



# THAMES VIEW JUNIOR SCHOOL SCIENCE POLICY AND GUIDANCE

Updated September 2025



## **Intent**

The 2014 national curriculum for science aims to ensure that all pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- Are equipped with the scientific skills required to understand the uses and implications of science, today and for the future.

We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this.

At Thames View Junior School, we aim to equip children with the knowledge required to use and implement Science today, tomorrow and for their futures. A high-quality Science education provides foundations for understanding the world. Therefore, building key knowledge and understanding concepts within our Science curriculum, we ensure our pupils recognise the power of rational explanation, develop a sense of curiosity about natural phenomena and develop respect for the environment and living things, including themselves and each other.

At Thames View Junior School, we are committed to delivering a high-quality science education that inspires curiosity and promotes a love for learning about the world. Our science policy is built around the principles of the White Rose Science Scheme, which provides a structured and progressive approach to teaching science, ensuring that all students have the opportunity to develop essential scientific knowledge and skills.

## **Implementation**

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all pupils are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned and arranged topic blocks by the class teacher, to have a project-based approach. This is a strategy to enable the achievement of a greater depth of knowledge.
- Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom.
- Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all pupils keep up.

- We build upon the knowledge and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.
- Events, such as project days provide a broader provision encouraging the acquisition and application of knowledge and skills. These are purposeful, linking with the knowledge being taught in class and where appropriate involve the wider community.

## Vision and Aims

Our vision for science education at Thames View Junior School is to cultivate inquisitive, knowledgeable, and responsible learners. We aim to:

- Foster a sense of wonder and curiosity about the natural world.
- Equip students with the skills and knowledge to explore scientific concepts and processes.
- Encourage critical thinking, problem-solving, and collaboration in scientific investigations.
- Provide an inclusive environment that meets the diverse needs of all learners.

## Impact

The approach at Thames View Junior School results in a fun, engaging, high-quality science education that provides children with the foundations and knowledge for understanding the world. Our engagement with the local environment ensures that children learn through varied and first hand experiences of the world around them. Through various workshops, trips and interactions, children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children learn the possibilities for careers in science, from a range of different scientists from various backgrounds, allowing all children to feel they are scientists and capable of achieving. Through a positive caring environment, we provide the opportunity for children to reach their full potential.

## Curriculum Framework

### 1. Alignment with National Curriculum

- Our science curriculum is aligned with the National Curriculum for England and follows the **White Rose Science Scheme**, covering the core areas of:
  - **Biology:** Life processes, ecosystems, and human biology.
  - **Chemistry:** Properties of materials and changes in substances.
  - **Physics:** Forces, energy, light, sound, and Earth sciences.
- We ensure that all students engage with a wide range of scientific topics throughout their time at school.

### 2. Progression and Continuity

- The curriculum is designed to promote progression and continuity, with clear learning objectives for each year group.
- Yearly topics build upon prior knowledge, ensuring a coherent understanding of scientific concepts.

### 3. Cross-Curricular Links

- Science is integrated with other subjects, such as mathematics and literacy, to create a cohesive learning experience.

- Opportunities for cross-curricular projects will be identified to reinforce scientific learning and promote collaborative skills.

## **Teaching and Learning**

### **1. Active Learning**

- We prioritise active learning strategies that engage students in hands-on experiments, investigations, and practical applications of scientific concepts.
- Students are encouraged to ask questions, hypothesize, and analyze results, fostering a culture of inquiry and exploration.

### **2. Adaptation**

- Teaching methods and resources will be adapted to cater to the diverse needs of all students, including those with special educational needs and disabilities (SEND).
- Teachers will employ a variety of instructional strategies to ensure that every child can access the curriculum.

### **3. Use of Technology**

- Technology will be utilised to enhance learning, including interactive simulations, digital resources, and data collection tools.
- Students will have access to a variety of online resources to support their scientific investigations and research.

## **Assessment and Monitoring**

### **1. Assessment**

- Regular formative assessments will be conducted to monitor student progress and understanding, providing feedback to inform future teaching.
- Summative assessments will occur at the end of each unit to evaluate students' knowledge and skills.

### **2. Monitoring**

- The STEM team will monitor the implementation of the science curriculum and assess the quality of teaching and learning through lesson observations, student work scrutiny, and feedback from staff and students.
- The impact of the science curriculum on student outcomes will be regularly evaluated, informing future planning and development.

## **Resources**

### **1. Physical Resources**

- A variety of high-quality resources, including scientific equipment, and materials for practical experiments, will be provided to support teaching and learning.
- Classrooms will be equipped with the necessary tools for effective science education.

### **2. Professional Development**

- Ongoing professional development opportunities will be provided for staff to enhance their understanding of science teaching and the White Rose Science Scheme.
- Staff will be encouraged to attend workshops, training sessions, and network with other schools to share best practices.

## **Health and Safety**

- All science activities will be conducted following strict health and safety guidelines. Safety checks will be completed prior to experiments, and appropriate safety measures will be implemented.
- Students will be taught the importance of safety in the laboratory and how to use equipment responsibly.

## **Parental and Community Engagement**

- Parents will be informed about the science curriculum and encouraged to support their children's learning at home through various activities and resources.
- Opportunities for community involvement, such as science fairs, guest speakers, and field trips, will be explored to enrich the science curriculum.

## **Review and Evaluation**

- This science policy will be reviewed annually to ensure its effectiveness and relevance. Feedback from staff, students, and parents will be considered to make necessary updates.
- The impact of the science curriculum on student engagement and learning outcomes will be evaluated regularly to inform future planning.

## **Conclusion**

At Thames View Junior School, we are dedicated to providing a high-quality science education that ignites curiosity, encourages inquiry, and prepares students to be informed and responsible citizens. By implementing the White Rose Science Scheme, we aim to foster a generation of enthusiastic and knowledgeable scientists who are ready to explore and understand the world around them.

Date of Policy: September 2025

Policy Review Date: September 2026

