

Middle School Science

Overview

In this program, students will develop personalised SMART goals aimed at enhancing their scientific knowledge. Students will work with a mentor to develop their critical thinking, inquiry mindset and overall sense of curiosity about the processes that drive the ever-changing world in which they live. After identifying their strengths and weaknesses, students will expand their knowledge and understanding of a variety of science topics and to equip themselves with the skills to explore how science is interwoven into the world they experience daily. Students will practice analysing information while gaining a better understanding of the scientific method and the effects that results can have on individuals, communities and the environment.

Objectives

- Develop an understanding of the scientific method
- Enhance knowledge of various science topics and an overall sense of curiosity and willingness to explore the changing world in which we live
- Improve analytical and evaluative skills
- Further understanding of how science used in the real-world

Structure

- Review prior knowledge and identify areas to specifically target
 - Set SMART goals
 - Develop a personalised curriculum with an associated timeline based on a specific set of goals.
- Develop scientific skills
 - Questioning and Predicting
 - Inquiry mindset
 - Planning and Conducting
 - Recording and Processing
 - Analysing and Evaluating
 - Critical thinking
 - Improve presentation skills - Presenting data and findings based on basic scientific experiments
 - Develop scientific writing skills
- Use real-world examples to demonstrate the role of science in our everyday lives
 - E.g., Electricity, Sustainability & Conservation, Genetic Make-up
- Begin to understand how to explore information that is presented
- Role reversal to test understanding of skills

Topics

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| • Science as a Human Endeavour (Method, Effects, Development) | • Environment & Sustainability | • Chemical Reactions |
| • Geology | • Cells and Organisms | • Atomic Structure |
| • Geography | • Ecology | • Energy & Motion |
| • Space | • Evolution | • Forces |
| | • State of Matter | • Light & Sound |
| | • Elements & Compounds | • Magnets |