

*At Churchwood Everyone Can*

**POLICY FOR SCIENCE**

***The importance of Science in the curriculum***

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. It also satisfies their curiosity with knowledge. Because Science links direct practical experience with ideas, it can engage learners at many levels. Scientific method is about developing and evaluating explanations through experimental evidence and modelling. This is a spur to critical and creative thought. Through Science, pupils understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving the quality of life. Pupils recognise the cultural significance of Science and trace its world-wide development. They learn to question and discuss Science-based issues that may affect their own lives, the direction of society and the future of the world.

**Subject Aims**

Our aims are:

- To promote positive attitudes towards, and enthusiasm for Science.
- To provide a Science curriculum which is broad, balanced, relevant and differentiated and which fulfils the requirements of the National Curriculum
- To enable children to develop their knowledge and understanding of the world they live in, through first-hand investigation of that world
- To enable children to work scientifically in a range of appropriate contexts using a wide variety of materials and equipment
- To provide a balanced and progressive range of scientific activities as an integral part of the whole school curriculum and to enable pupils to develop ideas and respect each other's views
- To provide opportunities for children to acquire, practise and develop scientific skills and strategies through a carefully structured activity based programme centered on investigations. These will involve class, group and individual ways of working.
- To build upon the experiences children bring to Science and develop them in a wide range of contexts
- To build up children's confidence and competence when working in Science to enable them to work in an increasingly independent way and develop their own research skills.

***Teaching Science***

***Curriculum***

Science is taught through the Knowledge Progression statements to ensure progression in knowledge that is sequential and builds on learning across the academy from EYFS – Year 6.

Disciplinary knowledge is taught alongside each unit :

1. Questioning and enquiring
2. Observing and measuring and pattern seeking
3. Investigating
4. Recording and reporting findings
5. identifying, grouping and classifying
6. Research
7. Conclusions

Links with the real world are made through trips, visitors and hands on experiences where possible. Classes have a key scientist, inventor or conservationist linked to each unit to provide meaning and a context to their learning and increase Science Capital.

Year Group	Topics Covered
1	Term 1 and 2 - Seasonal changes Term 3 and 4 - Everyday materials Term 5 and 6 – Animals including humans
2	Term 1 and 2 - Living things and their habitats Term 3 and 4 – Uses of everyday materials Term 5 - Plants Term 6 – Animals including humans
3	Term 1 and 2 – Forces and magnets Term 3 - Plants Term 4 – Animals including humans Term 5 – Rocks Term 6 - Light
4	Term 1 – Living things and their habitats Term 2 - Animals including humans Term 3 – Sound Term 4 – Electricity Term 5 and 6 – States of matter
5	Term 1 and 2 - Properties and changes of materials Term 3 – Earth and Space Term 4 - Forces Term 5 - Living things and their habitats Term 6 – Animals including humans
6	Term 1 – Light Term 2 – Electricity Term 3 and 4 - Living things and their habitats Term 5 – Animals including humans Term 6 – Evolution and inheritance

### **Teaching Time**

Science is taught discretely throughout the year. Links to the class topic and other areas of the curriculum are made where possible. Two hours of teaching time per week should be allocated to Science to ensure adequate curriculum coverage. At times it might be appropriate to 'block' a unit of work.

At Foundation Level, science is an integral part of topic work through Knowledge and Understanding of the World. Links will also be made to other areas of the EYFS curriculum so that pupils can develop and apply their scientific skills.

### **Science Principles of learning and vision**

Our Vision is **'Children at Churchwood are inquisitive and knowledgeable Scientists'**

Our principles underpin and reflect the vision for Science across the academy. This has been put together by staff and pupils. This is displayed in classrooms and referenced during Science lessons to help children develop an understanding of what science is. (See Appendix 2)

## ***Class Organisation***

In each year group, Science is taught in an imaginative and largely practical and investigative way. The children benefit from whole class or group teaching as well as being encouraged to work individually or in trios: finding out information, practising skills, or thinking scientifically by themselves.

## ***Assessment***

Science is assessed formatively. This takes the form of the teacher assessing the child against the curriculum end points (knowledge statements). Teachers will assess whether children have learned this knowledge through formative methods such as: feedback, marking, questioning. Children will have the opportunity to show they know the curriculum being taught through carefully planned recording e.g. concept maps (KWL grids), exit slips, peer and self-assessment, mini plenaries. This ongoing formative assessment will support teachers in planning next steps and future lessons.

## ***Health and Safety***

Staff are referred to the publication *Be Safe* (ASE, 2017 version) for further safety guidelines in science.

At Churchwood Primary Academy we believe that educational visits are an essential part of education and are exciting and highly motivating. To ensure safety, all educational visits will be carried out in accordance with the Academy and HAT Educational Visits Policy. Risk Assessments will be completed by the Group Leader and approved by the Educational Visits Co-Ordinator prior to the visit taking place.

Health and Safety is the responsibility of everyone at Churchwood. All lessons / activities will be risk assessed with relevant notes made on the lesson plans ensuring safety.

## **Policy status and review**

<b>Written by:</b>	Chloe Burford (Science lead)
<b>Owner:</b>	Ros Collett (Principal)
<b>Status:</b>	Approved
<b>Approval date:</b>	September 2022
<b>Review Date:</b>	September 2023

## Appendix 1

### *Resources and Accommodation*

A range of published materials is used in the planning of Science topics at both Key Stages. These are located in the Science resources room.

Project loans from the Schools' Library Service are often requested to provide both written and audio-visual resources for a topic. There is a stock of reference books for each Science based topic in the libraries. Both staff and children borrow these books.

The majority of Science materials and equipment are kept in the Science resources room, which is only accessible to members of school staff, and to parents under teacher guidance. Children should NOT enter to remove or replace resources at any time.

Children's reference books for Science are kept in the Library. These are colour-coded and arranged under the Dewey system. Children and staff borrow these using the usual library loans procedures.

The Science Subject leader is responsible for maintaining Science resources, monitoring their use and organising the resource area. The current resources are examined each year before requisitions are made. Teachers are asked to submit to the Science Subject leader lists of any resources which they require to be added to the existing stock. Science subject leader budget is used to provide resources for each year group.

The purchase of resources is planned each year by the Science subject leader based on the Science budget from the main school budget. This Science budget will reflect the degree of priority, which Science is being given in the Academy Improvement Plan.

Appendix 2

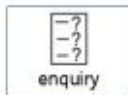
Science vision and principles

# Everyone can....



## do SCIENCE at CHURCHWOOD when...

**E**nquiry



We know the 5 different ways scientists find out things...

**V**ocabulary



We are able to learn and access new words that will help us with our science

**E**xplore



We explore and discover for ourselves!

**R**eal life



Our learning is linked to real life and we understand why Science is important.

**Y**ay!



Science is engaging and FUN! YAY SCIENCE!

**O**utside



We learn outside!

**N**ever give up



We show resilience and recognise mistakes as part of our learning.

**E**ngaging



Science is exciting, practical and hands on!

**C**hild led



We lead our own learning by asking questions and exploring.

**A**sk questions

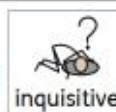


We learn through new experiences that we will hold onto forever!

**N**ew experiences

### Our Vision:

Children at Churchwood are



and



**Scientists!**