



## QUEEN'S HILL PRIMARY SCHOOL AND NURSERY SCIENCE POLICY – Updated October 2016

### **RATIONALE**

Science 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.

### **PURPOSE**

To provide every pupil with the scientific experience to which they are entitled. We will communicate and relate science to everyday life and develop these experiences through scientific investigations.

### **GUIDELINES**

Science will relate to other areas of the curriculum, particularly PHSE and SRE and will:

- 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 answer scientific questions about the world around them..
- Equip children with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.
- Develop interest and enthusiasm for Science;
- teach children how to communicate their ideas effectively;
- Teach appropriate scientific vocabulary;
- Develop an understanding of the relevance of Science in an everyday context;
- Help children understand that scientific knowledge relies on evidence;
- Teach that scientific evidence can be obtained in a variety of ways;
- Help children acquire scientific process skills;
- Develop children's computing capabilities;
- Make children aware of Health and Safety issues.

We will use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. Sometimes we will do this through whole-class teaching, while at other times we engage the children in an enquiry-based research activity. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs. They use computing in science lessons where it enhances their learning. Teaching will reflect key skills and thinking skills.

Appropriate differentiation by task, outcome, grouping or support will be matched to pupil ability and reflect our policies for Special Educational Needs (SEND) and Teaching and Learning

### ***Planning Science***

We operate a planning procedure agreed by the whole teaching staff, based upon the National Curriculum 2014. The KUW team has developed a year by year progressive school wide science skills Web together with programmes of study content in line with the new curriculum. Lesson plans for science include differentiation to accommodate gifted and talented pupils, pupils with SEND and identify computing links.

Use will be made of the school environment wherever possible and opportunities to relate science to other subject areas, particularly Maths skills and English skills, will be central to our planning process. Science teaching will be further enhanced by use of the school library for research, outside agencies/institutions and through school trips and visitors.

### **Foundation Stage**

We teach science to reception to the objectives set out our curriculum 'Development Matters in Early Years' which underpins planning for children aged three to five.

Spiritual, moral, social and cultural development - Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, healthy lifestyles. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the earth's resources. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

## ***Equal Opportunities***

The teaching of Science will be in accordance with our policy for Equal Opportunities. We aim to provide equal access to Science for those children with Special Educational Needs and those pupils who are very able and require extension activities, through small group work and through the use of Classroom Assistants' help where available. Our work in science takes into account the targets set in the children's Individual Education Plans (IEPs).

## ***Assessment and recording***

We assess children's work in science by making informal judgements as we observe them during lessons. Children's work will be marked according to the agreed school policy and their performance continually assessed in accordance with the National Curriculum by the class teacher. Pupils will be assessed against the age related science expectations for their current year group and graded as beginning, developing, embedded and mastered as appropriate. At the end of the year a judgment will be made about a pupils' level of science capability against the level descriptors.

*The Role of the KUW team is to:*

- \* Organise and maintain teaching resources;
- \* Manage a delegated budget and keep spending within it;
- \* Encourage and assist in-service training;
- \* Keep up-to-date by attending courses and feedback sessions organised by LA, Cluster groups or other colleagues;
- \* Provide guidance and support in implementing NC programmes of study
- \* Offer specialist advice and knowledge for special needs and gifted pupils;
- \* Co-ordinate recording and presentation throughout the school in consultation with colleagues;
- \* Advise the Headteacher of action required (e.g. resources, standards etc.);
- \* Encourage ways of involving parents in their children's learning;
- \* Promote liaison throughout the school (moderation etc.);
- \* Provide support for all who teach Science and so improve the quality and continuity of Science teaching and learning throughout the school.

## **Resources**

We have sufficient resources for all science teaching units in the school. We keep these in a central store where there is a box of equipment for each unit of work. The library contains a supply of science topic books and computer software to support children's individual research.

## **Health and safety**

Science is not an inherently risky or unsafe activity. However, when undertaking some activities, it is important that all pupils understand the need for good safe and sensible practices. Good classroom management will ensure that all activities are undertaken in an environment which takes account of important Health and Safety requirements. (see Health and Safety policy). When appropriate, risk assessment will be carried out.

## **Statement of intent**

Queen's Hill Primary School believes that teaching science in primary schools should be exciting, practical and rewarding for pupils. With this in mind, teachers will plan lessons that engage with pupils and follow the national curriculum.

Practical science lessons are potentially hazardous; therefore, teachers will take the safety of these lessons very seriously. By following the rules and procedures outlined in this policy, all members of staff will be free to plan interesting lessons, whilst ensuring that pupils and staff remain safe.

Signed by:

_____ Penny Sheppard	Date: _____	<b>1. Legal framework</b>
_____ Chair of governors	Date: _____	

1.1. This policy has due regard to relevant legislation, including, but not limited to the following:

- The Health and Safety at Work etc. Act 1974
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013
- The Workplace (Health, Safety and Welfare) Regulations 1992

1.2. This policy will be implemented in conjunction with the Queen's Hill Primary School's:

- Health and Safety Policy.
- Risk Assessment Policy.
- Manual Handling Policy.

## **2. Safety file**

2.1. The head teacher is responsible for creating and monitoring a safety file. This file will contain:

- The accident and report forms.
- The Health and Safety Policy.
- Emergency contact details.

3. **Risk assessments**

3.1. Risk assessments will be completed before any practical science lesson. Existing risk assessments, which cover lessons, may be used again if they are up-to-date.

3.2. If a risk assessment does not exist, one will be created to cover the specific lesson being planned.

3.3. It is the responsibility of the head teacher to ensure that all risk assessments are reviewed annually.

4. **Emergency procedures**

4.1. If an accident occurs, the teacher in charge will decide on the correct course of action.

4.2. If the teacher in charge is not a qualified first aider, one will be contacted at the earliest opportunity.

4.3. If the first aider believes that further treatment is needed, or if there is any doubt, arrangements will be made for transporting the injured party to a secondary location, such as a local NHS drop in centre to receive treatment.

4.4. If the first aider believes that emergency treatment is required, an ambulance will be called.

4.5. Emergency procedures will always be followed when the incident involves the ingestion, inhalation or absorption of hazardous materials.

4.6. Following the incident, the teacher concerned will complete and submit an accident report form.

4.7. If an accident occurs away from the school, a report will be submitted to the head teacher.

4.8. The head teacher will be responsible for investigating the incident.

4.9. Any accident will be reported to the local council's health and safety team.

4.10. If an accident occurs away from the school, it will be reported to the Health and Safety Executive (HSE) using the RIDDOR notification process.

4.11. Following the investigation, a report will be presented to the governing body.

## 5. **Training**

- 5.1. It is the responsibility of the head teacher to ensure that all members of staff have received adequate training for managing the risks associated with primary science lessons.
- 5.2. It is the responsibility of the head teacher to ensure that all new members of staff receive adequate training as part of their induction programme.
- 5.3. Regular refresher safety training will be arranged on an annual basis, to ensure that all members of staff are up-to-date.

## 6. **Purchasing equipment**

- 6.1. All purchased equipment will be safe and appropriate for primary pupils.
- 6.2. Equipment will only be purchased from recognised educational suppliers.
- 6.3. If equipment is donated, it will undergo safety checks by a qualified technician.

## 7. **Safety checks**

- 7.1. All equipment will be safely stored in the food technology room cupboard and an inventory will be kept in the safety file.
- 7.2. A qualified technician will check the Queen's Hill electrical systems annually.
- 7.3. If equipment is found to be defective, it will be disposed of safely.
- 7.4. If a member of staff has concerns about a piece of equipment, the head teacher will be notified. A qualified technician will check the equipment, making the decision as to whether to continue using the equipment.

## 8. **Living organisms**

- 8.1. Any plants, animals or micro-organisms purchased by the school will be acquired from reputable sources.
- 8.2. Risk assessments will be completed before any living organism enters the premises.
- 8.3. CLEAPSS guidance will be followed on any human cell activities, such as, looking at cheek cells or investigating blood.
- 8.4. Biological cultures will remain closed, with lids taped down. They will be disposed of by autoclaving.

## 9. **Monitoring and review**

- 9.1. This policy will be reviewed and amended if a serious incident occurs. Any changes will be communicated to all members of staff.
- 9.2. The head teacher is responsible for reviewing this policy at least annually.