



Science Policy

Rationale:

Science provides an empirical way of answering interesting and important questions about the biological, physical and technological world. Science is a dynamic, collaborative and creative human endeavour arising from our desire to make sense of our world by exploring the unknown, investigating universal mysteries, making predictions and solving problems. Science knowledge is contestable and is revised, refined and extended as new evidence arises.

The Science curriculum provides opportunities for students to develop an understanding of important scientific concepts and processes, the practices used to develop scientific knowledge, the contribution of science to our culture and society, and its applications in our lives. The curriculum supports students to develop the scientific knowledge, understandings and skills to make informed decisions about local, national and global issues and to participate, if they so wish, in science-related careers.

In addition to its practical applications, learning science is a valuable pursuit in its own right. Students can experience the joy of scientific discovery and nurture their natural curiosity about the world around them. In doing this, they develop critical and creative thinking skills and challenge themselves to identify questions, apply new knowledge, explain science phenomena and draw evidence-based conclusions using scientific methods. The wider benefits of this 'scientific literacy' are well established, including giving students the capability to investigate the world around them and the way it has changed and changes as a result of human activity.

Purpose:

The Science curriculum aims to ensure that students develop:

- an interest in science as a means of expanding their curiosity and willingness to explore, ask questions about and speculate on the changing world in which they live.
- an understanding of the vision that science provides of the nature of living things, of the Earth and its place in the cosmos, and of the physical and chemical processes that explain the behaviour of all material things.
- an understanding of the nature of scientific inquiry and the ability to use a range of scientific inquiry methods, including questioning, planning and conducting experiments and investigations based on ethical principles, collecting and analysing data, evaluating results, and drawing critical, evidence-based conclusions.
- an ability to communicate scientific understanding and findings to a range of audiences, to justify ideas on the basis of evidence, and to evaluate and debate scientific arguments and claims.
- an ability to solve problems and make informed, evidence-based decisions about current and future applications of science while taking into account ethical and social implications of decisions.
- an understanding of historical and cultural contributions to science as well as contemporary science issues and activities and an understanding of the diversity of careers related to science.
- a solid foundation of knowledge of the Biological, Chemical, Physical, Earth and Space sciences, including being able to select and integrate the scientific knowledge and methods needed to explain and predict phenomena, to apply that understanding to new situations and events, and to appreciate the dynamic nature of science knowledge.

Structure:

The Science curriculum has two interrelated strands: Science Understanding and Science Inquiry Skills. Together, the two strands of the science curriculum provide students with understanding, knowledge and skills through which they can develop a scientific view of the world.

| Strands | Science Understanding | Science Inquiry Skills |
|--------------------|------------------------------|-------------------------------|
| Sub-strands | Science as a human endeavour | Questioning and predicting |
| | Biological sciences | Planning and conducting |
| | Chemical sciences | Recording and processing |
| | Earth and space sciences | Analysing and evaluating |
| | Physical sciences | Communicating |

Implementation:

- All students at our school will study a sequential Science course based upon the outcomes contained within the Victorian Curriculum.
- All teachers will access the Victorian Curriculum online at <http://victoriancurriculum.vcaa.vic.edu.au/>, and are required to work with their respective teams to develop and implement a joint Science course for all students.
- Student's individual abilities must be measured at the commencement of each unit of work, and learning opportunities must be provided that cater for the identified needs of each student.
- Student progress in Science will be reported at least once per year for students in Years 3-6, and when taught in lower grades.
- Teachers will provide the Science Curriculum through an integrated approach, ensuring that students are introduced to relevant science experiences during topical foci based upon one of the six Science overarching ideas: Patterns, Order & Organisation, Form & Function, Stability & Change, Scale & Measurement, Matter & Energy, and Systems.
- Science experiences and learning episodes may also be incorporated during Inquiry Units that have a focus in other Domains, and in Learning Centre activities in Mathematics and Literacy.
- As a part of the Science Curriculum, students will participate in a Garden Program where specific science outcomes will be addressed.
- A budget that provides for the needs of the Science program will be developed by staff and resourced by school council.
- A staff member will be allocated the responsibility of coordinating the school's Science program.
- Staff at Bonbeach PS will be encouraged to attend relevant Professional Development opportunities that will align with the current School Strategic Plan, Annual Implementation Plan, and be of benefit for the students, as well as personally.

Evaluation:

This policy will be reviewed as part of the school's three year review cycle.

Approved by School Council on: 2nd June 2017