



Our Science Vision at Wells-next-the-Sea Primary and Nursery School

“Science has changed our lives and is vital to the world’s future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena.”

- Department for Education (2015) *National Curriculum in England: science programmes of study.*

At Wells-next-the-Sea Primary and Nursery School (WPNS), we acknowledge the importance of Science within our curriculum and its rightful place as one of the core subjects that we teach. Through our Science teaching and learning, we encourage and support children in becoming curious and motivated learners, who are equipped with and able to use the scientific skills and understanding needed to make sense of the world.

In order to make Science learning meaningful and memorable for all children, the use of scientific enquiry and enquiry-based teaching approaches to Science are implemented wherever possible into Science lessons, to make links between and develop simultaneously, children’s substantive and disciplinary knowledge. Scientific enquiries will start with a question, in order to encourage children to become curious and enthusiastic about finding out the answer. These questions will either be adult or child generated, depending on the age and progression of scientific skills. Practical Science work allows children to develop their disciplinary knowledge and provides them with opportunities to link their findings of an investigation to the substantive knowledge behind it and really ‘bring Science to life’.

Science is taught weekly at Wells-next-the-Sea Primary and Nursery School, so that key scientific skills and concepts are constantly being revisited and built upon throughout the year and throughout a child’s school career. Scientific learning is recorded in individual Science books so that there is a clear learning journey for all pupils. Other scientific experiences may also be recorded in class floor books, as a memorable learning event during an academic year and recording of Science knowledge may take a variety of different forms for the EYFS curriculum.

Vocabulary-rich lessons are another important part of Science teaching and learning at WPNS. Children are explicitly taught subject-specific vocabulary and supported to use it within their scientific work, including during discussions surrounding practical enquiries. Knowledge Organisers are used within all scientific topics to scaffold children’s learning of key concepts and also to remind them of important vocabulary that they will be learning and using within a topic. Children of all abilities are expected to use scientific vocabulary within their Science learning.

Teachers are expected to differentiate Science lessons where appropriate, to ensure that all children are able to make progress within a lesson and reach their scientific potential. As with English and Maths, activities are carefully chosen to develop particular scientific skills and understanding within lessons. Teachers also make use of regular Assessment for Learning to inform their teaching and also track pupils’ progress throughout the year in the form of assessment grids. Teachers are also aware of gaps in knowledge and skills that children may have, due to the pandemic school closures. These gaps have been identified and a plan has been put in place in order to close these gaps effectively, still through providing children with practical, meaningful learning experiences.

We are working hard to raise the profile of Science within the school community, to demonstrate the value of the subject to our pupils and also the scientific opportunities and experiences that are available in their local community and further afield. We have a school Science board, which focuses on practical Science taking place in all classes, from Nursery to Year 6, with a focus on the fact that we are all scientists finding out things about the world. It also has a monthly scientist focus, which enables children to be exposed to a range of scientists and job occupations that they otherwise may not have heard of. It also provides good opportunities to showcase the exceptional work of women scientists, as well as scientists of different ethnicities and backgrounds.

We have strong links to the local high school, Alderman Peel, where we often (pre Covid-19) participate in scientific activities such as visiting their Science fair and using their laboratories and resources. The Science leads at both schools meet regularly to discuss Science and ensure that the transition from primary to secondary is smooth in terms of children’s scientific knowledge and understanding. We take part in British Science Week annually and also enjoy welcoming scientific visitors into our school, such as the Royal Institute.

Our Science Curriculum

INTENT	At WPNS...	Children will be encouraged and supported to become curious and motivated learners, who are able to develop and apply enquiry skills and their understanding of scientific concepts within a range of different contexts, both independently and collaboratively.								
	In Science..	All children will be given the opportunity to develop and consolidate their scientific subject knowledge and understanding by applying enquiry skills ,from the ‘working scientifically’ section of the National Curriculum, to a range of different scientific concepts.	All children, of any ability, will be given the opportunity to learn, explore and access practical and meaningful Science lessons and activities, through effective and robust teacher assessment. Teachers will assess gaps in children’s knowledge and skills development and adapt planning and teaching accordingly to close these gaps.	Children will understand the importance of Science in everyday life and be exposed to different scientific experiences and opportunities that will raise the profile of Science within the school. Children will be provided with meaningful cross curricular links e.g. to Maths, English and Mental Health/Wellbeing, as well as inspiring activities from school and community links to develop a love of Science.						

IMPLEMENTATION	Classroom	Enquiry-based activities	Scientific vocabulary	Collaborative and independent work	Recording/analysing results	Real life contexts	High level questioning	Challenge and support	Encourage curiosity and exploration	Cross-curricular links	
	Events	British Science Week		Guest visitors		Educational visits			Real life application		
	Parental engagement	Curiosity Cafes			Class Dojo		Celebration assemblies			End of Year Reports	
	Community	Royal Institution			APHS Links				Local visitors/businesses		
	Training	Online CPD opportunities			Science staff meetings			Science Subject Leader Network meetings		Link Governor meetings	

IMPACT	Great outcomes	Children who have a good understanding of key scientific concepts and skills and are able to build on and apply this understanding as they progress through the school.	Children who are curious about the world around them and who are equipped with the skills to develop their own lines of enquiry about a particular concept, through exposure to a range of enquiry-based activities to develop these skills.				Children who deeply enjoy and are passionate about Science and appreciate its importance in our modern society and the scientific opportunities that are available to them.				
	Evaluation	Year 6 and Year 2 statutory assessment	Termly teacher assessment	Pupil voice	Subject leader monitoring	Curriculum coverage monitoring	Formative assessment within lessons	Assessment for Learning to begin units	Internal moderation	Gaps analysis from assessment grids	

