



## Science

### **Intent**

It is Thrapston Primary School's intention in Science to develop in all young people a lifelong curiosity and interest in the sciences. When planning for the science curriculum, we intend for children to have the opportunity, wherever possible, to learn through varied systematic investigations, leading to them being equipped for life to ask and answer scientific questions about the world around them. As children progress through the year groups, they build on their skills in working scientifically, as well as on their scientific knowledge, as they develop greater independence in planning and carrying out fair and comparative tests to answer a range of scientific questions.

The Science scheme of work ensures that children have a varied, progressive and well-mapped-out science curriculum that provides the opportunity for progression across the full breadth of the science national curriculum for KS1 and KS2. Thrapston Primary School allows children to have opportunities to develop their knowledge and understanding through granting them new experiences they would not have access otherwise. We are very lucky in our school to have a dedicated Science Lab which is timetabled for KS 2 children and available to KS1 if appropriate.

Furthermore, we organise Science WOW days, where we can make sure we give the children an extended opportunity to develop their understanding and love of Science. The children of Thrapston Primary gain these opportunities using our own Science where the children can partake in creative experiments and investigations to practically experience science outside of the classroom. We aim to develop our children's cultural capital through this investigating, observing and questioning to enhance their ability to explore the world around them.



## Implementation

The acquisition of key scientific knowledge is an integral part of our science lessons. Linked knowledge organisers enable children to learn and retain the important, useful and powerful vocabulary and knowledge contained within each unit. The progression of skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance within lessons. The progression of these skills is set out in the Science Progression Map. Each lesson has a clear focus. Scientific knowledge and enquiry skills are developed with increasing depth and challenge as children move through the year groups. They complete investigations and hands-on activities while gaining the scientific knowledge for each unit. Interwoven into the teaching sequence are key assessment questions. These allow teachers to assess children's levels of understanding at various points in the lesson. They also enable opportunities to recap concepts where necessary. The sequence of lessons helps to embed scientific knowledge and skills, with each lesson building on previous learning. There is also the opportunity to regularly review



and evaluate children's understanding. Activities are effectively differentiated or scaffolded so that all children have an appropriate level of support and challenge. Our detailed lesson plans include adult guidance to ensure that teachers are equipped with secure scientific subject knowledge, enabling them to deliver high-quality teaching and learning opportunities while making them aware of possible scientific misconceptions.

In addition to this, we feel that it is important to hear students voices in Science so we can help develop their own curiosities and allow them to influence their own learning. We are achieving this using class Science ambassadors. These children are given the opportunity to share their views, opinions and ideas from their year groups so that we can help cater to what they want to learn and adapt our teaching to support them. Within our school we promote a love for science in a dedicated Science week. Each year in Science week, we enable every year group to design and partake in their own investigations that can link to real world issues or help them learn life skills that enhance their intrigue and passion to explore their world. Furthermore, our school plans creative and educational trips and visits from real experts to grant the children the opportunity to experience the wonders of nature. By giving the children the chance to participate in these visits they will be inspired to learn and create lasting memories to fuel a love for Science.

## Impact

In Science, progress is measured through a child's ability to know more, remember more and explain more. This is measured in different ways in our units. The use of questioning ensures opportunities are built into the lesson for ongoing formative assessment. Attainment and progress can be measured across the school using our assessment quizzes. The impact of using the full range of resources included in the science unit will also be seen across the school with an increase in the profile of science.

The learning environment across the school will be more consistent with science technical vocabulary displayed, spoken and used by all learners. Whole-school and parental engagement will be improved through the use of open mornings and shared use of knowledge organisers. Children who feel confident in their science knowledge and enquiry skills will be excited about science, show that they are actively curious to learn more and will see the relevance of what they learn in science lessons to real-life situations and the importance of science in the real world.