



## **Warwick Bridge School Science Policy**

### **Introduction**

Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation and using and applying process skills. This policy was updated in December 2022 and will be reviewed biannually in relation to existing school policies, national and LEA guidelines and curriculum orders.

### **Rationale**

Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us.

### **Through science in our school we aim to:**

- Encourage the development of positive attitudes to Science.
- Deliver the National Curriculum 2014 Science orders in ways that are imaginative, purposeful, well controlled and enjoyable.
- Help in developing and extending the children's scientific concept of their world and encouraging them to ask deeper questions about the world around them.
- Deliver clear and accurate teacher explanations and skilful questioning. Providing guidance but at the same time allowing children the freedom to explore as independently as possible.
- Make strong, purposeful links between science and other subjects. Using COMPUTING in a meaningful way to extend their learning.
- Develop the use of scientific language, recording and techniques.

- Enable children to become effective communicators of scientific ideas, facts and data whilst becoming experts at analysing the data they collect.
- Develop the following skills of investigation – observation, measuring, predicting, hypothesising, experimenting, communicating and interpreting.

## Teaching and Learning of Science

### Content of the Curriculum

Science is important because: -

- It is a body of knowledge essential to our understanding of the world around us.
- The process of scientific investigation forms the basis of the most intellectual enquiry.
- The skills and knowledge of science have a wide application in everyday life.

Science is a core subject in the National Curriculum. The fundamental skills, knowledge and concepts of the subjects are currently set out in The Primary Science in the National Curriculum 2014 where they are categorised below:

1. All pupils will Work Scientifically
2. KS1 –  
**Plants    Animals including Humans    Everyday Materials    Seasonal Changes**
3. KS2 –  
**Plants    Animals including Humans    Rocks    Light    Forces and Magnets**  
**Living things and their Habitats    States of Matter    Sound    Electricity**  
**Properties and changes of Materials    Earth and Space    Forces**  
**Evolution and Inheritance**

The EYFS class is taught the required science elements of the Foundation Stage document through cross curricular themes.

In line with the New Curriculum, Science teaching across the school will change in terms of topics taught and expected skills to be mastered at each stage.

The school will continue to timetable an annual Science Week that will include trips, visits, investigations, presentations and performances.

### **Planning and delivery**

The whole school yearly science plan is based on the National Curriculum 2014 programmes of study that provides a basis for termly and weekly planning. The topics set out provide a vehicle to deliver the Science Curriculum and ensure that the programme of study is covered. The teaching of Science at Warwick Bridge School is informed by the Rising Stars guide. It ensures progression between year groups and guarantees topics are revisited. Teachers are expected to adapt and modify the model plans to suit their own teaching, the use of any support staff and the resources available.

- KS2, KS1 and Foundation Stage teachers should be teaching science for a minimum of two hours each week, or equivalent pro rata.
- Teachers should try to make cross-curricular links wherever possible.
- In KS2 a minimum of 50% of lessons should include practical Scientific Investigation.
- In KS 1/ Foundation stage a minimum of one third of lessons in each half term should include practical Scientific Investigation.

The science curriculum is delivered through co-operative group work, individual work, and whole class teaching.

Within this structure there will be: -

- Whole class and group discussions and presentations.
- Demonstrations, explanations and instruction by teachers to groups, individuals and the whole class as well as child-led when possible.
- Practical activities to advance and consolidate knowledge and skills.
- Problem solving and investigation tasks.

### **Computing in Science**

- The provision for the use of Computing in science at Warwick Bridge School is excellent and all teachers work to maximise the use of resources in their teaching. The children are given the opportunity to research, plan, present, test and improve their ideas using relevant Computing resources to improve understanding, aid communication and enhance presentation.
- Recently there has been a change of emphasis in Science curriculum and assessment shifting towards more investigative approach to Science.
- This involves more tasks involving interpreting and analysing results, which can be supported and developed by the use of Computing.

- Computing provides various opportunities to investigate (e.g. Discovery Dog, virtual experiments, , Concept Cartoons, Digital microscope, the Internet)
- And to interpret results (e.g. databases, graphs)
- Helps to develop more independence and can provide an excellent extension and challenge for more talented pupils, whilst supporting others where necessary.

## **Assessment**

Individual children's levels of attainment are recorded in class teachers' assessment folders, which are reviewed annually. Children's subject knowledge and understanding and level of competence and aptitude for scientific investigation are assessed and recorded by class teachers.

Reports to parents on the attainment of their children are made each term. Reporting in Science focuses on each child's:

- Attitude towards science
- Progress in the ability to investigate scientifically, including understanding of the nature of scientific method.
- Level of scientific knowledge achieved.

The formal assessment of Science at Warwick Bridge School at the end of KS1 takes place in accordance with the national statutory requirements.

## **Management and Development**

### **Moderation and Monitoring**

At Warwick Bridge School we moderate and monitor science as a part of our self-evaluation approach to maintaining standards and supporting staff in their teaching. This is timetabled every half term.

#### **Moderation**

Science moderation involves analysis of children's work in relation to ARE learning outcomes. Science moderation achieves the following.

- Evidence of learning outcomes
- Understanding and agreeing on levels for work
- Levelled samples for school portfolio

## **Monitoring**

Monitoring of science teaching is carried out through a program of lesson observations by the Subject Leader. The objective of the monitoring is to ensure Science is being taught well across the school. Observations focus primarily on the effective communication of scientific knowledge and the quality of investigative work.

Science monitoring achieves the following:

- Insight into the nature of science teaching across the school.
- It gives class teachers the opportunity to review their own practice and discuss teaching science with a subject specialist.
- It gives the science team an insight in to areas of strengths, enabling good practice to be shared among colleagues.
- It allows resources to audited and for the assessment of current and future resource requirements.
- It allows the science team to set targets, demonstrating the school's commitment to self-evaluation and improvement of standards in science.

## **Resources**

- The vast majority of resources are stored centrally near the school hall
- Teachers need to collect their resources as they need them and ensure they return them to where they came from.
- Staff should notify the co-ordinator of any extra resources required, of any breakages or losses that occur and of any new materials that might prove useful.
- Unsupervised children should not be allowed to collect resources.

## **Equal Opportunities**

At Warwick Bridge School we work to ensure that all children have the opportunity to gain scientific knowledge and understanding regardless of gender, race, class, physical or intellectual ability. We will ensure that expectations do not limit pupils' achievements and that assessments do not involve any cultural, social, linguistic or gender bias.

## **Health and Safety**

- The teacher should be clear as to the purpose of the work and ensure that any testing that needs to be carried out complies with the Health and Safety procedures and has been practised prior to the lesson.

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- Safety hazards should be pointed out to the children at the beginning of any work.

Policy written and adopted by Warwick Bridge staff **December 2022**

Ratified by Governing Body .....

Date to be reviewed **December 2024**

**Signed:**.....

**Signed:**.....

**Head Teacher**

**Chair of Governors**

**Date:**.....