

Northampton International Academy Science Curriculum Overview

















Why Teach Science?

Science enables students to make informed decisions and choices throughout their lives. By fostering and maintaining a curiosity throughout their education, our students will be able to:

- Understand how the world around them works
- Adapt to a life in the modern world
- Experience and share the cultural capital that Science provides
- Show resilience when solving problems
- Decipher fact from fiction by learning how to look for reliable sources of information.

Our Common Teaching approaches

- Retrieval starters every lesson
- Cold calling to make sure everyone is learning
- Modelling new information and skill

The 9 Big Ideas of the Science Curriculum

Curriculum maps detail the sequencing of substantive knowledge from the disciplines of biology, chemistry and physics to enable pupils to build schemata of important concepts over time through nine 'big ideas'



Scientific Enquiry Approaches we use to develop disciplinary knowledge

Pattern Seeking



Identify patterns and look for relationships in enquiries where variables are difficult to control.

Observation Over



Observing changes that occur over a period of time ranging from minutes to months.

Research



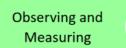
Using secondary sources of information to answer scientific questions.

Identifying, Grouping and Classifying

Making observations to name, sort and organise items.



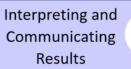
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Asking Questions



Recording Data



Setting up Tests

Making

Predictions



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Evaluating



Comparative/Fair Testing

Changing one variable to see its effect on another, whilst keeping all others the same Problem Solving



Applying prior scientific knowledge to find answers to problems.

Science Big Ideas Forces Electricity and Magnets Waves Reactions Earth Matter Organisms Ecosystems Genes