

Science: The Wray Common Way!

At Wray Common we are passionate about developing confident and empowered Scientists who have a broad knowledge base to draw from and who are equipped with the investigative skills needed to find out more. We do this through inspiring curiosity in the children about the world around them and ensuring that lessons are as practical and engaging as possible, whilst linking Science to many other areas of the curriculum and topics. The use of scientific language is paramount, as is the ability to record results in a suitable format so we therefore foster strong links with both English and Mathematics. We make sure that the children understand what it means to be a scientist and work scientifically, progressing their skills from Year 1 to Year 6.



The love of Science starts informally within the Reception year where learning is centred on the world around them and children are encouraged to explore and discover in a variety of ways both indoors and outside.

In Years 1 and 2 the children continue to develop their curiosity and are encouraged to ask questions and develop their observational skills. They show their findings pictorially and also begin to record data in more formal ways. Scientific investigation skills are broken down into manageable sections and the children practice these whilst developing their knowledge of Plants, Animals, Habitats, Materials and Seasonal change.



During Years 3 and 4 the children are expected to become more independent in their ability to; carry out practical enquiries, fair tests, make careful observations and record their results formally in a variety of ways such as labelled diagrams, tables and bar charts. The children also develop their ability to explain and draw conclusions from their findings. Children are taught to use scientific equipment, such as thermometers and data loggers which they use in their investigations. The conceptual understanding of Magnets, Light, Rocks, States of matter, Sound and Electricity are developed, as well as continuing to build upon their knowledge of Plants, Animals and Habitats.

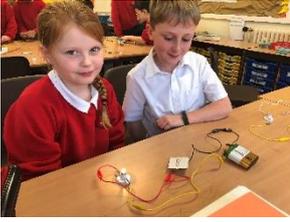
In Years 5 and 6 the children encounter more complex and challenging concepts, such as Earth and Space, Forces and Evolution, as well as broadening their knowledge of Plants, Animals, Habitats, Electricity, Light and Materials. When revisiting themes, children are expected to lead their own practical investigations - developing their own scientific questions, planning how to manipulate variables to be changed or controlled as well as recording results in tables and graphs, from which they are able to draw their own considered conclusions using scientific evidence and terminology.



	Question
	Prediction/ Hypothesis
	Plan
	Equipment
	Method
	Results
	Conclusions

Throughout their time at Wray Common, children become independent in carrying out meaningful investigations in order to answer their self-posed scientific questions. To help the children achieve this, we use scientific 'symbols' to represent the parts of an experiment or a science skill. We also teach the children to use a 'post-it planning' template to enable them to structure their investigations - whereby they record (either using post-its or coloured pens) what they could change in their investigation (ie the independent variable), what they could measure or observe (ie the dependent variable) and how they will keep their test fair. This structure allows the children to be supported yet independent and moves them towards more formal written reports as they progress.

Planning	
Our question is...	
We could change	We could measure/observe
We will change	We will measure/observe
We will keep these the same...	
When I change:	What will happen to:
Why?	



As well as making all Science lessons as practical and engaging as possible, we have a programme of events which enhance our Science curriculum such as Receptions trip to Ladyland farm, Year 1's trip to Nower Lodge, Year 3's trip to Wakehurst and Year 5's visit from The Space Dome. Visits also include a Fossil workshop for Year 3 as well as a Bones and muscles talk from a Physiotherapist. Year 4 benefit from an

Electrical safety talk from an Electrician. Year 6 take part in a Heart dissection demonstration and practical as well as a Drug safety talk from The Guildford Flames Ice Hockey team. Also selected Year 5 children also benefit from a twilight Forensics crime solving evening at Reigate Grammar School. We firmly believe that exposing the children to Science in the 'real world' will give them an understanding of why Science is incredibly useful and potentially inspire their future career choices.



All of the opportunities and experiences mentioned above were noted and praised as part of our Primary Science Quality Mark.

