

# CHEMISTRY



Chemistry is the study of materials and their properties and structure. Chemistry is often referred to as the “central science” because of its role in connecting the physical sciences, which include chemistry, with the life sciences and applied sciences such as medicine and engineering.

Senior Chemistry students participate in a range of experiments and investigations which allow for the progressive development of their suite of science inquiry skills, while gaining an enhanced appreciation of chemical structure and properties. Collaborative experimental work also helps students to develop communication, interaction, and self-management skills.

## Students in Year 11 & 12 study:

- Atomic theory, chemical bonding and the structure and properties of elements and compounds
- Intermolecular forces, gases, aqueous solutions, acidity and rates of reaction
- Equilibrium processes and redox reactions
- Organic chemistry, synthesis and design

## Studying Chemistry will develop students':

- interest in and appreciation of chemistry and its usefulness in helping to explain phenomena and solve problems encountered in their ever-changing world
- understanding of the theories and models used to describe, explain and make predictions about

- chemical systems, structures and properties
- understanding of the factors that affect chemical systems and how chemical systems can be controlled to produce desired products
- appreciation of chemistry as an experimental science that has developed through independent and collaborative research, and that has significant impacts on society and implications for decision-making
- expertise in conducting a range of scientific investigations, including the collection and analysis of qualitative and quantitative data, and the interpretation of evidence
- ability to critically evaluate and debate scientific arguments and claims in order to solve problems and generate informed, responsible and ethical conclusions
- ability to communicate chemical understanding and findings to a range of audiences, including through the use of appropriate representations, language and nomenclature.

## Career Opportunities:

- Research, forensic or environmental scientist
- Engineering
- Health Science - medicine, pharmacy, allied health
- Education
- Veterinary Science

