Subject on a Page for Science

Why you teach it - your purpose of study

At Audlem, we aim to teach children the knowledge, methods, processes and uses of science. They are encouraged to understand how science can be used to explain what is happening, make predictions and form conclusions. Our science curriculum planning is based on the National Curriculum 2014 where the key foundational knowledge and concepts are built on. Science has changed our lives and we place an importance on children learning and developing a curiosity about the world around them. We want them to understand that science is the study of the world around us. We want to encourage them to become detectives who explore science in an exciting way. We teach children to be open minded and enquiring thinkers who understand cause and effect. We want them to understand how to observe, describe and experiment. We encourage first hand experiences through planning STEM based experiments where possible and bringing in specialists for in-school workshops. All of these will bring the children as close as possible to understanding science. We teach that science is an integral part of our world and has links to many other subject areas including maths, English and computing.

DESIGN

What you teach - your programme(s) of study

We believe that high-quality, hand on science lessons will inspire children to think innovatively and develop their natural curiosity. Our science curriculum aims to encourage children to develop a coherent knowledge and understanding of the world around them.

Pupils should be clear what the intended outcomes are and have a means to measure their own work against this. In science, children are expected to be reflective about their thinking. This should be made meaningful and as real as possible throughout the process, with evidence of age-related verbal and written reflection.

Science at Audlem is developed to equip pupils to think critically and ask questions. They will learn about specific people and events in science that have changed the way we live, as well as developing a chronology of Britain's science both historically and recent.

DELIVERY

How you teach it - your delivery of the above

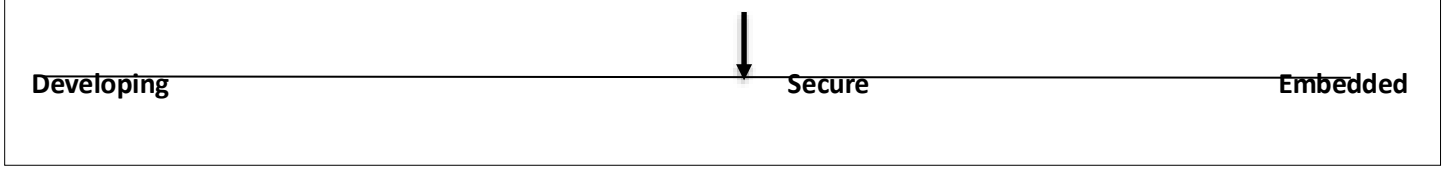
Teachers use Plymouth Science to plan science carefully using the objectives that form our medium-term plans, which are then transferred onto our curriculum map. These lessons are specifically designed to encourage the development and understanding of working scientifically. Teachers are able to see what skills and knowledge have been taught previously. From this they can create a glossary mat which outlines knowledge and skills (including vocabulary) that children should master. Teachers are then able to design a cycle of lessons for each subject, which plans for progression and depth. Teachers also plan lessons that can be carried out collaboratively with other year groups. They will create a way for science to be displayed or shared to celebrate the pupil's work.

ACHIEVEMENT

So what - your evaluations of the above

Our science curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. In addition, we measure the impact of our curriculum through: a reflection on standards achieved against the planned outcomes; a celebration of learning for each term which demonstrates progression across the school; assessment of the skills and knowledge with our progressive statements and pupil discussions about their learning.

On the scale below rate where you believe this subject currently stands in terms of your overall curriculum



Previous Improvement Actions and Impact	Current Improvement Actions	Future Improvement Actions
• STEM week – Maths, D&T, ***Science***, and Computing. Due to COVID lock down restrictions, this was not as successful as previous STEM weeks. • Pupil voice showed that children enjoy the experimental side of science and feel inspired when they get to experiment for themselves. • British Science Week 2024- children were able to take part in science activities and develop an understanding of how Science affects our everyday life. As well as see how various careers can be linked to Science.	• For Plymouth Science to be used by all teachers to plan high quality science lessons which enable the children to 'work scientifically' as well as develop their scientific vocabulary and technical understanding. • To ensure that children use scientific language in their books and have clear progressive knowledge. We need to work on substantive and disciplinary knowledge in science. This involves understanding science as a tradition of enquiry (working scientifically). • Core skills are to be used effectively across the curriculum. Skills taught in the lessons will be evident in the learning objectives displayed in class and on planning. This will be linked to clear success criteria which are shared with the children. Monitored through learning walks, lesson observations and termly planning scrutiny. Linked to book scrutiny sampling. • Further develop cross curricular links, particularly with Maths, English and Computing through Science. Integrating writing opportunities and ICT to use in science subject lessons. This should be evident in lesson plans and topic books. This will be monitored through book scrutiny on a termly basis. • To embed the use of science working walls with clear vocabulary banks to enhance children's understanding of specific scientific vocabulary.	• Further embed subject knowledge through the teaching of science to a variety of year groups. • Utilise knowledge and resources from Brine MAT colleagues. • Utilise the outdoor space at the Turnpike field in Audlem Village. Liaise with Anthony Hadfield re; Forest Schools. • Knowledge mats continue to be stuck into books and displayed on working walls for regular referral during teaching to promote 'sticky knowledge'. • Class Science Books to show pupil voice during investigations and experiments. As well as, a way to record class experiments.