



### 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

Intent	Implementation	Impact
<p>At HPS, our intent is to inspire every child to explore Allah's creation with curiosity, integrity, and gratitude. We want children to see themselves as scientists who question, investigate, and reflect on the world around them.</p> <p>The staff at HPS ensure that children are exposed to quality first teaching and engaging learning experiences, where children:</p> <ul style="list-style-type: none"><li>• Build excellence in knowledge and skills across biology, chemistry, and physics, enabling pupils to apply their learning with confidence.</li><li>• Encourage integrity through fair testing, honest enquiry, and clear communication of findings.</li><li>• Foster gratitude and respect for the wonders of creation, the environment, and all living things.</li><li>• Promote service and compassion by linking science to real-world issues such as health, sustainability, and community wellbeing.</li><li>• Through this approach, children grow not only as confident learners of science but also as responsible citizens who live out their values in the service of others.</li></ul> <p>At HPS it our intent that our children are encouraged to explore confidently, and to ask questions which allow them to develop and deepen their understanding of the world we live in. They learn to question and discuss science-based issues that may affect their own lives, and the future of the world, and are exposed to a diverse range of important scientists whose discoveries have impacted the way that we live.</p>	<p>At HPS, science is taught through enquiry-based lessons where children work practically and think as scientists. Each unit begins with retrieval activities to build on prior knowledge and address misconceptions. Investigative learning is planned each half term, promoting our values.</p> <p>Working Scientifically skills are embedded in each topic, so that children revisit and develop these skills throughout their time at school. As outlined in our progressions map, topics such as Animals Including Humans and Materials are revisited across KS1 and KS2. In addition to this, year groups are paired with concepts first taught at a basic level, before being revisited at a more advanced and deeper level.</p> <p>Adaptation ensures all children, can achieve success</p> <p>Throughout their time at HPS children are provided with opportunities to further develop their scientific understanding of the world around them through trips, workshops and talks.</p>	<p>The impact of our Science curriculum is that children leave HPS with not only secure scientific knowledge and skills, but also the values needed to use them responsibly. They grow into curious, confident learners who can think critically, communicate clearly, and make connections between science and the world around them. Children also understand the scientific process of investigation — making predictions, carrying out methods, and drawing conclusions — and how this links to real-world problems and solutions.</p> <p><b>By the end of their time at HPS, children:</b></p> <ul style="list-style-type: none"><li>• Achieve excellence in scientific knowledge, vocabulary, and enquiry skills, preparing them for future study and lifelong learning.</li><li>• Demonstrate integrity by investigating fairly, recording results honestly, and respecting evidence even when outcomes differ from expectations.</li><li>• Show gratitude and respect for Allah's creation, recognising their duty to care for the environment and value all living things.</li><li>• Apply science in the service of their community, considering issues such as sustainability, health, and technology with compassion for others.</li></ul> <p>Through regular assessment, pupil voice, enrichment opportunities, and cross-curricular links, we ensure that all children make strong progress, feel valued as scientists, and develop the character to use science for the good of society and the wider world.</p>

## Knowledge and Skills

Knowledge and skills in science refers to the theories and concepts making up Science alongside the method of posing questions and carrying out scientific enquiries. Children will progressively build this knowledge as they move through the school, and this knowledge should be based on children's existing knowledge of concepts in science, building gradually to ensure that children retain and build on their understanding. In addition to this, science knowledge organisers will be used to support with the understanding of science knowledge and skills

In **Early Years**, science is explored through the 'Understanding the World' Learning Goal, where children are introduced to science indirectly through activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them.

In **Key Stage One**, children should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping, and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information.

In **Key Stage Two**, (we endeavour) children develop a deeper understanding of a wide range of scientific ideas, using key scientific enquiry skills. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.

### Creativity

Our curriculum for science aims to stimulate children's creativity and curiosity through use of enquiry based learning. Children are encouraged to ask questions and think actively about the ways in which new learning links to prior knowledge.

At HPS curriculum planning supports and encourages natural links between science and other areas of the curriculum including mathematics, art and DT.

Alongside this, our science curriculum plays a key part in our ongoing work towards sustainability and respecting the environment around us

Throughout their learning of science, children are provided with opportunities to express themselves in a variety of ways and children are encouraged to be creative in this. Thus, pupils are enabled to realise their own strengths and gain a feeling of achievement, boosting their confidence.

### Assessment

At HPS we understand the importance of assessment to inform the tracking of pupil progress, planning next steps, reporting and involving parents and pupils as part of this. It is an integral part of the Teaching and Learning process.

Teachers make assessments through:

- regular marking of work
- analysing errors and picking up on misconceptions
- explicit teaching of scientific enquiry through investigations
- effective use of science knowledge organisers
- questions and answers throughout the lesson
- facilitating and listening to discussions
- making observations
- formative and summative assessment

Children will be assessed at the end of each term against the objectives set out each unit, and an overall judgement will be made as to whether children are working towards, secure or above national curriculum expectations

**Our Curriculum follows our school values: service, gratitude, excellence, compassion, integrity, respect**