

# Children First Learning Partnership



Inspiring Excellence Together



## Science Policy 2023

*The CFLP English Policy in respect of the Children First Learning Partnership has been discussed and adopted by the Local Advisory Board.*

*Chair of Local Advisory Board:*

*Mrs. S Blood*

*Responsible Officer:*

*Headteacher – Mr L Anderson-Pugh*

*Agreed and ratified by the Local Advisory Board on:*

*July 2023*

*To be reviewed:*

*July 2025*



## Reginald Mitchell Primary School

### Science Policy 2023

The overall intent of our school curriculum is to:

**Recognise uniqueness:** in our pupils, staff, resources and whole school community.

**Be Inclusive:** recognising learning styles, learning needs at all levels and providing solutions to any barriers to learning we encounter.

**Engage and Inspire:** through knowledge rich, highly enriched, progressive and purposeful contexts.

**Promote Aspiration:** offering challenge, accountability and responsibility for their learning.

**Create citizens of the Future:** who thrive on responsibility, see difference as a strength of our community and use democracy to embed their own values and beliefs.

Our Science curriculum strives to drive all of these intentions and links very closely to the achievement and development of them all.

#### Intent

To develop children's substantive knowledge and disciplinary skills of science, inspiring and igniting curiosity about the processes and methods and how it helps to shape the future.

We aim to achieve this through allowing the children:

- To research significant scientists and figures and to understand their impact
- To be curious and ask questions about science and to interpret their findings
- To use scientific evidence to back up their explanations and judgements
- To be able to apply scientific skills when undertaking practical work
- To use scientific skills to be able to reason and solve problems

#### Implementation

We use the **Development Matters and National Curriculum** documents to inform the delivery of science at Reginald Mitchell Primary School. Science is taught discretely following the units as set out in the National Curriculum.

Our progression documents show a build-up of knowledge and skills across the following areas:

In the Early Years science content is delivered through the 'Understanding of the World' strand of the EYFS curriculum. This involves guiding children to make sense of the natural world around them through opportunities to explore and look closely, use equipment and tools safely, question why things happen and test ideas. They are assessed according to the Development Matters objectives.

Through the EYFS framework, pupils should be taught to:

### **Communication and Language (ELG)**

- Make comments about what they have heard and ask questions to clarify their understanding

### **Personal, Social and Emotional Development (ELG)**

- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

### **Understanding the World (ELG)**

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Through the National curriculum, our progression documents show a build-up of knowledge and skills across the following areas:

KS1 – The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

Lower KS2 – The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

Upper KS2 - The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw

conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

Our whole school science progression documents cover the following areas

- Working scientifically strands
- A build-up of knowledge and skills across each unit
- Key vocabulary to be used during each science unit

## **Unit/Lesson**

### **Unit**

At Reginald Mitchell Primary School we follow the science progression documents to ensure that both substantive and disciplinary skills are progressive within each year group and therefore across the school. These are supported by the Education in Focus Science documents to support staff in planning and delivering an effective scientific curriculum. Each unit of work is divided into a number of sequential components which lead to a composite task which allows the children to demonstrate their developing knowledge and skills.

### **Lesson**

Each lesson will start with a revisit/review/retrieval on/of the previous learning which links to the current learning. This will be an opportunity for staff to assess where there may be gaps in learning which needs to be addressed. Previous and new vocabulary will be introduced and discussed to ensure all children can access the lesson. Learning outcomes and success criteria are shared so that children are aware of the context of their learning and therefore be successful. Staff will teach knowledge and skills to enable the children to ask questions and apply their knowledge and skills before reflecting on their learning and reaching conclusions (Review/Plenary)

At Reginald Mitchell Primary School there is a mastery approach to science. All children will start their learning from the same expectation and where necessary children will be scaffolded throughout the lesson to enable their success.

Working walls and a range of other resources, including key vocabulary, are evident within the learning environment and are referred to and used by both staff and children within the lessons.

### **Assessment**

Assessment within science is based upon many sources of evidence. This will allow for judgements to be evidenced based and secure regarding what pupils know and remember in relation to our planned curriculum outcomes in all year groups. Teachers will use a variety of assessment methods which they will select carefully based upon the quality of evidence it will provide within science and will avoid additional workload for pupils and children.

Formative assessment takes many forms in science.

### **AfL**

Teachers and subject leaders value the voice of the pupil. They will observe pupils carefully, question purposefully and listen and use pupil responses in all lessons and the day-to-day life of the school to adapt teaching in the moment, lesson to lesson and unit to unit to ensure learning is secure and built upon in a sequential and progressive manner. In many lessons and where appropriate, purposefully planned explicit

retrieval opportunities will also be used to ensure pupils have secured component knowledge and are ready to move on and make links to previous learning.

### **Evidence Me**

A wealth of other evidence such as practical hands-on learning, behaviours, drama, performances and group work, will also be captured on evidence me to support teacher assessment judgements. Photos of learning will be printed and included in children's book when needed. At Reginald Mitchell Primary School we value talk, practical exploration and pupil responses as a method of ensuring all pupils can access our science curriculum and demonstrate the gains they are making simply and effectively.

Summative assessment in science may in some year groups be available to aid the judgements teachers make about what pupils know and remember:

Pupil's work, end of unit quizzes and composite outcomes

Pupils, will where appropriate, capture their understanding, evaluate their own learning or rehearse and secure knowledge in a written form. This will be used effectively to evidence progress and avoid creating barriers to learning for any group of pupils in our school, for example due to their age or any additional needs they may have.

### **Teacher Assessment Judgements**

Children will be judged as meeting curriculum expectations in science on a termly basis using evidence from activities listed above. This judgement will be working at, below or at a greater depth within the year group/key stage unit they have completed. This will be captured on our Arbor system and used to inform curriculum design and developments, resourcing, training and leadership monitoring activities. Teacher assessment judgements in science will be shared with parents on an annual basis via their annual report.

### **Role of Leaders**

- Ensure the delivery of a progressive science curriculum
- Monitor compliance, quality and standards in science
- Respond quickly and in a supportive manner to overcome barriers to implementation and impact.
- Use assessment information to provide effective CPD and challenge.
- Provide clear updates to the Local Advisory Board, Head Teacher and SLT.

Version	Review Date	Changes Made