

Science – Making Sense of the Living World

Level	Achievement Objective (AO)	Specific Learning Outcome (SLO)
1	<p>AO1 Share their experiences relating to the living world, and group the living world according to some of its attributes</p> <p>AO2 Observe and identify parts of common animals and plants</p> <p>AO3 Investigate and describe the changes in a particular plant or animal over a period of time</p>	<p>SLO1 Explore Taupo’s freshwater environment and describe the wide variety of living things identified</p> <p>SLO2 Observe parts of trout body and identify basic functions of parts like scales, fins and gills</p> <p>SLO3 Identify different stages of trout development in the hatchery complex</p>
2	<p>AO2 Investigate and understand the general functions of the main parts of animals and plants.</p> <p>AO3 Investigate and understand the changes that take place in animals and plants during their life cycles</p>	<p>SLO1 Identify key internal and external body parts and functions of trout</p> <p>SLO3 Investigate the way wild Taupo trout live their life and produce offspring for the next generation</p>
3	<p>AO2 Investigate special features of common animals and plants and describe how these help them stay alive</p>	<p>SLO2 Identify how specific habitat features and certain body parts like gills, lateral line, and air bladder help trout to stay alive</p>
4	<p>AO2 Investigate and describe special features of animals or plants which help survival into the next generation.</p> <p>AO3 Investigate and describe patterns in the variability of a visible physical feature found within a species.</p> <p>AO4 Use simple food chains to explain the feeding relationships of familiar animals and plants, and investigate effects of human intervention on these relationships</p>	<p>SLO2 Describe different stages of trout life cycle and identify specific body parts and actions of trout that increase its likelihood of survival</p> <p>SLO3 Identify different physical features of rainbow trout and brown trout species</p> <p>SLO4 Describe relationship between trout and other fish/insects in freshwater environments and explain how Lake Taupo food web has been modified since introduction of trout</p>
5	<p>AO2 Investigate and describe structural, physiological, and behavioural adaptations which ensure the survival of animals and flowering plants in their environment</p> <p>AO4 Investigate and understand trophic and nutrient relationships between producers, consumers and decomposers</p>	<p>SLO2 Explain how specific adaptations of trout (e.g. their ability to camoflogue themselves within the environment) increases their chance of survival</p> <p>SLO4 Identify the 6 trophic levels of Lake Taupo food chain</p>

Science – Making Sense of Planet Earth and Beyond

Level	Achievement Objective	Learning Outcome
1	<p>AO1/4 Share their ideas about some easily observable features and patterns that occur in their physical environment and how some of these features may be protected</p>	<p>SLO1/4 Illustrate what the Waihukahuka Stream and the Tongariro River looks like and explain how waterways like these can become polluted</p>
2	<p>AO1/4 Investigate easily observable physical features and patterns and consider how the features are affected by people</p>	<p>SLO1/4 Illustrate what the Waihukahuka Stream and the Tongariro River looks like and explain how humans can keep pollution out of these waterways</p>

3	AO1 Investigate the major features, including the water cycle, that characterise Earth's water reserves	SLO1 Describe how water enters and exits Lake Taupo
	AO2 Gather and present information about the origins and history of major natural features of the landscape	SLO2 Explain the relationship between the volcanic mountain landscape and the region's waterways
4	AO2 Collect and use evidence from landforms, rocks, fossils, and library research to describe the geological history of the local area	SLO2 Explain where pumice floating down the Tongariro River has originated from
	AO4 Investigate a local environmental issue and explain the reason's for the community's involvement	SLO4 Describe the social and economic impacts that didymo might have on Turangi
5	AO1 Investigate and describe processes which change the Earth's surface over time at local and global levels	SLO1 Identify where erosion has occurred as a result of fluvial processes from the Waihukahuka Stream and the Tongariro River
	AO4 Research a national environmental issue and explain the need for responsible and co-operative guardianship of New Zealand's environment	SLO4 Explain how water quality in Lake Taupo is being degraded and what is being done to solve the issue

Social Studies – Resources and Economic Activities

Level	Achievement Objective	Learning Outcome
1	AO1 Different resources that people use	SLO1 Describe why resources like freshwater, trout, and trees are important to people
	AO2 Different types of work that people do	SLO2 Give examples of types of work that Department of Conservation staff does to look after the trout resource
2	AO1 How and why people work together to obtain resources	SLO1 Explain why anglers fish
3	AO1 How and why people manage resources	SLO1 Discuss why the Taupo trout population needs to be managed, the process of wild fishery management and the consequences of depleting trout stocks to an unsustainable level
4	AO1 How and why people view and use resources differently and the consequences of this	SLO1 Describe how different groups of people (e.g. anglers, poachers, anti-introduced specie groups) view the Taupo trout resource
5	AO1 Factors that influence people's access to resources, goods and services	SLO1 Describe how bag limits and fishing restrictions affect people's access to the trout resource and explain why this is necessary

Social Studies – Place and Environment

Level	Achievement Objective	Learning Outcome
1	AO1 Why particular places are important for people	SLO1 Discuss why the Tongariro River and Lake Taupo are important places for people
2	AO1 How people's activities influence places and the environment and are influenced by them	SLO1 Explain how people can damage the water quality in Tongariro River or Lake Taupo. Also explain how people can minimize human impacts.
3	AO1 How different groups view and use places and the environment.	SLO1 List all the different users of the Tongariro River
4	AO1 How places reflect past interactions of people with the environment	SLO1 Explain how the hatchery complex at the trout centre was used by people in the past

5	AO1 Why people move between places and the consequences of this for the people and the place	SLO1 Describe how the development of the Tongariro Power Scheme affected the Turangi community
	AO2 Why particular places and environments are significant for people.	SLO2 Identify some of the important places in the North Island Central Plateau like the Tongariro National Park, Tongariro River, and Lake Taupo, and explain why they are valued places

Environmental Education

Taupo for Tomorrow education programmes are integrated with the Ministry of Education's *Guidelines for Environmental Education in New Zealand Schools*.

All programmes integrate the three key dimensions of environmental education as indicated in these guidelines:

- education in the environment;
- education about the environment; and
- education for the environment.

Education in the environment: Programmes at the trout centre are an excellent education outside the classroom (EOTC) experience. The programmes encourage students to work co-operatively in groups to observe, investigate and collect data about Taupo's freshwater environment.

Education about the environment: Students will learn about managing and sustaining natural resources, like the wild Taupo fishery and freshwater environment. Students will also gain insight about the key ecological, economic, social and political factors that influence decision-making about sustainable resource use.

Education for the environment: Taupo for Tomorrow aims to increase student appreciation of the environment through fun, interactive experiences, and seeks to teach students about how to minimise their impact on freshwater environments.