

At Scartho Junior Academy, we will tap into the natural inquisitive minds of young people, enabling children to become curious investigators of the world around them. We aim to fuel and ignite the passion for experimenting and exploring the 'hows?' and 'whys?' by delving deeper into the unknown, whilst proving and disproving observations and theories. Each year we will build upon existing scientific knowledge, leading to evolving skills and a deepening understanding of the world around them, throughout their school journey. Science has changed our lives and is vital to the world's future prosperity, therefore our pupils are taught essential aspects of the knowledge, methods, processes and uses of science.



Intent—We aim to...

Support children to understand the world, in terms of chemistry, physics and biology.

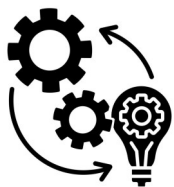
Help children to see the way science has evolved our lives and its importance now, and in the future.

Develop our children's scientific knowledge and understanding through the disciplines of chemistry, biology and physics.

Provide opportunities for scientific exploration and enquiry, linked to the world around us.

Give ample opportunities for the children to learn about scientific concepts in a hands on way.

Broaden our children's horizons so that they may see the future opportunities available to them in this field.



Implementation—How do we achieve our aims?

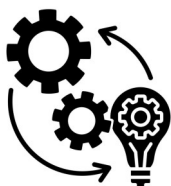
Working Scientifically

Science is a hands on subject and, wherever possible, children will be given the opportunity to handle scientific equipment and record their findings in a variety of different ways. For children in Year 3/4, handling equipment safely and accurately prepares them for handling more complicated equipment further up the Key Stage. Being able to show their findings using graphs, tables, labelled diagrams is just the start of the journey. Those in Year 5 are expected to record data with increasing complexity using such equipment as: data loggers, thermometers, with an emphasis on the use of technology. Eventually, in Year 6, the children will be presenting their findings from their enquiries, including: drawing conclusions, changing variables, looking at explanations of their results and creating written displays or presentations.

Scientific thinking

Building on the ability to ask simple questions in KS1, and recognising that they can be answered in different ways, we aim to develop and hone their skills to become much more mature scientists. Starting in Year 3, we guide the children into asking relevant and challenging questions, as well as devising ways that they could be investigated, which leads to asking and investigating more challenging ideas in Year 4, with the aid of models. This theme continues across Upper School as there is now a change in focus on developing fair and unfair tests of their own, and using experimental evidence to either support or refute their thinking. Thus leading to a greater understanding of the experiments undertaken, whilst providing further opportunities to question.

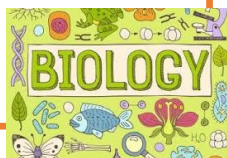
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Implementation (continued) - How do we achieve our aims?

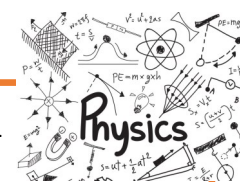
Biology

Through a progression across the year groups, children will be taught about plants and animals including humans. To begin with, in Year 3, we start looking at the basic structures of a plant and what a plant needs to survive, all the way through to life cycles of plants and the parts that they play in food chains and in ecology as a whole. Year 4 we start to look at our own bodies and how they work and are designed to keep us in a healthy condition. In Upper School, there is a detailed look at life cycles of animals, including humans, as well as the stages of puberty.



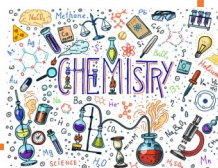
Physics

Throughout KS2, children will be given the opportunity to look at key areas such as: forces, light, sound and electricity. Using age appropriate concepts, the children will explore everyday science for understanding and meaning, for example: how sounds are made and amplified; considering how forces could be small forces, such as attraction when exploring magnets, but also large, in the form of gravity, which holds our planet and others in orbit and not falling out of the sky.



Chemistry

Properties of matter is a very large part of the chemistry curriculum. Initially, it is introduced as the states of matter and how solids, liquids and gas behave. This is developed further in Years 5 and 6, as these properties are used to explain the everyday world in which we live, for example the water cycle. Similarly, properties of everyday materials are investigated with a focus on those that the children come in contact with to explain the world about them.



✓ Impact—How will we know we have achieved our aims?

Children will be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Children can talk with engagement and motivation about studying science in the future, with an awareness of the avenues available to them.

Children will be able to use scientific language, and technical terminology, with accuracy, to answer questions about the world around them.

Project books will tell a story of a curriculum that exposes children to a variety of scientific fields, through both a practical and theoretical approach.