

# **Carrington Infant School (Carrington Schools Federation)**

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## **Science Policy**

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### **MISSION STATEMENT:**

**The Carrington Schools Federation: an ambitious, caring, and inclusive community.**

### **VISION:**

**To be a nurturing community that develops respectful, resilient, and happy children with the self-belief, knowledge, and skills to thrive in the future.**



**Date Policy last reviewed: October 2025**

**Signed by:**

**Head Teacher: Kate Cliffe**

**Date:**

**Chair of Governors: Nadia Zachary**

**Date:**

## **Science Policy 2025- 2026**

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### 1. Introduction

Science is a core subject in the National Curriculum. Science is about children developing a sense of enquiry and extending their knowledge and understanding of the world around them. Through science, children understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving quality of life. 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. Scientific method is about developing and evaluating explanations through experimental evidence and modelling.

### 2. Subject Intent

*‘Curiosity is Key’*

Children are curious learners who take appropriate risks in exploring practical solutions to problems. Extending their knowledge and understanding of the world around them prepares for a life in an increasingly scientific and technological global society.

### 3. Aims and Outcomes

At Carrington Infant School we consider Science to be a body of knowledge built up through the experimental testing of ideas. Science is also a practical way for our children to find reliable answers to questions which they may ask about the world around them. Through Science in our school we aim to:

- Encourage the development of positive attitudes to Science.
- Deliver the Science Programmes of Study of the National Curriculum.
- Help in developing and extending children’s scientific concept of the world, and encourage them to ask deeper questions about the world building upon their natural curiosity.
- Develop the use of scientific language, recordings and techniques.
- Develop the skills of investigation including observing, measuring, predicting, experimenting, communicating, interpreting, explaining and evaluating.
- To promote learning through a wide variety of teaching and learning styles.
- Prepare our children for life in an increasingly scientific and technological world.

### 4. Teaching and Learning

The expected impact of the Science curriculum is that children will:

- Develop scientific knowledge and understanding of concepts, answering scientific questions about the world around them through different types of enquiries.
- Develop and use a range of skills including observations, planning and carrying out investigations.
- To evoke an enthusiasm and enjoyment for scientific learning and discovery, creating independent learners who are eager to explore scientific questions.
- Be equipped with the knowledge needed to understand the breadth of Science, through both its uses and the implications of it, today and in the future.

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- Use a range of methods to communicate their scientific findings and present it, including written explanations, ICT, diagrams, graphs and charts. These latter methods allow the children to apply their mathematical skills, in the areas of measure and data handling.
- Meet the end of key stage expectations outlined in the National Curriculum for Science.

### **Planning**

Planning is a collaborative process and each class teacher plans with their year group partner.

Teachers include specialist vocabulary and key knowledge in lesson content and ensure an appropriate emphasis on skills through practical experiences and approaches. Teachers use White Rose Science to inform their planning and lesson design and the school utilises the support and resources from the National STEM Centre and Science HUB.

Key knowledge and skills, in line with the National Curriculum are mapped on our Overview. The school's own context is also considered and opportunities for learning outside the classroom, including the use of specific school resources (such as the Forest School Area, Mud Kitchen, school garden and pond) and relevant educational visits, are included on the map and are planned by teachers. Cross curricular links are also mapped to further support the contextual relevance of the science curriculum.

Exploration activities in EYFS and Year 1 continuous provision are carefully planned to link with both the National Curriculum and to support medium term teaching plans. They are also designed to create awe and wonder, and to encourage use of scientific vocabulary and questioning.

### **Progression**

Target Tracker is used to record pupil's attainment and progress in Science in line with the expectations laid out in the National Curriculum statements.

## **5. Curriculum Overview**

### **EYFS**

Children will explore Science through making predictions, using their senses and investigating materials and their properties. Science is taught through the strand of, 'Understanding the World'. Science teaching is also linked to other strands of the EYFS framework for learning. Teachers and Support Staff guide children to develop a solid understanding of things occurring around them in their day-to-day lives. Children are encouraged to be creative and inquisitive as they participate in activities. Children are encouraged to use their natural inquisitiveness, whilst taking part in exploratory play in specific scientific areas as well as areas which link across the EYFS framework.

### KS1

During Key Stage one, pupils observe, explore and ask questions about living things, materials and the world around them. They begin to work together to collect evidence to help them answer questions, find patterns, classify and group objects and research using a variety of sources. Children will use reference material to find out about scientific ideas. They will share their ideas and communicate them using scientific language, drawings, charts, and tables.

#### *'Working Scientifically':*

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. Pupils should learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.

#### **On site Forest School sessions**

All children are also provided the opportunity to experience Science in action within onsite Forest School sessions. This can be through both specific activities and incidental observations or experiences. As such, this allows our children to investigate scientific theories, pose questions in the context of a situation and highlights the role Science has in our everyday lives. Children can observe seasonal change, different weather conditions and plants growing and changing over time within the Forest School environment. They can explore the natural world around them and engage in identifying and classifying a variety of plants and animals. They can learn about the relationships between local plants and animals through first hand experience and develop their own questions about the world around them.

## 6. Cross Curricular Links

**English** - During English lessons children will develop their Scientific skills by learning vocabulary and strategies to support the reading and interpreting of problems and thinking of their own questions and answers. Children will think about how there is often more than one answer and in certain situations, there is no one correct answer. Children will also be able to explain their ideas, methods and present their findings.

**Maths**- Almost every scientific investigation is likely to require some mathematical skills in classifying, counting, measuring, calculating, estimating, and recording in charts, tables or graphs.

**Computing** – Science links closely with computing in a technologically advancing world. Children develop understanding of patterns and problem solving through writing algorithms and debugging programs.

**Art** - Children will be exploring patterns, symmetry, shape and position. Children explore using a range of materials and how colours mix and change.

**Design and Technology** - Food hygiene is explored through cooking activities and children learn why it is important to wash our hands before handling food. Through food preparation children will explore measurements, scales and time. Children explore which materials are best suited to specific purposes through testing of their properties.

**Music** - In music children will develop and support their Science learning through recognising sequences and patterns. Children explore changing pitch, volume and tempo as they listen to and play a variety of musical instruments. How sound travels and use of vibration is explored through playing different instruments in different ways. Focus on listening skills and how the ear works is key to appreciating music and recognising similarities and differences in styles of music.

**History and Geography** - In History and Geography learners may collect data by measuring or counting and record results in the form of charts, tables or graphs. Historical ideas require an understanding of time and time line and an understanding of observing changes over time.

**Physical Education (PE)** - PE gives children the opportunity to explore how our body changes with exercise and develop healthy life styles. The relationship between healthy eating, energy and movement is explored through a variety of activities. Children develop understanding and mastery of the use of their senses in sports and games.

**Personal Social Health Education (PSHE)** Children explore how to keep fit and healthy linking positive habits, eating a variety of food and recognising how our bodies change (eg pulse, developing fitness) with different types of exercise. Children use mindfulness breathing and recognise how they can be healthy and develop independent skills. Children learn how to look after themselves and others.

## 7. Assessment and Recording

Assessment is an integral part of teaching and enables staff to meet the needs of all pupils. Teachers use a range of methods in order to monitor and assess pupil progress, including:

- High quality questioning and discussion during lessons
- Working with focus groups of children
- On the spot verbal feedback
- Feedback from support staff
- Intervention groups – support and challenge
- Regularly updating Target Tracker
- Termly assessments

### Early Years Foundation Stage

Pupils' progress is constantly reviewed through ongoing observations children. Wow moments are recorded on Tapestry. Children's next steps are identified and targeted through

adult led activities. Knowledge & Understanding achievements are updated termly on Target Tracker.

### Key Stage 1

Continuous assessments are carried out by all teachers ensuring that progress is regularly recorded and monitored. Teachers will record progress for each pupil related to Science on Target Tracker every term. Assessments are made over a period of time and based on the evidence of more than one activity. Practical assessments will be carried out either at the end of a topic or at both the beginning and end of a topic as teachers see fit. Teachers will discuss which assessments to use and the assessment task will be consistent across both classes in a Year Group. It is the responsibility of the class teacher to ensure a highlighted copy of the assessment page is in each pupil's Science book for each topic, indicating the pupil's understanding as *Working Towards*, *Working At* or *Working Above* National expectations. It is the responsibility of the Science Lead (Mrs Cook) to ensure teachers are carrying out regular practical assessments that are relevant to the topic and demonstrate appropriate 'Working Scientifically' and investigative skills. The majority of pupils will be expected to reach 'Working At' by the end of Key Stage 1. In deciding on a pupil's level of attainment at the end of KS1, teachers will judge which description level best fits the pupil's performance.

## 8. Resources

The Science Coordinator will be responsible for ordering, maintaining and organising resources.

A bank of practical resources are kept in each classroom. Further resources relating to key whole school topics are kept in Science cupboards which are located in the Communication Hub and Willow Class.

We use 'White Rose Science' created by White Rose Education as a base for the scheme of work for Science in Key Stage 1.

The school is a member of the Oxford Science Hub and we regularly access resources from the Primary Science Teaching Trust and Explorify.

## Health and Safety

Carrington Infant School subscribes to CLEAPSS ([www.cleapss.org.uk](http://www.cleapss.org.uk)) which provides advice on health and safety for science including model risk assessments, information sheets, a helpline service and advice in the event of an emergency.

All children will be made aware of the relevance to health & safety when undertaking work in science. Staff will carry out Risk Assessments when taking pupils on outings and visits or

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introducing activities in our school grounds as well as making visual checks of all equipment before use.

Equipment is available for each class and is easily accessible. Teachers have access to the CLEAPSS document outlining safety guidelines and appropriate activities. Teachers will adhere to these guidelines both when planning and carrying out practical activities for Science lessons. Teachers will evaluate practical activities and make note of the suitability and any potential changes for future reference.

### *Risk Assessment*

The school has adopted 'model' or 'general' risk assessments published by CLEAPSS which each member of staff adapts to:

- local circumstances
- the activity
- resources
- the needs of individual pupils

When planning lessons, staff will note down any relevant and important health & safety information and if necessary, reference relevant CLEAPSS guidance. If the proposed activities or equipment are not covered by a model risk assessment in relevant CLEAPSS guides, a Special Risk Assessment must be obtained by contacting CLEAPSS

## 9. Roles and Responsibilities

Children's progress will be monitored and evaluated regularly, and evidence of attainment will be recorded, based upon teacher assessment against the criteria of the National Curriculum. These evaluations, and data analysis, will be used to inform future planning within the class and year group.

The Teaching and Learning Governor will regularly visit to monitor and evaluate the Science curriculum and support children in their learning. The Teaching and Learning Governor will report back to the governing body through the teaching and learning committee.

The Science Lead will report to the governing body updating them on the progress of the subject. This policy will be reviewed regularly by the Headteacher, staff and governors.

Parents will be informed of their child's progress in Science during parent consultation evenings in the autumn term, spring term and the end of year report.

## 10. Inclusion

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In line with the school's inclusion policy, the Science Lead and class teachers will work together with the SENDco to ensure that all pupils have work planned to meet their specific needs. This may involve further adaptations, individual teaching from a teacher/support staff and intervention groups. Science lessons will be inclusive of all children. Where required, pupils will have work planned to meet their specific needs. We support our SEND pupils by pre-teaching subject specific vocabulary and adapting work where appropriate. A range of equipment is available for practical investigations. Methods of recording are adapted as required to support children with a range of needs.

### **Entitlement**

All children are entitled to access a well taught and adapted Science curriculum. It is accepted that factors such as gender, ethnicity, English as an additional language, disability, exceptional ability and social circumstance may affect a child's ability to learn. Various teaching strategies will therefore be employed to alleviate the impact of such factors. The teaching of science should be reflective of a multicultural society. The implementation of this policy is the responsibility of all teaching staff.

### **11. Links to Other Policies**

- Assessment
- Behaviour
- SEND

### **12. Monitoring and Review**

The Science Lead, Curriculum & Assessment Lead and the Teaching and Learning Governor will monitor the approaches detailed in this policy, in line with school policy and assessment procedures.