

KnMPA Science Policy

Purpose of Study

Science at Knighton Mead aims to provide children with a strong understanding and a curiosity of the world around them. It intends to stimulate a child's curiosity in finding out why things happen and how, by teaching methods of enquiry and investigation to stimulate creative thought. By introducing a strong connection between science and the past, present and future lives of our children, they can clearly see and understand the relevance and impact that science has on their everyday lives. This ensures all children leave Knighton Mead knowledgeable, skilled and ready for the next step in their scientific journey.

Intent Statement

At Knighton Mead, we aim to ensure that all pupils develop a broad, enriched and relevant understanding of science through an engaging, progressive curriculum. All children are encouraged and supported to develop and use a range of skills including questioning, reasoning and curiosity.

National Curriculum Aims

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Enrichment

At Knighton Mead we aim to provide a range of enrichment opportunities for the children to ensure they receive an engaging and purposeful curriculum. In Science we aim to do this through:

- Enrichment through offsite visits and local walks
- Good quality and extensive resources.

Teaching and Learning Styles

Science is taught as a discrete subject weekly across all year groups, using the Twinkl Plan It scheme of work alongside other high-quality curriculum resources such as White Rose and Explorify. Knighton Mead's Science curriculum is designed to be progressive both in terms of knowledge and skills and is carefully structured to build on prior learning. In Science, the children are encouraged to take part in a range of practical activities that promote a love of science and the development of 'Working

Scientifically' skills. This learning starts in the Early Years Foundation Stage with a strong focus on investigation and 'Understanding the World', through carefully selected topics which reflect the children's interests.

Our science coverage is as follows:

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Everyday materials	Uses of everyday materials	Light	States of matter	Forces	Electricity
Seasonal changes (autumn and winter)	Living things and their habitats	Animals Including Humans	Sound	Living things and their habitats	Animals including humans
Animals including humans	Animals including humans	Rocks	Electricity	Earth and Space	Light
Plants	Plants	Plants	Animals including humans	Properties and changes of materials	Living things and their habitats
Seasonal changes (spring and summer)	The Environment	Forces and Magnets	Living things and their habitats	Animals including humans	Evolution and inheritance

Scientific enquiry

Scientific enquiry and investigation are a strong focus in our science lessons. Teachers embed 'Working Scientifically' objectives into their lessons, using the Science skills progression document to pinpoint the focus of their year group. Children conduct different types of enquiries throughout the year. These enquiry types are pattern seeking, fair and comparative tests, research, identifying and classifying, and observing over time.

Assessment

A range of formative and summative assessment strategies are used. At the start of each unit, pupils complete an 'Entry Ticket' to ensure that prior knowledge is secure. This also allows teachers to adapt planning to meet the needs of pupils and address gaps or misconceptions. Judgements about pupil attainment are formed from teacher observations, work completed in books and on Tapestry and post-unit assessment tasks. Assessments are peer moderated by staff and attainment is reported to parents via reports at the end of the year.



Resources

All resources are stored centrally in the resources room with resources organised in topic boxes. Staff are responsible for informing the Science subject leader when extra resources are needed, when there are breakages and when consumables are running low. The Science subject leader will update and replenish resources when needed. These are stock checked at the end of the year.

Monitoring and Review

The Science subject leader is responsible for monitoring the standards of children's work and the quality of teaching. Science is monitored by sampling planning and children's work, conducting pupil and staff questionnaires, and visiting lessons to observe teaching and learning. The subject leader also seeks and shares opportunities for professional development and is responsible for reviewing and further developing the Science curriculum.