Watercare
An Auckland Council Organisation

Learning intentions:

- To appreciate how humans can affect the quality of water in streams
- To understand that animals are suited to specific habitats
- To test for turbidity, pH, nitrate, temperature and oxygen
- To identify the bugs according to their features
- To carry out various water quality tests
- To carry out observations of bugs in a local waterway
- To gather and record data from a waterway
- To record bugs collected against a bug identification sheet

Achievement objectives

Nature of Science

LEVELS 3 AND 4

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 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 purpose 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.

Living world

LEVELS 3 AND 4

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.

WATER FOR LIFE

Planet Earth and beyond

LEVELS 3 AND 4

Earth systems

- Appreciate that water, air, rocks, soil, and life forms make up our planet and recognise that these are also Earth's resources. Develop an understanding that water, air rocks, 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.

Material World

LEVELS 3 AND 4

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.
- 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.

Physical World

LEVELS 3 AND 4

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 effects 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.