

Usworth Colliery Primary School Curriculum Vision

Enjoy achieving together...to be the best that we can be!

At Usworth Colliery, we have high expectations and aspirations for all. We pride ourselves on providing a safe, happy and healthy environment which supports our children to become confident, caring and independent learners. As a highly inclusive school, we support all our learners to access an education pathway that supports them to build on their starting points, considers their social and emotional needs and challenges them to thrive. Our ethos and core values, along with our engaging curriculum, prepares our children for modern day life and their next stage of learning. We aim to deliver a curriculum that supports our children to be ready for the real world with opportunities to problem solve, develop resilience, be inspired, curious and creative and develop aspirations for their futures. We are determined that our children will make strong progress regardless of their starting points through a well sequenced, broad and balanced curriculum. Oracy development is at the heart of the entire curriculum: children use key stem sentences to develop language structures and progression is designed across the curriculum in the Physical, Linguistic, Cognitive and Social & Emotional strands. Lessons are crafted to support pupils to build on prior knowledge, revisit key learning, practise key skills and make links, to help them learn more and remember more. We actively encourage respectful, positive relationships for all and promote British Values to maintain a strong whole school community.

Safety, Resilience, Care, Aspiration

Science INTENT

At Usworth Colliery Primary School, our pupils learn best through experiential learning therefore our Science curriculum is built around this.

Our pupils learn Science through real-life, hands-on experiences that broaden and raise aspirations as well as support the acquisition of new Scientific disciplinary and substantive knowledge. We want our children to be curious and have a thirst for knowledge throughout their time at our school leading then to become life-long learners. Our Science curriculum fosters a healthy curiosity in children about our world and beyond and promotes their respect for the living and non-living. We endeavour to challenge and inspire pupils through the use of a variety of fun and exciting learning opportunities, both in and out of the classroom through the use of: practical enquiry, scientific visits, visitors, STEM week, STEM competitions and learning about past and current real-life scientists and their discoveries.

Our intention is to ensure that we support the development of strong basic skills within both the 'working scientifically' element and the 'knowledge of Science' and that these are developed progressively across school to ensure deep knowledge and understanding. We want our children to learn the possibilities for careers in Science and we aim to achieve this by learning from and working alongside professionals, ensuring that children have access to positive role models within the field of Science from the wider local community. From this exposure to a range of different Scientists from various backgrounds, all children feel they are Scientists and are capable of achieving in the subject and in their future lives.

We INTEND that our curriculum will:

Chemistry	Support pupils in their understanding of the properties, composition and structure of materials, as well as reversible and irreversible changes and states of matter.
Physics	Support pupils in their understanding of energy, forces, electricity and waves (sound and light), with Key Stage 2 looking at Earth and Space.
Biology	Support pupils in their understanding of all living things including humans, animals and plants.
Working Scientifically	Support children in their understanding and discovery of the working scientifically skills:

... IMPLEMENTATION

The National Curriculum is used to ensure correct coverage and progression of Science throughout Key Stage 1 and 2 whilst the Early Years Framework is used for Reception. Base and Thrive units use the Equals Curriculum in line with the needs of the children. The curriculum overview is clearly sectioned into the 3 main Science disciplines: Chemistry, Biology and Physics. These disciplines are revisited over the years to ensure children are building upon prior knowledge, remembering more and therefore learning more. Science in Reception is recorded using Seesaw and in Key Stage 1, floor books are used to showcase learning. Key Stage 2 pupils are expected to record their work more formally in preparation for working more independently.

Staff pose precise and challenging questions to support and assess the children which will also enable learning to be inclusive. They begin and end each unit with a retrieval task, with lessons in-between start with a 'Bright Idea' to instil curiosity. Pupils are offered a wide range of extra-curricular activities, visits, trips and visitors to inspire them. These complement and broaden the curriculum as well as the outdoor learning opportunities we offer through Forest School. Pupils will also learn about scientists which may inspire them in their future choices which links directly to one of our core school values – aspiration.

Real-world Opportunities:

- To encourage the love of Science in our everyday life, we at UCPS:**
- Have been a part of the 'Science is my Superpower' programme at Newcastle High School for Girls.
 - Have close links with the NUSTEM programme at Northumbria University.
 - Take part in British Science Week.
 - Explore our local area, wild garden and Forest School.
 - Use practical equipment at every opportunity.
 - Run regular Eco-Council and School Council meetings to give pupils a voice.
 - Ensure sustainability runs through all of our lessons.

Big ideas:

Substantive Knowledge:

- Pupils learn the facts, including specific subject knowledge and explicit vocabulary used to learn about the content.
- Eg. The Earth is the planet on which we live.
Eg. Liquids change state when they are heated.

Disciplinary Knowledge:

- Pupils have a chance to consider how scientific knowledge originates. They become experts by thinking like a scientist.
- Eg. Observing the Sun and its impact on Earth.
- Eg. Testing the temperature needed to change the state of a liquid.

Working Scientifically:

- Pupils build key skills around scientific enquiry. They pose and answer questions, explore the controlled and independent variable, gather and collect data and then present the information accurately.



... IMPACT

The impact of our Science curriculum at Usworth Colliery Primary School is clear. Science education supports our pupils to achieve their academic and social potential. By the end of Y6, all of our children should have met the key outcomes of our Science curriculum and therefore acquired the skills and knowledge to help lay the foundations for understanding the world and becoming successful problem solvers with a thirst for knowledge. Our engagement with the local area and the school environment ensures that children learn through varied and first-hand experiences of the world around them. They will also have developed a keen interest and understanding of how Science and STEM impacts and shapes our everyday lives, and how a career within STEM is accessible regardless to them.

The IMPACT of our curriculum will create pupils who:

Observant	Observe relationships and patterns in the world around me and draw conclusions from them.
Interested	Collect and record data in different ways and interpret that data.
Caring	Ask questions about the world around me and investigate them.
Curious	Make predictions and evaluate them based on evidence.
Confident	Use scientific equipment to accurately measure and then use scientific vocabulary to explain my thoughts and findings.
Aspirational	Are excited about Science and all of the opportunities it can bring.