

## Planning pathways using conservation resources

This interactive groups Hub resources into key science and teaching concepts. The article [Conservation resources – planning pathways](#) provides pedagogical advice and links to the New Zealand Curriculum.



This [interactive diagram](#) provides a selection of pathways that allow for differing approaches and starting points using some of our conservation resources. The aim is to assist educators with their planning of lessons and units of work by providing options that cover multiple science concepts.

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## Transcript

### Animals

Our quirky and unique birds receive a lot of attention but they are only one subset of endemic and native animals. Aotearoa New Zealand's long isolation from other land masses means that many of our native creatures – from snails to skinks to wētā – are quite unusual. Many other native animals also need our protection from habitat loss and introduced predators.



The following introductory articles curate Hub resources about different groups of native animals.

- [Insects](#) – article
- [Moths](#) – article
- [Butterflies](#) – article
- [Wētā](#) – article
- [Reptiles and amphibians](#) – article
- [Earthworms](#) – article
- [Freshwater fish](#) (English and te reo Māori versions) – article
- [Birds](#) (general) – article
- [Ducks](#) – article
- [Takahē](#) – article

Image of *Richardsonianus mauianus*, Manaaki Whenua – Landcare Research, [CC BY 4.0](#).

### Plants

Our plant life is just as unique as our bird life. Over 80% of our native plant species are found nowhere else. Our plants evolved as the land rose from isolated lowland islands to varied and mountainous ecosystems – our animals evolved alongside them.



The following introductory articles and links curate Hub resources about native plants.

- [Trees](#) – article
- [Ferns](#) – article
- [Harakeke/flax](#) – resource collection
- [Subantarctic Islands megaherbs](#) – resource collection

Image of Chatham Islands sow thistle, Amanda Baird.

## Fungi

Our forests hold a treasure trove of life that is mostly found only in Aotearoa New Zealand. There are nearly 6,000 species of fungi. Like animals and plants, fungi are also at risk due to habitat loss.



The following introductory articles curate Hub resources about native fungi.

- [Fungi](#) (English) – article
- [Tēnei mea te hekaheka](#) (te reo Māori) – article

Image of honey mushrooms, Andy Taylor.

## Taking action

Conservation action enables students to engage with science in real-life contexts. This section offers pedagogical advice, project ideas and science resources.



## Professional development

These professional development resources provide pedagogical advice and resources when using conservation as a topic of learning or inquiry.

- [Taking action for conservation](#) – webinar
- [Our native trees](#) – webinar
- [Eco-explorers](#) – webinar
- [Eco-champions](#) – webinar
- [Inquiry outside the classroom](#) – webinar
- [Pest detectives](#) – webinar

## Citizen science

Citizen scientists are volunteers who contribute to scientific projects. It makes science education more relevant and engaging and develops students' science capabilities. The following links aid with planning and action.

- [Getting started with citizen science](#) – PLD webinar
- [Planning for students to be citizen scientists](#) – PLD article
- [Citizen science projects](#) – resource curation section

## PSP initiatives

Participatory Science Platform (PSP) initiatives support collaborative, community projects that bring together locals and scientists or technologists to research and investigate locally important questions or problems. Get inspired with these conservation-based projects.

- [Project Hotspot – protecting threatened coastal species](#) – article
- [Sediment and seashores – monitoring Otago Harbour](#) – article

- [Redesigning wētā houses](#) – article
- [Students help restore mauri to the Oruarangi Stream](#) – article

## Restoration science

These resources explore the science that underpins restoration.

- [Restoration](#) – article
- [Riparian restoration](#) – article
- [Planting stream edges](#) – article
- [Te whakatō otaota ki ngā tapa kōawa](#) – article
- [River islands](#) – article

Image: Sustainable Coastlines, CC BY-NC 3.0 NZ.

## Mātauranga Māori

Scientists recognise the value of Māori knowledge, particularly that concerned with the natural world and ecology. As tangata whenua of Aotearoa, Māori have an inherent responsibility as kaitiaki (those who carry out [kaitiakitanga](#)). Mātauranga Māori and science can complement one another, benefiting both Māori as kaitiaki and scientists in their research.



These resources explore aspects of mātauranga and conservation.

- [Mātauranga Māori and science](#) – article
- [Understanding kaitiakitanga](#) – article
- [Te mana o te awa](#) – article
- [Estuaries – a Māori perspective](#) – activity
- [Ngā mātauranga me te whakamahi a te Māori i ngā hekaheka](#) and [Māori knowledge and use of fungi](#) – articles
- [Ihumātao – past and present](#) – article
- [Making moth identification guides](#) – article
- [Working together to restore the Ōngātoto/Maketū Estuary](#) – article

Image of moth, Olly Ball.

## Habitats

Conservation is often about preserving or restoring habitats. The following introductory articles and links curate Hub resources regarding habitats.

- [Marine habitats](#) – article
- [Life on a reef](#) – article
- [Estuaries](#) – article
- [Bush ecosystems](#) – article
- [River ecosystems](#) – article
- [Urban habitats](#) – article



Image: Steve Attwood.

## Biosecurity

Biosecurity is the process of detecting and controlling unwanted crop weeds, pests and diseases. Aotearoa New Zealand has a unique but fragile natural ecosystem, which developed without many of the pests that are common elsewhere in the world.



We rely on production agriculture as a key part of our economy.

Biosecurity isn't limited to airports and seaports. Learn more about biosecurity and the role we can all play to protect our country.

- [Biosecurity](#) – article
- [Biosecurity collection](#) (find out how to make this part of your own [collection](#))
- [Kauri dieback](#) – resource curation
- [Myrtle rust](#) – article
- [Myrtle Rust Reporter](#) – citizen science project
- [Kiwifruit and PSA](#) – article

Image: Scottie Productions.

## Pest control

Pest control can mean many things in Aotearoa New Zealand. Pests range from small insects to introduced mammals. There are actions we can take in urban and rural areas, on conservation land, on school grounds and on private properties.



The New Zealand Government has a vision of becoming predator-free by 2050. The following article outlines the vision and links to a series of unit plans and resources developed by ZEALANDIA with the support of WWF New Zealand.

- [Predator Free 2050 vision](#)

These resources highlight methods of pest control.

- [Methods of predator control](#) – slideshow
- [1080 – an overview](#) – article
- [Alternatives to 1080](#) – article
- [Clover root weevil](#) – article

These resources look at a range of pest species. Most of the resources contain related content sections with links to additional content.

## Aquatic pests

- [Koi carp](#) – article



### **Land-based pests**

- [New Zealand's wasp problem](#) – article
- [White butterflies](#) – article
- [Invasive animals in cities](#) – article
- [Cat fight](#) – article
- [Rabbit control](#) – article

Image of EnviroMate 100™ courtesy of Shane Hyde.