

Science Squared

This subject provides a year-long course and has been designed for students who have a keen interest in Science and are looking to continue to explore and deepen their scientific understanding. The course will provide strong foundations and direct pathways for all VCE Sciences (Biology, Chemistry, Physics and Psychology). It will also cater for students who would like a deeper understanding of the relationship between scientific developments and society.

Semester 1: Chemistry and Genetics

- Explore acid-base reactions, refining equation-writing skills.
- Apply these skills to design experiments revealing reaction mechanisms and factors affecting rates.
- Understand DNA's role as the blueprint for controlling organism characteristics and its relation to genes and chromosomes.
- Comprehend genetic information transmission through meiosis to gametes.
- Represent inheritance patterns using Punnett Squares and Pedigree Charts.
- Predict offspring genotypes and phenotypes.

Semester 2: Physics and Evolution

- Represent motion using graphs
- Newton's Laws of Motion
- that energy transformations and exchanges can be described using laws of physics
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- Grasp basic evolution ideas like adaptation and natural selection.
- Applying Evolutionary Principles: Use these ideas to explain how species change over time.
- Evaluating Evidence: Judge if fossil records and other data support evolutionary theories.