

West Park Primary School

Science Policy

Rationale

Science has changed our lives and is vital to the world's future. All pupils should be taught essential aspects of the knowledge, methods and uses of science. Through building up a body of key foundational knowledge and concepts, they 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 understand how key foundational knowledge and concepts can be used for explanation of what is occurring, prediction of how things will behave, and analysis of causes. This foundational understanding should be consolidated through appreciation of specific applications in society bringing their learning into a real-world understanding.

Curriculum Intent

At West Park Primary School, our children are **SCIENTISTS!** Our **intent** is to give every child a broad and balanced Science curriculum which enables them to confidently explore and discover what is around them, so that they have a deeper understanding of the world we live in. We want our children to love science. We want them to have no limits to what their ambitions are and grow up wanting to be astronauts, forensic scientists, toxicologists or microbiologists. We want our children to remember their science lessons in our school, to cherish these memories and embrace the scientific opportunities they are presented with!

To achieve this, it involves exciting, practical hands-on experiences that encourage curiosity and questioning. Our aim is that these stimulating and challenging experiences help every child secure and extend their scientific knowledge and vocabulary, as well as promoting a love and thirst for learning. At West Park, we have a coherently planned and sequenced curriculum which has been carefully designed and developed with the need of every child at the centre of what we do.

As a Visible Learning School our approach encourages children to be resilient and reflective scientists who question, wonder, think and make connections within their learning.

We want to equip our children with not only the minimum statutory requirements of the science National Curriculum but to prepare them for the opportunities, responsibilities and experiences of later life.

Implementation

At West Park, Science topics are taught within each year group in accordance with the National Curriculum.

- Topics are blocked to allow children to focus on developing their knowledge and skills, studying each topic in depth.

- Every year group will build upon the learning from prior year groups therefore developing depth of understanding and progression of skills.
- Teachers promote enjoyment of science and plan engaging lessons.
- Children explore, question, predict, plan, carry out investigations and observations as well as conclude their findings.
- West Park Science Principles underpin our aims and support us to plan and deliver stimulating lessons (have fun, investigate, learn new things, ask questions and work together)
- Children present their findings and learning using science specific language, observations and diagrams.
- In order to support children in their ability to ‘know more and remember more’ there are regular opportunities to review the learning taken place in previous topics as well as previous lessons.
- At the start of each topic children will review previous learning and will have the opportunity to share what they already know about a current topic.
- Effective CPD and standardisation opportunities are available to staff to ensure high levels of confidence and knowledge are maintained.
- Effective use of education visits and visitors are planned, to enrich and enhance the pupil’s learning experiences within the Science curriculum.
- Teachers use highly effective assessment for learning in each lesson to ensure misconceptions are highlighted and addressed.
- Effective modelling by teachers ensures that children are able to achieve their learning intention, with misconceptions addressed within it.
- Through using a range of assessment tools, differentiation is facilitated by teachers, to ensure that each pupil can access the Science curriculum.
- Pupils are regularly given the opportunity for self or peer assessment, which will then be used to inform planning, preparation, differentiation and address misconceptions within that lesson, or for the next lesson.
- Cross-curricular links are planned for, with other subjects such as Maths, English and Computing.

EYFS

The Early Years Foundation Stage Curriculum supports children’s understanding of Science through the planning and teaching of ‘Understanding the World.’ Children find out about objects, materials and living things using all of their senses looking at similarities, differences, patterns and change. Both the environment and skilled practitioners foster curiosity and encourage explorative play, children are motivated to ask questions about why things happen and how things work. Our children are encouraged to use their natural environment around them to explore. Children enjoy spending time outdoors exploring mini-beasts and their habitats, observing the changing seasons, plants and animals.

Assessment

Teachers assess their class’s learning throughout each lesson and adapt learning accordingly. Students are assessed at the end of each year as WTS (working towards), EXS (expected) or GDS (greater depth) in their scheme of learning. In EYFS children are judged to have met or not met the Early learning Goal.

Science also seeks to stretch and challenge students, especially high attainers:

- Use all of their senses for observation in investigations
- Work independently.
- Think in an abstract way.
- Communicate well in discussion.
- Can apply what is learnt in the lesson to everyday phenomenon.
- Can recognise patterns from graphs of data.
- Can carry out and explain why they are using a fair test.
- Can apply learning to investigations.
- Interested in learning more and explores further.

Health and Safety at West Park

We follow the guidelines as outlined in 'Be Safe' published by the Association for Science Education. Health and safety objectives for the children are promoted around the school. During practical investigations in science, health and safety is an important consideration and pupils are taught:

- about hazards, risks and risk control;
- to recognise hazards, assess consequent risks and take steps to control the risks to themselves and others;
- to use information to assess the immediate and cumulative risks;
- to manage their environment to ensure the health and safety of themselves and others;
- to explain the steps they take to control risks.

We enable all pupils to have access to the full range of activities involved in learning science. Where children are to participate in activities outside the classroom we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

Impact

Our successful approach to teaching of science at West Park Primary school will result in fun, engaging high-quality science education that provides children with the foundation for understanding the world that they can take with them once they complete their primary education. We provide children with the knowledge, skills and understanding they need for their future. Our school motto is *Be the Best you can be!* And through our curriculum we enable this to happen.

Children at West Park will:

- Demonstrate a love of science and an interest in further study and work in this field.
- Be confident, resilient, independent learners with a sound scientific understanding.

- Retain knowledge that is pertinent to Science with a real-life context.
- Question ideas and reflect upon knowledge.
- Work collaboratively and practically to investigate and experiment.
- Achieve age related expectations in Science at the end of their cohort year.

Jo Dickens

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