

Science Intent statement

Intent: Introduction, Vision and Philosophy

We aim for all pupils to: Develop knowledge and understanding of the nature, processes and methods of science through different types of scientific enquiries and observations that help them to answer scientific questions about the world around them. Our aim will allow children to become equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. Our curriculum designed to enable children to ask scientific questions and deepen their scientific knowledge and conceptual understanding. They will be able to plan and carry out scientific investigations with equipment, including use of the outdoor environment, correctly and effectively.

We believe a high-quality science education provides the foundations for understanding the world. Science has changed our lives and is vital to the world's future prosperity, that 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. They should be encouraged to use skills to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Implementation: What does Science look like at Weston Schools Federation?

We believe our pupils should be equipped with the skills and knowledge to describe their scientific learning, by using technical terminology accurately and precisely. They should build up an extended vocabulary, knowledge and apply this throughout their learning journey. A variety of teaching and learning styles are used in science lessons with the aim of developing children's knowledge, understanding and skills. This could be through whole class teaching, investigation or research based activities. Children are encouraged to ask and answer scientific questions. Science lessons provide the opportunity for data to be collected and technology to be used. Children may also take part in role play activities and discussions. Wherever possible, children are engaged in real scientific problem-solving activities.

Each science topic is divided and organised into a sequenced knowledge progression for every half term with a focus on the progression of working scientifically. Each unit is planned with prior learning and the unit outcomes at the heart of learning process. We are committed to ensure all our children's needs are met and our planning reflects our knowledge of the children and guarantees learning is tailored to meet and respond to the children's individual ability needs. The aim is to provide appropriate differentiated support to enable children to achieve success by ensuring their varied needs are met. At the start of a topic, teachers ensure that the prior learning knowledge is secure and that all children have a good understanding

before moving on. Key vocabulary is displayed, and teachers are responsible for continually updating their classroom working wall.

Year Groups	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS						
Year 1	Animals including humans	Classification Animals	Everyday materials – sorting and classifying according to properties	Longitudinal study through the year	Plants	Longitudinal study through the year
Year 2	Materials Uses of everyday materials – sorting and classifying	Food Chains and habitats	Healthy Humans	Plants – grow sunflowers. Microhabitat		
Year 3 Animal homes unit across the year	Animals and Skeletons	Forces and Magnets	Light	Rocks and Soils	Plants	
Year 4 Animal homes unit across the year	Electricity	Digestion	Classification	Respecting our Environment	Sound	States of Matter
Year 5	Forces		Properties of Materials and Changing States	Earth and Space	Living things and habitats - Life Cycles	Animals incl. humans
Year 6	Heart and lungs Beware corporal punishment...	Evolution- Survival of the fittest	Classification African animals and plants great and small	Light Blackouts for air-raids and periscopes for war submarines		Electricity How do you power a theme park?

Impact: Evidence and Assessment

The teaching of science offers children many opportunities to examine some of the fundamental questions in life e.g. the evolution of living things, and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of ‘awe and wonder’ regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children can discuss, for example the effects of unhealthy eating and the moral questions involved in the issue. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the earth’s resources. Science teaches children about the reasons why people are different and through developing the children’s knowledge and understanding of physical and environmental factors, it promotes respect for other people and the wider world around them.

Teachers are required throughout lesson to mark and feedback link to children’s understanding. At the end of each unit teachers are required to use DC pro to assess children’s outcomes and progression. This will inform future planning and progression throughout year groups. Science leaders regularly monitor planning, DC Pro and evidence in books as well as conducting pupil conferencing to evaluate the impact of the science enquiry lead curriculum.