Intent, Implementation and Impact of Science at Hatch Ride

At Hatch Ride, we appreciate the importance of providing our pupils with a meaningful and insightful scientific experience. We aim to ensure that our children develop a passion for understanding the world around them by building a knowledge of key concepts and scientific wonders. We like to promote a sense of care and responsibility in our children so they may grow to help care and preserve our precious planet as well as develop their own contextual abilities in areas such as explanation, experimentation, problem solving and discovery.

INTENT

We are committed to providing a high-quality science education that:

- Follows the National Curriculum: Delivers a curriculum that covers all National Curriculum requirements for science in Key Stages 1 and 2, ensuring breadth and depth of learning
- Builds foundational knowledge: Ensures all pupils, acquire the essential scientific knowledge and vocabulary needed to explore the rich, scientific world we live in asnd builds an understanding of a range of scientific happenings in everyday life
- Develops scientific skills: Equips pupils with the ability to think critically, ask questions, make observations, conduct investigations, and draw evidence-based conclusions
- Develops scientific vocabulary and uses it appropriately
- Promotes diversity and inclusion: Celebrates the contributions of diverse scientists from different backgrounds, genders, and cultures, helping pupils understand that science is for everyone
- Prepares for the future: Gives pupils the knowledge they need to take advantage of opportunities, responsibilities and experiences in later life, including potential careers in scientific fields

IMPLEMENTATION

Curriculum

- A long-term progression map aligned with the National Curriculum that builds knowledge and enquiry skills year on year.
- Medium- and short-term planning that breaks learning into coherent, well-sequenced lessons with clear learning objectives
- Use of Knowledge Organisers for each topic to support learning, vocabulary and retrieval
- Lessons designed around key scientific concepts with opportunities to revisit, secure, and deepen understanding.
- The explicit teaching of scientific vocabulary, models, diagrams, and representations to secure conceptual clarity.
- Use of an in-house ‘Quick Science’ scheme of work to revisit and revise science learning from the previous year
- Study of scientists from diverse backgrounds, including women scientists, scientists of colour, and scientists from different cultures and time periods
- Trips, visits and an annual Science Week planned to enrich the science curriculum

Practical Work & Investigations

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- Regular opportunities for hands-on enquiry, including observing over time, pattern seeking, classifying and grouping, comparative and fair testing.
- Use of a range of scientific equipment, supporting pupils in collecting accurate, reliable data.
- Teacher modelling of scientific thinking, prediction, and evaluation.
- Structured activities that help pupils plan investigations, control variables, make measurements, record findings, and draw evidence-based conclusions.
- Opportunities for pupils to work independently and collaboratively, fostering resilience and problem-solving.
- Use of the extensive school grounds to study habitats, flora and fauna and seasons

Assessment

- Formative assessment embedded in every lesson through questioning, observation, discussion, retrieval tasks, and reviewing pupils' work.
- Use of summative assessments at end of topic to evaluate cumulative knowledge and scientific enquiry skills.
- Assessment trackers aligned to the National Curriculum to monitor progress.
- Quick Science sessions to check retention of prior learning
- Feedback that is immediate, constructive, and designed to move learning forward.

Professional Development

- Ongoing CPD for staff to strengthen subject knowledge, assessment practices, and the delivery of practical science.

Differentiation, Support and Challenge

- Reasonable adjustments or adaptations to the curriculum or teaching for specific pupils' needs are planned
- Additional scaffolding and support materials provided as needed
- Higher order thinking promoted using probing questions

IMPACT

The impact of our science curriculum is measured through:

Pupil Outcomes

- Pupils demonstrate secure scientific knowledge and can articulate key concepts.
- Pupils show strong scientific enquiry skills and can apply them independently in new contexts.
- Pupils recognise the importance of science in everyday life
- Pupils have an understanding of scientific discoveries throughout history and their significance to the modern world
- Pupils show enthusiasm for the subject.

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Progress & Attainment

- Assessment information shows progression across year groups in both knowledge and the “working scientifically” skills.
- Gaps in understanding are identified early and addressed through targeted support.
- Pupils, including those with SEND, make at least expected progress from their starting points.

Quality of Learning & Teaching

- Book looks, lesson visits, and pupil voice show:
  - Well-sequenced learning
  - Frequent practical work
  - Accurate use of scientific vocabulary
  - Increasing independence in enquiry

Long-Term Impact

- Pupils leave primary school as curious, confident, and capable learners, prepared for KS3 science.
- They demonstrate resilience, critical thinking, and the ability to make informed decisions based on evidence.
- They have knowledge of the potential for careers in science