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Te pūtaiao | Science

Children are born scientists — they are innately curious about the physical environment and naturally open to making meaning through their exploration of the world around them.

As competent, confident explorers, tamariki can discover science through many experiences and opportunities. Preparing and cooking kai, caring for plants and animals, playing with water and ice, exploring the natural world, racing toy cars down a ramp — the possibilities for science learning are endless!

Links to *Te Whāriki*

Tamariki learn to think critically and make connections between different ideas. They develop skills like hypothesising, predicting, and problem-solving as they experiment and investigate (**Exploration | Mana aotūroa**). Science can encourage tamariki to use language to describe what they see, ask questions, and share their discoveries with others (**Communication | Mana reo**).

Te Tāhuhu o te Mātauranga
Ministry of Education

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22 Te pūtaiao | Science

Science can help tamariki to:

- learn to observe, question, and investigate
- explore cause-and-effect
- investigate living things and learn about the natural world
- care for the wellbeing of others, including plants
- experiment and problem-solve with concepts like gravity, velocity, and water displacement
- design, tinker, and engineer.

Adults can support tamariki by:

- encouraging hands-on exploration, experimentation, and problem-solving
- exploring the natural resources of the local area
- modelling open-ended questions, e.g. What do you think might happen? Why do you think that happened? What do you see happening?
- supporting them to use all their senses to explore the world around them
- learning about healthy kai choices, through growing kai in the garden, gathering kai from moana and orchards, how food is gathered, processed, and made available for eating
- inviting them to describe and draw what they see
- encouraging them to ask questions and come up with their own explanations
- introducing science language, e.g. new words like gravity, magnetism, energy, and life cycle
- investigating the life cycles of natural resources, e.g. to discuss when is it the best time to go diving for pāua, or collecting the kōrari from the harakeke bushes.

Providing for science

Provide a stimulating and supportive environment where tamariki can take risks, make mistakes, and learn from their experiences. Supply a variety of materials and resources that encourage observation, exploration, and investigation. Set up a low display table so tamariki can touch, feel, and smell the items. Offer a range of opportunities to observe and test chemical reactions, e.g. melting ice or baking soda and vinegar.

Ideas for equipment

- natural resources of the area such as rākau, harakeke, toetoe, pipi, tuangi, pāua shells, non-poisonous plants, flowers, and leaves
- rocks, stones, shells, bones, fur, and feathers
- balance scales and tape measures
- books and other information about nature, animals, electricity, and other science topics
- magnifying glasses, microscopes, and thermometers
- magnets and magnetic wands.