



# Cartmel CE Primary School

## Science Policy

**2016/2018**

The Governing Body adopted this policy on: February 2016

Approved by: Jean Bell

Review date: November 2018

### **Mission Statement**

*'Mighty Oaks from Little Acorns Grow'*

We will do our best, be happy and honest, show respect and be friendly.

At Cartmel we create a happy caring environment based on Christian Values, where we value every child and encourage them to strive for their highest standards of achievement. We ensure that our young people go into the world as confident, independent, responsible citizens with a love for learning.

Our Mission Statement pays homage to our conviction that there is something potentially wonderful in every individual.

This policy was written after due consideration of the School's Mission Statement and Core Values.

### **1. Aims and Objectives**

The aims of Science are to:

- develop an understanding of natural phenomena
- stimulate children's curiosity in finding out why things happen in the way they do
- teach methods of enquiry and investigation
- stimulate creative thought

- ask scientific questions and begin to appreciate the way science will affect their future on a personal, national and global level

The objectives of Science are to enable children to:

- ask and answer scientific questions
- plan and carry out scientific investigations, using equipment correctly
- observe, predict, measure and work co-operatively
- know and understand the life processes of living things
- know and understand the physical processes of materials, electricity, light, sound and natural forces
- know about the nature of the solar system, including the earth
- evaluate evidence and present their conclusions clearly and accurately
- use and understand scientific vocabulary

## **2. Teaching and Learning Style**

2.1. We use a variety of teaching styles in science lessons. Our principal aim is to develop children's knowledge, skills, and understanding. Sometimes we 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 ICT in science lessons where it enhances their learning. They may take part in role-play and discussions and they present reports to the rest of the class. They engage in a wide variety of problem-solving activities. Wherever possible, we involve the pupils in 'real' scientific activities, for example, researching a local environmental problem or carrying out a practical experiment and analysing the results.

2.2. We recognise that there are children of widely different scientific abilities in all classes 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. We achieve this by:

- Setting common tasks which are open-ended and can have a variety of responses;
- Setting tasks of increasing difficulty (we do not expect all children to complete all tasks);
- Grouping children by ability in the room and setting different tasks for each ability group;
- Providing resources of different complexity, matched to the ability of the child;
- Using classroom assistants to support the work of individual children or groups of children

## **3. Science Curriculum Planning**

3.1. The school uses new National Curriculum for science as the basis of its curriculum planning. We have planned the topics in science so that they build upon prior learning so that the children are increasingly challenged as they move up the school.

3.2. The long term plan maps the scientific topics studied in each term during the key stage. The Science Leader works this out in conjunction with teaching colleagues in each year group. Wherever possible, especially at Key Stage 1, we combine science with work in other subject areas to enhance relevance and meaning; at other times the children study science as a discrete subject.

3.3. Our medium term plans, which we have based on the new National Curriculum in science, give details of each unit of work. The science subject leader keeps and reviews copies of these plans.

#### **4. Science in the Foundation Stage**

4.1. We teach science in Reception as an integral part of the topic work covered during the year. As the reception class is part of the Foundation Stage of the National curriculum, we relate the scientific aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. Science makes a significant contribution to the objective in the ELGs of developing a child's knowledge and understanding of the world, e.g. through investigating what floats and what sinks when placed in water.

#### **5. Teaching Science to Children with Special Needs**

5.1. We teach science to all children, whatever their ability. Science forms part of the school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Our work in science takes into account the targets set in the children's Individual Education Plans (IEPS).

#### **6. Assessment and Recording**

6.1. We assess children's work in science by making informal judgements as we observe them during lessons. On completion of a piece of work, the teacher marks the work and comments as necessary. By talking to pupils we can use their feedback as a basis for assessing the progress of each child and we pass this information onto the next teacher at the end of the year.

6.2. Children take the national tests in science at the end of Key Stage 2. Teachers make an assessment of the children's work in science at the end of Key Stage 1. We report the results of these tests to parents along with the teacher assessments which we make whilst observing the work of children throughout the year.

#### **7. Resources**

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

#### **8. Monitoring and review**

8.1. It is the responsibility of the science co-ordinator to monitor the standards of children's work and the quality of teaching in science. They are also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The Science Subject Leader has allocated time for fulfilling the vital task of reviewing children's work and monitoring teaching.