

Case Study 3

Science, year 6 – Understanding a unique environment (native bush and stream)

Refer to the level 3 TSMs “Interdependence” and “Making a difference” for more detail and information about teaching students to use their writing to support learning in science and social sciences contexts. Go to: <http://literacyonline.tki.org.nz/Literacy-Online/Pedagogy/Writing-hub/Teacher-support-materials>

Context	Planning focus	Learning tasks
<p>A year 6 class was going on a three-day school camp in term 1. The camp was situated near an extensive stand of native bush and a stream.</p>	<p>The teacher, Nikki, looked at the curriculum plan for the term and realised that this was a great opportunity to explore a planned ecology theme, “Understanding a unique environment – how living things thrive and survive”, at level 4 of the science curriculum. The focus for learning was for the students to explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.</p> <p>To support her own understanding of the big ideas and science concepts related to this theme, Nikki referred to the following books in the Building Science Concepts series:</p> <ul style="list-style-type: none"> • <i>Is This an Animal?</i> (Book 39) – “Scientists group living things.” “We can group animals in many different ways.” • <i>Is This a Plant?</i> (Book 35) – “Scientists group living things.” “There are many different groups and subgroups of plants [in] the bush.” <p>Nikki also contacted local Māori, some of whom were involved in a conservation group to improve the water quality of the stream. They accompanied the students on their field trips and talked with them about kaitiakitanga, sharing their knowledge of the role of specific plants in the environment and of their use by Māori.</p>	<p>Nikki organised a number of activities to develop the students’ understanding that living things have features and attributes particularly suited to their immediate and wider environment. The activities included exploring the plant and animal life in the bush and near the stream.</p> <p>The students observed the environment closely. They noticed what was growing and living there, saw the differences and similarities, and gathered lots of information and examples (including drawings and photographs) to classify and compare later. The teacher wanted the students to understand that scientists follow careful processes as they gather and record information, so she taught the students strategies and processes for:</p> <ul style="list-style-type: none"> • setting up science notebooks • recording information in phrases and key words for later retrieval (for English language learners, possibly in their first language) • using specialised vocabulary to describe particular attributes of plants and animals • organising field notes, photos, and information into classification and comparison tables. <p>The students worked in groups to analyse and synthesise their information. They described their findings; explained how specific features of animals and plants enable them to survive and thrive; and suggested what actions could be taken to ensure the sustainability of this natural environment.</p>

Starting point: The context led the planning decisions.

The teacher made links between the context and the curriculum and designed tasks and activities that supported and challenged the students’ learning. She encouraged English language learners who had literacy skills appropriate to year 6 in their first language to record notes in this language when it was useful to them.