KINGS MEADOW PRIMARY SCHOOL

Science Policy

1. INTRODUCTION

This document is one of a series that make up the whole CRACKING curriculum statement for the school. It states the school philosophy about the contribution which Science makes to our pupils' education and the way in which the National Curriculum and Science are delivered in practice. In effect it is an expanded policy statement and together with the long, medium and short-term thematic planning constitutes the school scheme of work.

2. INTENT

Why is Science important:

Science is an important and valued subject because it is highly relevant; an integral part of daily life, from cooking and checking the weather, to recycling and nature walks.

Through science, our lives are changed for the better. We believe all pupils should be taught about the role that science plays in positive advancements, as well as scientific knowledge, methods and processes.

Advances in science are continuing to transform our world at lightning speed and we need to do our best to prepare our pupils for a future we can only imagine.

At Kings Meadow we believe that:

- Science motivates pupils to explore the world around them and to change it for the better;
- Sustainable science teaches pupils about the important interaction between human activity and the environment and how we can make a positive impact;
- Science encourages pupils to ask how and why questions, with the aim of finding out the answers;
- Science leads pupils on a journey of discovery as they link facts to form a coherent narrative about the world;
- Science teaches pupils about interdependence and the inter-connectiveness of life.

Through our CRACKING curriculum it is our intention for our children to:

- 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;
- Equip them with the scientific knowledge required to understand the **uses and implications** of science, today and for the future;
- Stimulate their curiosity about the things they observe, experience and explore relating to the world around them;
- Use their experiences to develop understanding of key scientific ideas;
- Use models to represent things that they cannot directly experience;
- Develop skills of sorting, classifying, planning, predicting, asking questions, making inferences, concluding and evaluating through investigative activities;
- Make informed decisions based on evidence and their own experiences, and to apply scientific knowledge to new situations;
- Practise mathematical skills (counting, ordering numbers, measuring, drawing and interpreting graphs and charts) in real contexts;
- To develop effective ways of thinking, finding out about and communicating scientific ideas and information;
- To develop their enjoyment and interest in science;
- To enable pupils to effectively communicate scientific ideas by using scientific vocabulary;
- To develop positive attitudes which encourage collaborative learning and perseverance.

3. IMPLEMENTATION

When is Science taught:

Science is taught through discrete lessons from our planned 'Science Curriculum' which uses 'Developing Experts' as the primary resources for teaching and learning. It is also delivered through our CRACKING curriculum thematic units when appropriate to make connections between for example: the use of mathematical skills in the presentation and interpretation of data and the development of speaking and listening skills through groups and class discussion

The attached overview (Appendix 1) maps out which thematic units and the Long-Term Plan (Appendix 2) clearly shows the objectives taught in specific year groups through our discrete science lessons.

How is Science taught:

Science is taught through working scientifically (involving practical investigation, observation and application skills, enquiry and research) alongside specific taught subject knowledge. The 'Developing Experts' resource employs a specific STEM and careers-led approach to learning,

utilising the skills of scientific experts within their area of expertise to illustrate how scientific knowledge and understanding is put into practice in the world of work. Scientific language is developed alongside the learning being embedded within the units of work. Review and revision take place on a regular basis through the use of key questions or 'Rocket Thinking' activities. Learning takes place both inside and outside the classroom as our children gain in their understanding through the immersion in a real scientific setting. As a result of the outstanding teaching and learning experiences including visits and workshops, pupils have excellent opportunities to develop their scientific knowledge. Pupils' contributions through Pupil Voice and surveys mean that their experiences meet their individual needs, interests and aspirations.

All pupils are encouraged to reach their full potential through the provision of varied opportunities. We recognise that our CRACKING curriculum planning must allow pupils to gain a progressively deeper understanding and competency as they move through the school.

Resources:

The resources for Science topics are housed in the cupboards in the corridor between The Link area and the hall. They are organised into theme boxes e.g. Electricity/Forces, etc.

Adaptive Teaching:

Adaptive teaching in Primary Science focuses on meeting the varied needs of all pupils, including those with Special Educational Needs & Disabilities (SEND) and the More Able, ensuring that every pupil can engage with scientific concepts at their own level. For instance, when exploring a topic like the Water Cycle, the teacher might use a range of resources such as interactive experiments, videos, or diagrams to cater to different learning preferences. Pupils who need extra support could work with simplified text or be given more time for practical activities, while those who are more able might be encouraged to design their own experiments or delve deeper into related scientific concepts. To further promote inclusivity, pupils could present their understanding in multiple formats—such as drawing a diagram, creating a model, or explaining the process in a video. This approach accommodates diverse learning styles, fostering curiosity and critical thinking, allowing all pupils to develop a strong foundation in science regardless of their starting point.

Oracy in Science:

Oracy in our science lessons is essential for fostering pupils' understanding and communication of scientific concepts. By engaging in discussions, explanations, and debates, our children can clarify their thinking and develop a deeper comprehension of scientific ideas. For instance, when conducting experiments, pupils might verbally explain their hypotheses, describe their observations, and share their conclusions with peers. This helps reinforce their learning and encourages them to articulate complex concepts in accessible language. Oracy also promotes active listening, as pupils need to respond to questions, discuss results, and consider alternative viewpoints. Through structured oracy activities, such as group discussions, presentations, and reasoning through scientific phenomena, pupils can

develop critical thinking skills and the ability to express scientific ideas clearly, which are essential for their future academic growth.

Health and Safety:

Teachers should refer to the CLEAPS website when planning for practical learning in science and all safety guidance should be followed. When planning trips all teachers are required to gain permission from the head teacher before confirming a booking. The teachers must also complete a risk assessment. Teachers should refer to the school's Health and Safety Policy / Trips and Visits Policy and the safety procedures recommended in the DfE 'Health & Safety of Pupils on Education Visits' guidelines.

4. IMPACT

In order to measure the impact of our teaching and learning, planning and work audits are carried out by the subject leader ensuring coverage and development of skills in line with specific year group expectations. The subject leader also assesses children's understanding and skills through observation and discussion of their work (Pupil Voice). In Key Stage 2 the children are also involved in self-evaluating their learning.

Work is marked thoroughly in line with the school's Marking Policy.

Formative and summative assessment is used to track children's learning against the statutory objectives and progress against the expectations are recorded termly on our 'Insight Tracking' system.

In order to ensure continued improvement in the teaching and learning of science, the subject leader is responsible for supporting colleagues in the teaching of Science by informing them of current developments in the subject and by providing a strategic lead and direction for the subject in school. The subject leader is also responsible for evaluating strengths and weaknesses in the subject and identifying areas for improvement and development. Subject leadership time enables the opportunity to fulfil their role by reviewing medium term plans, monitoring children's work and displays and identifying next steps for the subject. The subject leader also attends termly meetings as part of the Southport Learning Partnership / North West Primary Science Hub working in collaboration to improve Science teaching in schools across the local area.

Reviewed	January 2025
Approved by Governing Body	January 2025
Next Review	January 2028 or sooner if required.