks. This will give children opportunities to reason, explain and demonstrate their learning.

- Children should have a range of group and individual tasks, where children are solving problems, communicating with their peers and involved in hands-on practical science.
- All lessons should be purposeful and inject a sense of excitement and anticipation as to what the children may be learning next.
- All lessons should be focused around the knowledge objectives of the National curriculum and also the working scientifically skills: how children are going to grasp the concepts in the lesson. Where possible, links to real life should be made and children should be working as scientists to promote independence in problem solving and thought processes. Opportunities for cross curricular learning activities are encouraged and for children to learn through discovery and play.
- Children should have opportunities to pose questions and have time to find the answers to these questions for themselves- deciding what line of enquiry they need to take
- Whole school curriculum maps are used to identify relevant knowledge and skills to be developed through each unit of work, ensuring that teachers build upon pupils prior knowledge and experiences and prepare them for their next step
- More detail can be found in our whole school curriculum map

### **Impact**

Assessment for learning is continuous throughout the planning, teaching and learning cycle.

A variety of assessment methods are used, these include:

- ✓ A diagnostic test to help identify children's prior learning (this is undertaken at the start of each unit to assess prior retention and demonstrate progress from the start of a unit to the end of a unit)
- ✓ Observing children at work (individually, in pairs, in a group and in classes)
- ✓ Questioning, talking and listening to children
- ✓ An end-of-topic test to assess understanding of core content after teaching;
- ✓ Monitoring of pupils' work through regular book looks, class displays, observations and self-assessment where children have an opportunity to discuss and reflect upon their own work
- ✓ A summative test for use at the end of the year.
- ✓ Children's work is continually monitored and tracked

**Health and safety:**

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class teachers will check equipment regularly and report any damage, taking defective equipment out of action. A simple risk assessment will be carried out for all practical activities any perceived hazards will be reported to the Head who will determine the appropriateness of said activity.

**Conclusion:**

This policy will need to be read in conjunction with the following school policies

- Teaching and learning policy
- Marking Policy
- SEN policy
- Computing policy
- Equal opportunities policy
- Health and Safety policy.

Signed Head teacher \_\_\_\_\_

Chair of Governors \_\_\_\_\_

This Science Policy will be reviewed September 2020