



Our Science Curriculum

Science at The Cedar School

Our science curriculum encompasses biology, physics, chemistry and scientific core skills. We teach these subjects during 12 immersive discovery days each year. The discovery days will focus on a specific area of science (biology, chemistry or physics) and will have the scientific core skills embedded within this. Our approach aims to increase children's skills throughout all 5 key stages.

Communication

Children will develop their communication skills through being encouraged to ask and answer questions about the world around them. They will engage in scientific enquiry and reflect upon this to communicate their scientific findings. Children will express interest in a wide range of topics and communicate their preferences in their own way. They will develop their understanding and use of scientific vocabulary related to the four core areas. Interactions will encourage the use of or experience of this vocabulary and children will explain what they have observed.

Empowerment

Children's independence will be promoted through setting up and taking part in investigations. They will be empowered to work successfully as part of a team throughout. They will make their own contributions to planning and evaluation by making choices and interpreting what they have found. Children will be empowered to develop their core scientific skills and conceptual understanding in biology, chemistry and physics.

Discovery

Children will explore and begin to understand the world around them through real life experiences. They will be encouraged to develop their sense of excitement and curiosity about natural phenomena by taking part in enquiries that are relevant to them and their everyday life. They will explore objects, environments, and living things in a way which will foster their love of learning and discovering.

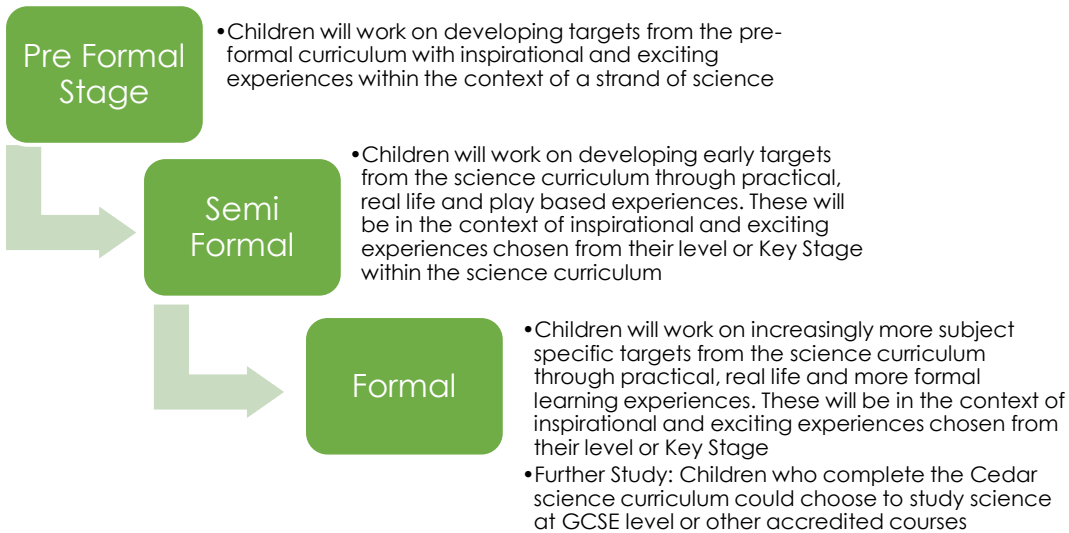
Aspiration

Children will be exposed to the uses of science in our everyday life and the impact it has upon us. They will be encouraged to understand how science can be used to explain what is occurring. Children will develop their skills relevant to their age and stage of development. Where appropriate children will have the necessary skills to embrace formal learning and accreditation in their future education.

Resilience

Children will be challenged to question what they see around them. They will begin to predict how things will behave, and analyse the causes. Children will be resilient if enquiries require another attempt and will understand that scientists spend many years working on their discoveries.

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Throughout the science curriculum, children are taught to use practical scientific methods, processes and skills to support their understanding of the content they are taught.

- Below is the progression of these skills

Scientific Core Skills
<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions

Scientific Core Skills
<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings.

Scientific Core Skills
<ul style="list-style-type: none"> • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests □ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments