



EXPLORING SCIENCE

Intent • Implementation • Impact

Pembroke is a school where we encourage everyone to be **inspired** through faith in God and to live by Christian values so that our **teaching and learning** is of the highest quality, our whole community **flourishes** and we reflect all that is worthy of **praise**.

INTENT	How does science inspire our children?	Our rural landscape which surrounds our village school provides much for the developing scientist to explore! We want to develop children who are curious about what, how and why things happen in the world around them. Science is so much more than remembering key facts and knowledge; skills such as planning an investigation, obtaining and presenting evidence, and evaluating results are taught through the topics we study in school. They will use the vocabulary of a scientist to observe, record, present and explain what they find out. When our children work scientifically, we want them to make sense of the information they discover whether that is through practical demonstrations, experiments or by using secondary sources. We value the questions they ask themselves to develop their understanding and support them to identify where errors in their observations, data presentation or evaluation could lead to misinterpretation. Where possible, we try to make use of local resources such as visiting the River Arrow for pond dipping, our own grounds, liaising with High School science departments or going further afield to science centres in Cardiff.	
IMPLEMENTATION	How is our teaching and learning in science organised?	A two-year rolling programme ensures that science skills, knowledge and understanding are built on and developed as children progress through the school. In the Early Years, children have a six half-termly science questions to explore; as they move through the school, these questions narrow to half-termly or termly units per year. These questions might start with 'What is the best material to make a chair for baby bear?' in the Reception year and end with 'Why can't I roll my tongue?' in Year 6. We use objectives from Focus Education® which help children to develop how to <i>work scientifically</i> and learn about <i>living things, their habitats and animals, including humans, states of matter, forces, sound and electricity</i>. Our learning behaviours are interwoven with these so that we enable children to engage in the subject with growing independence and curiosity so that they can make connections across different areas. Where there are natural links across skills in other subjects such as maths – for example, drawing, plotting and interpreting graphs – we will use the science to help give these purpose.	
IMPACT	How does science help our children to flourish and be worthy of praise?	Our children are eager to discover how and why things happen in the world. They enjoy the discoveries they experience and think deeply about the reasons which might explain what they see. They enjoy finding out and using new vocabulary. As children move through the school, they observe, measure and collect data with growing independence and accuracy demonstrating ways to present this so that they can explain it scientifically. They understand the concepts of fair testing and finding proof. When our children make connections with science across the curriculum and in life, for example learning about rainforest habitats in geography or understanding why chocolate might melt in your hand, we know our teaching has been a success.	