

Curriculum leader: Anne Bartlett

Budget: \$2,000

Science Values and Beliefs

All children can learn

The Western Australian 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

Overarching Teaching Approach

SCIENCE INQUIRY SKILLS (Investigating)

Five Sub Strands:

Questioning and predicting: Identifying and constructing questions, proposing hypotheses and suggesting possible outcomes.

Planning and conducting:

Making decisions regarding how to investigate or solve a problem and carrying out an investigation, including the collection of data.

Processing and analysing data and information: Representing data in meaningful and useful ways; identifying trends, patterns and relationships in data, justify conclusions.

Evaluating: Quality of available evidence and the merit of a conclusion with reference to that evidence.

Communicating: Conveying ideas to others through appropriate represent, text types and modes

Use Western Australian / Australian Curriculum content and Scope and Sequence to supplement "Primary Connections". Development is guided by "Primary Connections" 5Es Instructional Model. Teach content from the 4 Sub Strands using "Primary Connections". Continue to work through the appropriate units of "Primary Connections" (topics organised in year groups so that units are not repeated).

Science Teaching Approach

SCIENCE UNDERSTANDING

Four Sub Strands:

Biological Sciences

Understanding living things. Students investigate living things, including animals, plants, and micro-organisms, and their interdependence and interactions within ecosystems.

Chemical Sciences

Understanding the composition and behaviour of substances. Students classify substances such as solids, liquids and gases. They explore physical & chemical changes.

Earth and Space Sciences

Students view Earth as part of a solar system, which is part of a galaxy, which is one of many in the universe and explore the immense scales associated with space.

Physical Sciences

Understanding the nature of forces and motion, and matter and energy. Students gain an understanding of how an object's motion (direction, speed and acceleration) is influenced by a range of contact and noncontact forces such as friction, magnetism, gravity and electrostatic forces.

SCIENCE AS A HUMAN ENDEAVOUR

Two Sub Strands:

Nature and Development of Science

An appreciation of the unique nature of science and scientific knowledge, including how current knowledge has developed over time.

Use and Influence of Science

How science knowledge and applications affect peoples' lives, including their work, and how science is influenced by society and can be used to inform decisions and actions.

Support/Resources	Assessment and Monitoring	Reflections and Evaluations
<ul style="list-style-type: none">• Leadership• School Board• Parents and P&C• Classroom teachers• Shenton Network• Primary Connections• Connect Communities and networks• Students• Scitech incursions	<ul style="list-style-type: none">• West Australian Curriculum• Moderation tasks using SCSA exemplars• Teacher observation and appraisal• Checklists• Reflective journals• Anecdotal evidence• Worksheets – short and extended responses included• Class discussions• Informal and formal presentations• SCSA content descriptions, elaborations and Achievement Standards• Report comments for Semester 1 & 2 for Years 1-6. Comment bank to be established	<ul style="list-style-type: none">• Whole school reflection and evaluation processes• Performance management• Class observations• Parent, teacher and Student surveys• Reflect and evaluate on Professional Learning attended