WHAKATANE INTERMEDIATE SCHOOL

SCIENCE CURRICULUM

* NZ Curriculum
* Data gathering and analysis
* Community beliefs and values
* Local and school events
* Curriculum participation
* Local resources
* School targets
* School and individual needs
* Engaging contexts
* Whanau/community
* Ethnic and cultural diversity
* Resources
* Integration
* Critical thinking
* Key competencies
* Inquiry
* Follow the mission statement
* Respect of local diversity
* Develop an awareness of global science issues
* Make observations
* Understand the world’s resources and their significance
* Make classifications
* Understand systems and cycles e.g. water cycle, solar system
* Self management skills
* Make a connection between science and technology
* Assessment/analysis
* Meaningful contexts
* Collaboration
* Talking about learning
* Learning styles
* Key competencies
* Feedback/feed forward
* Critical thinking/discussion
* Digital learning experiences e.g.skype
* Home learning
* Community projects
* EOTC
* Whanau/community involvement
* Vocabulary
* Research skills
* Thinking skills
* Questioning

WHAKATANE INTERMEDIATE SCHOOL

SCIENCE CURRICULUM

Whakatane is located in an area rich in learning opportunities. It is located on a fault line, has an active volcano, has an abundant marine life. It is surrounded by a harbour, a river and rich dairy land. There is forestry and industry with a science focus i.e. Fonterra, Tasman.

Students may access the science curriculum using the inquiry approach. Other curriculum areas may be included into science learning.

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| **LEVEL 4 – NATURE OF SCIENCE** | **SCIENCE CURRICULUM** | **WHAT DOES THIS LOOK LIKE AT WIS** |
| **Understanding about science*** Appreciate that science is a way of explaining the world and that science knowledge changes over time.
* Identify ways in which scientists work together and provide evidence to support their ideas.

**Investigating in science*** Build on prior experiences, working together to share and examine their own and others’ knowledge.
* Ask questions, ﬁnd evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

**Communicating in science*** Begin to use a range of scientiﬁc symbols, conventions, and vocabulary.
* Engage with a range of science texts and begin to question the purposes for which these texts are constructed.

**Participating and contributing*** Use their growing science knowledge when considering issues of concern to them.
* Explore various aspects of an issue and make decisions about possible actions.
 | **By studying science, students:*** Develop an understanding of the world, built on current scientific theories;
* Learn that science involves particular processes and ways of developing and organizing knowledge that these continue to evolve;
* Use their current scientific knowledge and skills for problem solving and developing further knowledge;
* Use scientific knowledge and skills to make informed decisions about the communication, application and implications of science as these related to their own lives and cultures and to the sustainability of the environment
 | * White island
* Earthquakes – fault lines
* Industry
* EOTC – Waihi (Mining) , Tongariro Volcanoes),
* Science Fair focus term 2
* Environmental science (Awatapu Lagoon)
* Sustainability
* Recycle, reuse, reduce
* Energy efficiency
* Tied to tech/arts/science contexts
* Whanaungatanga
* Kaitakitanga – Guardianship of the land
* Using a scientific process to answer questions and solve problems
* Mining
* Estuaries
* Dotteral
* Fair testing
* Science Vocab building
* Wondering
* Making links to local knowledge and environments
* Native Trees – medicinal purposes
* Matariki – focus in many classrooms
* Maori section of science fair
* Astronomy
* Inventions
* Human Bdoy
* Science Badge
* Science investigation skills
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| **LIVING WORLD** | **PLANET EARTH AND BEYOND** | **PHYSICAL WORLD** | **MATERIAL WORLD** |
| **Life processes*** Recognise that there are life processes common to all Living things and that these occur in different ways.

**Ecology*** Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.

**Evolution*** Begin to group plants, animals, and other living things into science-based classiﬁcations.
* Explore how the groups of Living things we have in the world have changed over long periods of time and appreciate that some living things in New Zealand are quite different from living things in other areas of the world.
 | **Earth systems*** Develop an understanding that water, air, rocks and soil, and life forms make up our planet and recognise that these are also Earth’s resources.

**Interacting systems*** Investigate the water cycle and its effect on climate, landforms, and life.

**Astronomical systems**Investigate the components of the solar system, developing an appreciation of the distances between them. | **Physical inquiry and physics concepts*** Explore, describe, and represent patterns and trends for everyday examples of physical phenomena, such as movement, forces, electricity and magnetism, light, sound, waves, and heat.

For example, identify and describe the effect of forces (contact and non-contact) on the motion of objects; Identify and describe everyday examples of sources of energy, forms of energy, and energy transformations. | **Properties and changes of matter**• Group materials in different ways, based on the observations and measurements of the characteristic chemical and physical properties of a range of different materials.• Compare chemical and physical changes.**The structure of matter**• Begin to develop an understanding of the particle nature of matter and use this to explain observed changes.**Chemistry and society**• Relate the observed, characteristic chemical and physical properties of a range of different materials to technological uses and natural processes. |

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| **Key Competencies** |
| **Thinking** | **Using language, symbols, and texts** | **Managing Self** | **Relating to others** | **Participating and contributing** |
| * Observing
* Hypothesising
* Experimenting
* Investigating
* Writing conclusions
* Designing a fair test
* Tinkering
* Modifying/adapting
 | * Measuring volumes etc
* Using scientific vocabulary
* Technology – building, creating
 | * Completing all set tasks
* Working to time frames
* Working independently
 | * Communicating scientific results
* Sharing ideas and findings
 | * Science Fair
* Science Badge
* Appreciating the local environment – taking learning outside
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Review Date: June 2014

WHAKATANE INTERMEDIATE SCHOOL

SOCIAL SCIENCES/SCIENCE OVERVIEW

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| Social ScienceStrands | **Identity, Culture and Organisation*** Rules and laws, general election, the government
* Responding to disasters
* Rights and responsibilities
* Children’s rights
* The United Nations
* New Zealand Peace Keepers
* Celebrations
 | **Place and Environment*** Explorers
* Changing land use
* Our community
* The local area
 | **Economic World*** Local community and resources
* Money through the ages
 | **Continuity and Change*** Famous people, their effect on history and today
* Disasters and their effect
	+ War
	+ Disease
	+ Epidemic
	+ Famine
	+ Drought
	+ Refugees
 |
| Science Strands | **Living World*** Life processes
* Ecology
* Evolution
 | **Planet Earth and Beyond*** Earth systems
* Interacting systems
* Astronomical systems
 | **Physical inquiry and physics concepts*** patterns and trends for everyday examples of physical phenomena,
	+ movement,
	+ forces,
	+ electricity and magnetism,
	+ light
	+ sound
	+ waves
	+ heat.
 | **Material World*** Properties and changes of matter
* The structure of matter
* Chemistry and society
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Over two years teachers will cover all strands. There is no expectation of which strand is covered when. This allows for teachers to have autonomy to plan learning experiences around topical issues/events. For example; Olympics, major disaster, science fair, war (could tie in with commemorations).

NB: science will be the focus in term two each year in association with the school science fair.