

Physics and Chemistry in Motion

This subject is recommended for students who may be interested in VCE Chemistry and/or VCE Physics. It aims to prepare students for either VCE subject as well as introduce students to applications of Chemistry and Physics in society.

Students will learn about how energy can be stored, transformed and used. Students will use rockets as a system to examine how objects move and how this motion can be represented either graphically or with equations. Students also look at chemical reactions, with a focus on how the rate of a chemical reaction can be altered. The ideas used to explain why chemical reactions occur, based on the structure of atoms is explored in this subject. Students will design and undertake scientific investigations, evaluate their results and communicate their findings using scientific conventions.

AREA OF STUDY

- Explore reactions involving acids and bases.
- Develop equation writing skills.
- Apply these skills to design experiments revealing reaction mechanisms and factors affecting rates.
- Formulate questions or hypotheses that can be investigated scientifically.
- Plan, select and use appropriate investigation methods.
- Consider possible independent and dependent variables and ensure these are controlled appropriately.

AREA OF STUDY

- 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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- Analyse patterns and trends in data, including identifying inconsistencies.
- Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language and representations.