

# Christ Church CofE Primary – Science

## Overview

### Rationale

“In the same way, let your light shine before others, that they may see your good deeds and glorify your Father in heaven.” – Matthew 5:16



At Christ Church, we believe that every child is uniquely created in the image of God and deserves a curriculum that enables them to flourish academically, socially, morally, and spiritually. Through our SHINE values – to be Successful, Happy, Included, Nurtured, and Enriched – we seek to educate the whole child, helping them to discover their gifts and use them to make a positive difference in the world.

Science plays a vital role in this vision. It inspires curiosity about the natural world, deepens children’s understanding of living things, materials, and physical phenomena, and shows how scientific discoveries continue to shape our lives today. Through science, children develop empathy, resilience, and respect for diversity. They also gain skills of enquiry, analysis, and critical thinking which prepare them to become knowledgeable, reflective, and responsible citizens.

### The Christ Church CofE Offer

Science at Christ Church is taught through the White Rose Science scheme, which is ambitious, coherent, and evidence-led. It meets and

exceeds the National Curriculum while remaining firmly rooted in our Christian ethos and SHINE values.

We believe that science enables children to understand their place in God's world and to recognise the responsibilities they hold towards others. Through the study of different scientific concepts, children explore the richness of the natural world and develop a strong moral compass.

Our science curriculum promotes cultural capital and supports children in understanding British values of democracy, the rule of law, individual liberty, and mutual respect. It also broadens horizons by introducing children to global scientific advancements, diverse voices, and different interpretations of scientific evidence.

## **Curriculum Design**

Our curriculum is deliberately sequenced to ensure that children build cumulative knowledge over time. From EYFS through Key Stage 2, children revisit and deepen their learning in meaningful ways, developing secure scientific understanding and the ability to make connections across topics and themes.

In the Early Years, children begin to explore ideas of the natural and physical world through play, storytelling, role-play, visitors, and first-hand experiences. This lays the foundation for future scientific enquiry. As children progress through school, they learn to think and work like scientists: asking questions, evaluating evidence, and forming evidence-based conclusions.

Our approach is driven by our children developing their:

- **Cumulative knowledge** – children revisit and build on prior learning from EYFS through KS2.

- **Progression and connection** – Learning is sequenced to build secure understanding of scientific concepts and show cause, consequence, and change.
- **Substantive and disciplinary knowledge** – children learn both key scientific facts/concepts and how scientists work.
- **Vocabulary development** – Scientific vocabulary (Tier 2 and Tier 3) is taught explicitly, sequentially, and cumulatively.
- **Inclusivity** – High expectations are set for all children, with adaptations for SEND and EAL to ensure access and challenge.

Big Ideas - Substantive Concepts				
Living Things	Materials	Physical Phenomena	Human Body	The Earth and Beyond
<p>This focuses on the characteristics of living things, their life cycles, and how they interact with their environments.</p> <p>It also includes the classification of plants and animals.</p>	<p>This focuses on the properties of different materials and their uses.</p> <p>It includes changes of state, dissolving, and separating mixtures.</p>	<p>This focuses on forces, light, sound, electricity, and magnetism.</p> <p>It involves understanding how things move and interact with each other.</p>	<p>This focuses on the human body, its systems, and how to stay healthy.</p> <p>It includes the study of diet, exercise, and a healthy lifestyle.</p>	<p>This focuses on the solar system, seasons, and the environment.</p> <p>It involves understanding natural cycles and our impact on the planet.</p>

Disciplinary Knowledge						
Scientific Enquiry	Observing:	Questioning:	Predicting:	Investigating :	Analyzing:	Communicating
<p>This involves a structured and relevant enquiry that sets pupils on a scientific quest.</p> <p>Using learning question that gives the pupil the opportunity to attempt and apply their understanding of the substantive knowledge (what pupils KNOW) in a disciplinary</p>	<p>Using all five senses to gather information about the world.</p>	<p>Formulating questions that can be investigated.</p>	<p>Making a logical guess about what will happen based on prior knowledge.</p>	<p>Designing and carrying out experiments to test predictions.</p>	<p>Looking at data and evidence to find patterns and draw conclusions.</p>	<p>: Sharing findings with others through writing, speaking, and diagrams.</p>

way (what pupils DO).   These cumulate towards a more expert understanding of the big ideas.						
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## Structure and Planning

Science is taught through carefully sequenced units that build upon prior learning and prepare children for future study. Each lesson revisits previous knowledge, introduces new content, and provides opportunities for practice and application. Knowledge organisers, retrieval practice, and structured questioning ensure that learning is embedded securely in long-term memory.

Our science curriculum is consciously taught in half-termly blocks. Science is delivered this way to maximise learning time and secure consistently high outcomes. This meets the needs of the children by supporting their learning and understanding, development of skills as well as reducing cognitive load. It also enables children to acquire depth in their learning by revisiting and building on existing knowledge.

Educational visits and enrichment experiences further bring science to life, giving children the opportunity to engage directly with scientific sources, artefacts, and places of significance. This provides opportunities for enquiry beyond the classroom.

## Special Educational Needs and Disabilities

At Christ Church, science is inclusive and accessible to all. Lessons are adapted to meet the needs of children with SEND, including those in our Focus Provision. Strategies such as visual supports, scaffolded tasks, structured questioning, and sensory-friendly approaches enable every child to participate fully.

Children with English as an additional language are supported through language scaffolds, ensuring that they can access the curriculum and

develop the vocabulary needed to succeed. High expectations are maintained for all children, with appropriate levels of support and challenge.

## **Curriculum Impact**

Through our science curriculum, children gain knowledge, skills, and understanding that prepare them for life beyond Christ Church. They develop curiosity about the natural world, a love of learning, and the ability to think critically about human experience. Over time, children become more confident, reflective, and independent in their enquiry.

Assessment is ongoing and purposeful, with teachers using questioning, discussion, and retrieval activities to check understanding. Summative assessments ensure progression across year groups, while pupil voice allows children to reflect on their learning and articulate what they have remembered.

Ultimately, the impact of our science curriculum is seen in the way children leave Christ Church: as resilient, responsible children who understand the importance of science in shaping the world and who are equipped to make a positive difference in society.

## **Roles and Responsibilities**

### **The Role of Headteacher**

The Headteacher is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the curriculum, and those subjects which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual children will be met.
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed

- They manage requests to withdraw children from curriculum subjects, where appropriate
- The school's procedures for assessment meet all legal requirements
- Proper provision is in place for children with different abilities and needs, including children with SEN

### **The Role of all other staff**

Staff are responsible for delivering a high-quality, broad, and balanced curriculum that meets or exceeds National Curriculum expectations. They will:

- Implement the curriculum in line with this policy, ensuring all children make excellent progress.
- Be responsive to children's needs, making learning personal and relevant.
- Promote strong moral values and encourage children to make a positive impact locally and globally.
- Uphold the highest standards, recognising that our children deserve the very best.

### **The Role of Families**

Parents and carers play a vital role in supporting the curriculum by:

- Encouraging a positive attitude towards learning at home and in school.
- Engaging with the school's curriculum through parents' evenings and communications.
- Supporting home learning and reading to reinforce classroom learning.
- Communicating with the school about any factors affecting their child's ability to access the curriculum.
- Promoting curiosity, resilience, and high aspirations in their child's learning journey.

### **The Role of Governors**

Governors support and monitor the effectiveness of the curriculum by:

- Championing an ambitious, inclusive, and enriching curriculum for all children.
- Monitoring the impact of the curriculum on pupil progress and outcomes through reports, data, and school visits.
- Supporting staff development focused on curriculum design, delivery, and subject leadership.
- Ensuring the curriculum is broad, balanced, and aligned with statutory requirements.
- Holding leaders to account for the coherence, quality, and impact of the curriculum across all phases and subjects.