



Science Subject Intent Statement

Curious

Caring

Creative

Courageous

Intent

At Archibald First School, we believe that a high-quality science curriculum will not only help children develop the skills and knowledge that they require but also the lifelong love of being a Scientist. Our children are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. At Archibald we want children to be aware of how science has changed our lives and is vital to the world's future prosperity. Children will develop a sense of curiosity about our world as well as a sense of responsibility for the living and non-living. Children will be caring and have the aspiration to use their scientific knowledge to make the world a better place.

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

In accordance with 'Understanding the World' in the Early Years Foundations Stage and through the programmes of study for Science, children will acquire and develop the skills and knowledge they require. This will be taught alongside the crucial Working Scientifically skills. These working scientifically skills will allow children to use equipment effectively, confidently ask relevant questions, the responsibility of creating their own investigations and the courage to explain concepts confidently. Our curriculum also allows the opportunity to address gaps in pupils' knowledge and skills. Not only will our children have secure knowledge, they will have a passion for Science that they will take with them to the next phase of their learning.

Having fun, learning together.

Curious, caring, creative and courageous.

Implementation

At Archibald, Science is taught via a progressive curriculum that ensures a high standard of teaching and learning. Science is taught weekly for up to two hours. This ensures that Science maintains a core subject position and allow sufficient opportunities for pupils to gain, apply and revisit key knowledge.

The science programmes of study are sequenced to best meet the needs of our pupils. Some science programmes of study are linked to class topics. For example, Rocks and The Stone Age. However, often this is not possible and Science is taught discretely which allows the concept of being a Scientist to be fully embedded. We implement science in an aspirational manner. Therefore, pupils across the school are consistently provided with challenges so they are able to apply their skills in an open-ended fashion to fulfil their potential and display a greater depth of learning.

Working Scientifically opportunities are provided throughout the year. They are not taught as a separate strand but are embedded within the content of biology, chemistry and physics, focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

The five scientific enquiry types at Archibald are:

- Observation over time
- Identifying and Classifying
- Researching
- Fair Testing
- Pattern Seeking

Science progress, attainment and coverage is monitored closely by teachers. Every half term, staff complete science assessment grids and record data into our school tracker on a termly basis. This provides opportunities for staff to identify what needs to be revisited and whether there are any data concerns for specific groups of pupils e.g. SEND, disadvantaged (FSM/PP), EAL, boys/girls. Therefore, all groups of children are given the chance to fulfil their potential. These grids also allow staff to be aware of prior pupil learning so that new knowledge and skills build on what has been taught before. Pupils can therefore work towards clearly defined end points. Pupils are also able to discuss previous programmes of study taught and how these link to new programmes e.g. KS1 plants to KS2 plants. They can also make link between investigations carried out previously e.g. provide examples of 'observation over time' investigations.

In addition, we have STEM clubs, science-based school trips, science visitors, science assemblies and whole school events that allow our pupils to be caring science citizens on both a local and global scale.

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Impact

The impact of our Science curriculum is clear and evident. At Archibald, we have pupils who consistently acquire the key skills and knowledge required via a high-quality curriculum. Our high school standards are evident in the pride children take in their work; this is reflected in their books. This can also be seen from the progress and attainment that is shown in our data tracker. Not only this, we also have pupils who enjoy lessons, are curious, fully engaged and who are passionate and confident Scientists. The feedback from middle schools is that our pupils not only have secure knowledge but are confident, keen and aspirational. Ultimately, we create scientists who are ready for the next stage of their education not just in terms of their knowledge but in terms of their motivation and understanding that they can use this knowledge to positively care for and influence the world's future prosperity.

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