Enviroschools in the primary classroom

Enviroschool Principles	Nature of Science	Examples of Integration (*not an exhaustive list, by any means)*
Empowered Students are enabled to participate in a meaningful way in the life of their early childhood centre or school. Their unique perspectives are valued for the knowledge and insight that they bring, and they are supported to take action for real change.	**Investigating in science** Carry out science investigations using a variety of approaches: classifying and identifying, pattern seeking, exploring, investigating models, fair testing, making things, or developing systems. **Participating and contributing** Bring a scientific perspective to decisions and actions as appropriate	Vegetable gardening • Plant life cycles • Soil types and testing • Micro-organisms • Pests and plant diseases • Ecosystems Butterfly gardens • Butterfly life cycles • What plants are needed for feeding and attracting butterflies • Native butterflies See sciencelearn.org.nz/Science-Stories/Butterflies/Monarch-butterflies and forestandbird.org.nz/branches/auckland/central-auckland/central-auckland-branch-contact/butterfly-breeding-guide/native-n Bee keeping • Food chains • Importance of bees in the environment Worm farms See sciencebuddies.org/science-fair-projects/project_ideas/EnvSci_p055.shtml Recycling • How long do things take to decompose? Beach, stream monitoring and clean-ups • Compile data on rubbish collected • Analyse data and make conclusions relating to rubbish collected

		• Action plans • Understanding the importance of water and the issues affecting it • Introduce features that make water special, including recreational and cultural values, but especially ecosystem values • Water-related problems, including pollution, drought and flooding. Investigations with water from an ecology and environmental viewpoint. • Weather stations • Give students the opportunity to study weather recording systems and to compare weather patterns with other locations.
The principle of **learning for sustainability** recognises the types of teaching and learning that foster student empowerment, decision-making, action and sustainable outcomes.	**Understanding about science** Learn about science as a knowledge system: the features of scientific knowledge and the processes by which it is developed; and learn about the ways in which the work of scientists interacts with society.	Recycling, reducing, reusing • Why do we recycle? • Find ways to conserve energy and water • Why is it better to use reusable items instead of disposable ones? • How and why do we conserve our natural resources and protect our planet? • Understand different methods of waste disposal. See scienceonline.tki.org.nz/Introducing-five-science-capabilities/Engage-with-science/Hukanui-Enviroschool
The principle of **Māori perspectives** honours the status of tangata whenua in this land and the value of indigenous knowledge in enriching and guiding learning and action.	**Participating and contributing** Bring a scientific perspective to decisions and actions as appropriate. **Communicating in science** Develop knowledge of the vocabulary, numeric and symbol systems, and conventions of science and use this knowledge to communicate about their own and others' ideas.	Manaakitanga • Caring for the land Native plants, animals and insects • Endangered species and conservation projects • Plant and animal habitats/natural ecosystems • Rongoā – medicinal use of plants • Rotating crops • Kaitiakitanga – the act of stewardship – investigate why this is done • The harakeke (flax bush) and the importance of the external blades.
Respect for the **diversity of people and cultures** acknowledges the unique gifts, contributions and perspectives of individuals and groups, reinforcing the need for	**Participating and contributing** Bring a scientific perspective to decisions and actions as appropriate.	Any of the above suggestions can be used as an opportunity to learn what it means to respect the diversity of people and cultures. It is important here to use the appropriate terminology so the children know what they are doing

participatory decision-making in Enviroschools.	**Communicating in science** Develop knowledge of the vocabulary, numeric and symbol systems, and conventions of science and use this knowledge to communicate about their own and others' ideas.	
Sustainable communities act in ways that nurture people and nature, now and in the future, to maintain the health and viability of our environment, society, culture and economy.	**Participating and contributing** Bring a scientific perspective to decisions and actions as appropriate. **Communicating in science** Develop knowledge of the vocabulary, numeric and symbol systems, and conventions of science and use this knowledge to communicate about their own and others' ideas.	Sustainable practices in place following the investigations carried out

Useful links and resources

- scienceonline.tki.org.nz/New-resources-to-support-science-education/Resources
- scienceonline.tki.org.nz/What-do-my-students-need-to-learn/Building-Science-Concepts
- tki.org.nz/r/assessment/exemplars/sci/index_e.html
- nzcurriculum.tki.org.nz/Curriculum-resources/EFS

The Connected series has a wealth of ideas – here are a few examples:

- CONNECTED, LEVEL 2 2014 – How Do You Know? Garden with Science by Sophie Fern
- CONNECTED, LEVEL 3 2014 – Why Is That? Counting Kākahi by Hannah Rainforth
- CONNECTED, LEVEL 2 2013 – I Spy … Take a Closer Look by Margaret Cahill
- CONNECTED, LEVEL 4 2013 – Are You Sure? After the Spill by Maria Gill