



CONSERVATION DOGS PROGRAMME

School visit information and
supporting resources for teachers



Department of
Conservation
Te Papa Atawhai

Kiwi
bank.



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CONTENTS

WHAT IS THE CONSERVATION DOGS PROGRAMME?

| | |
|--|---|
| Conservation Dogs in New Zealand | 2 |
| Kiwibank's partnership with DOC | 6 |
| Conservation Dogs handlers | 6 |

PREDATOR FREE 2050

| | |
|--|---|
| The role of our Conservation Dogs | 8 |
| Why control predators in New Zealand? How can we do this humanely? | 9 |

WHAT IS CONSERVATION EDUCATION?

| | |
|--|----|
| The three dimensions of conservation education | 10 |
|--|----|

THE PURPOSE OF THE CONSERVATION DOGS SCHOOL VISITS

| | |
|-------------------------------------|----|
| Curriculum links | 11 |
| Overarching learning outcomes | 11 |
| Integrated inquiry learning | 13 |

PRE-VISIT LEARNING IDEAS

| | |
|--|----|
| Introducing students to Conservation Dogs | 15 |
| Introducing students to their own role in protecting and restoring a local natural environment . | 17 |
| Worksheet: Working dogs – ideas and experiences | 18 |
| Worksheet: Protecting and restoring nature – ideas and experiences | 19 |

POST-VISIT LEARNING IDEAS

| | |
|---|----|
| Reflecting on the Conservation Dogs visit and extending thinking | 20 |
| Telling others about your new understanding of Conservation Dogs and the work they do | 21 |
| Future-focused thinking: Predator Free 2050 in your community | 23 |
| Action ideas: to contribute to Predator Free 2050 and support the Conservation Dogs Programme in your community (covers inquiry stages 1–9) | 24 |
| Reviewing and reflecting on your environmental actions | 27 |
| Sharing success | 28 |

NEXT STEPS/EXTENDING LEARNING

| | |
|--|----|
| Follow the adventures of our Conservation Dogs | 29 |
| Other resources to support inquiry into native species and biosecurity | 30 |

KEY

▶ = links to videos, 🔗 = links to websites; 🔍 = links to pages within this resource



WHAT IS THE CONSERVATION DOGS PROGRAMME?

The Conservation Dogs Programme is an internationally renowned effort managed by the Department of Conservation (DOC) to protect Aotearoa's endemic species, and control unwanted plant and animal pests.

Dogs have an extraordinary sense of smell that enables them to find native species and introduced pests 40 times faster than other methods – saving DOC huge amounts of time and money. The dogs love the work, and it is hugely rewarding for the staff who work with them.



Did you know?

New Zealand was the first country to use dogs to benefit conservation – as far back as the 1890s! We are a global leader in biosecurity, have helped Australia use dogs to find feral cats and rodents, and have supplied dogs to Japan to find mongooses.

CONSERVATION DOGS IN NEW ZEALAND

The Conservation Dogs do three kinds of work:

1. Pest detection

These dogs are trained to locate animal pests and plant pests (weeds) that destroy our native wildlife. Animal pests include mice, rats, possums, feral cats, mustelids (stoats, ferrets and weasels), rabbits, wallabies, plague skinks, and invasive insects such as Argentine ants. There are approximately 20 dog handlers and 30 dogs around the country that are trained and certified to sniff-out pest species. They deliver instant results with near-perfect accuracy, and are a non-invasive and eco-friendly way to detect pests.



Woody is a jagdterrier/border terrier cross, trained to find mustelids (stoats, ferrets and weasels). **Ahu**, **Moss** and **Will** are all fox/border terrier crosses, trained to find rodents.

▶ Videos of Miriam Ritchie and Woody

Videos: [Kiwibank/Wrestler](#)

[Introducing Conservation Dog team Miriam and Woody](#)

[Miriam and Woody: The Conservation Dog](#)

[Miriam and Woody: The Work](#)

[Miriam and Woody: In the Field](#)

[Miriam and Woody: The Bond](#)





Maxie, a collie/labrador cross, was DOC's first weed-detection dog. Maxie was trained to sniff out the distinctive scents of black passionfruit (*Passiflora edulis*), yellow guava (*Psidium guajava*) and purple guava (*Psidium cattleianum*), all of which are invasive weeds that strangle native plants.

Maxie and her handler Di worked on Raoul Island to help clear the island of noxious weeds. Maxie assisted the Raoul Island team by identifying and digging out hidden weeds.

[!\[\]\(bd1a142de767a21e5362c595f844a4ff_img.jpg\) DOC Blog story about Maxie](#)

[!\[\]\(e2376d476d06eb31946dc01a69a4403a_img.jpg\) One News story about Maxie](#)



Milo is a German shorthaired pointer trained to find feral cats.

[!\[\]\(830769b31eeeaca920791081939ff8ba_img.jpg\) Videos of Milo](#)

[Milo finds a cat](#)

[Milo's morning training session](#)

Videos: Brad Windust

Milo the Conservation Dog. Photo: Brad Windust



2. Protected species detection

These dogs help us find and monitor our protected species like kiwi, tokoeke, kea, tāiko (petrel), ngutu pare (wrybill), rowi (Okarito brown kiwi), whio, takahē, tuatara, pāteke, kakī, kākāpō, weka, kororā (little blue penguin), hoiho (yellow-eyed penguin), matuku (Australasian bittern) and other wetland/riverbed birds. There are 52 dogs around the country trained to do this.



Neo is a German shorthaired pointer, trained to find whio, brown kiwi, petrel and tuatara.

Beau is a German shorthaired pointer, trained to find whio and brown kiwi.



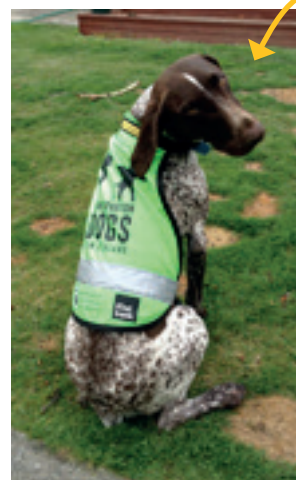
Ajax is a border collie cross, trained to find kea nests. He is the only kea conservation dog in the country!

▶ [Ajax the kea conservation dog.](#)

Ajax with a kea. Photo: Loading Docs



Kip with Femmie Klos, a seasonal kakī ranger, uplifting eggs from a kakī nest to take back to the captive facility near Twizel. Godley River, Mackenzie Basin. Photo: Cody Thyne



Kip is a German shorthaired pointer, trained to find kakī, wrybill and whio.



3. Wild-animal control

These dogs are trained to find specific animals such as goats, deer or pigs. Dogs are essential for wild-animal control programmes because they can find animals in dense vegetation. With dogs, we can control feral animal populations in ecologically valuable areas (areas with high biodiversity) more efficiently.

Wild-animal control dogs work with hunters. Every hunter-dog team has its own hunting style:

- *A bailing dog* locates its target species (sometimes up to 300 m away), usually beyond the sight of the hunter. The dog will 'head off' the animal (run the animal down, cutting in front to stop it), then bark constantly to tell the hunter where it is.
- *An indicating dog* stalks its target species, tracking the animal (or sometimes a mob of the target species) within close sight of the hunter. When the quarry is very close to the hunter, the dog will show a positive indication by freezing in a classic 'point' pose: one leg off the ground, a fixed tail, the head indicating the exact direction of the quarry.



Joe was the Team Leader for the (DOC Hauraki) Peninsula Project goat control programme. Here he works a herd of four goats with two dogs (Girl and Rosie) in a large bush clearing. Note Joe's casual approach, showing total confidence in his dogs' ability to contain the goats; getting a working dog to this level takes years of training. *Photo: Kim Dawick*



Did you know?

Certain dog breeds are more suited to this work. Pointers are often used to find protected species, while terriers are better at finding pests.





KIWIBANK'S PARTNERSHIP WITH DOC

Kiwibank is proud to call New Zealand home. It believes that getting out and experiencing our native birds and wildlife is a huge part of what makes being a Kiwi so special.

That's why, in September 2016, Kiwibank joined forces with the Department of Conservation to support the Conservation Dogs Programme. Kiwibank wishes to contribute to the development of the programme to support conservation benefits, provide for a higher programme profile, and enable the programme's longer-term sustainability.

CONSERVATION DOGS HANDLERS

Through Kiwibank's partnership with DOC, four more full-time dog handlers have been recruited to join the Conservation Dogs Programme. One of these handlers will probably visit your school on the organised visit!

HANDLER: MIRIAM RITCHIE



Location: Whangarei

Conservation Dogs: Ahu, Moss, Will (trained to find: rodents) and Woody (trained to find: mustelids) (pictured)

Bio: Miriam is a long-standing member of the Conservation Dogs Programme. Miriam performs surveillance and monitoring of New Zealand's offshore islands and rodent-free mainland sites.

As well as being a full-time dog handler, Miriam mentors and certifies other dog handlers in the programme.

Miriam's background includes monitoring kiwi and managing predator-trapping within the Whangarei Kiwi Sanctuary.

Miriam handles fully certified mustelid and rodent dogs.

HANDLER: RICHARD JOHNSTON



Location: Wellington

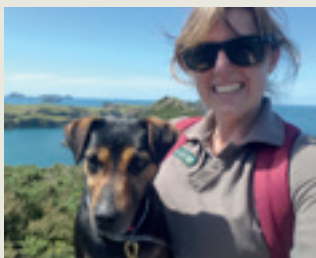
Conservation Dogs: Flint (trained to find: rodents) and Kowhai (trained to find: mustelids) (pictured)

Bio: Richard joined DOC from Wellington Zoo in October 2017, to strengthen DOC's island biosecurity programme and boost its presence at ferry terminals and marinas in the capital.

Richard will perform surveillance and monitoring of Kapiti, Mana and Matiu/Somes islands, the pest-free islands in the Marlborough Sounds, and the Zealandia mainland sanctuary.



HANDLER: HANNAH JOHNSTON



Location: Auckland

Conservation Dogs: Indie (trained to find: rodents (pictured) and Harper (trained to find: plague skinks)

Bio: Hannah joined DOC from the Ministry for Primary Industries, where she worked as a 'Kg' handler with MPI's biosecurity team.

Hannah will carry out surveillance, quarantine and incursion-response activities in the Hauraki Gulf/Tikapa Moana and the greater Auckland region.

HANDLER: GREG VAN DER LEE



Location: Whitianga

Conservation Dogs: Maia (trained to find: mustelids) (pictured) and Sassy (trained to find: rodents)

Bio: Greg is a long-standing DOC employee. Before becoming a dog handler, Greg managed Treaty settlements, concessions/permitting and community groups, and worked closely on the Fonterra partnership.

Greg's focus is to maintain the pest-free status of islands in the Whitianga/Coromandel region by performing quarantine, monitoring and incursion-response activities.



PREDATOR FREE 2050

Predator Free 2050 is New Zealand's biggest conservation challenge. It demands that we all work together – DOC, iwi, regional councils, conservation organisations, other government agencies, scientists, businesses, schools and communities – to rid New Zealand of the most damaging introduced predators (most commonly rats, stoats and possums) that threaten the natural environment.

If we achieve Predator Free 2050, we:

- will have forever preserved some of the world's most unique flora and fauna
- will leave a priceless environmental legacy for future generations of New Zealanders
- will no longer worry about rats or possums invading our homes and gardens, and about the diseases these pests can spread
- won't continue to spend billions of dollars each year on pest control
- will be even more attractive to visitors to New Zealand, because of our conservation story and respect for the land.

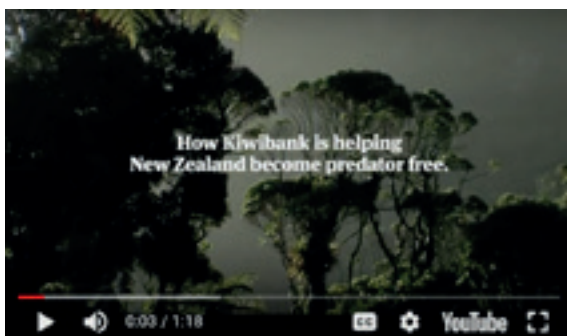
Check out the [!\[\]\(8b57f0e15e7dda24cf9977561475f640_img.jpg\) Predator Free Community Toolkit](#) on DOC's website for more information on how your school can help contribute to this conservation challenge. Predator Free New Zealand's website also has [!\[\]\(db042feca7af64186eb772bb6c70fab6_img.jpg\) school resources](#) available, including lesson plans and games to play.



School children from South Westland Area School installing a stoat trap, South Westland, 2009. Photo: DOC

THE ROLE OF OUR CONSERVATION DOGS

The Conservation Dogs Programme helps us achieve our Predator Free 2050 goal by sustaining our threatened species now, and by teaching us how to secure their future.



[!\[\]\(f2b341b2842f84b06275b7e52ec9f0ae_img.jpg\) Kiwibank, DOC and Predator Free NZ Trust join forces](#) Video: Kiwibank

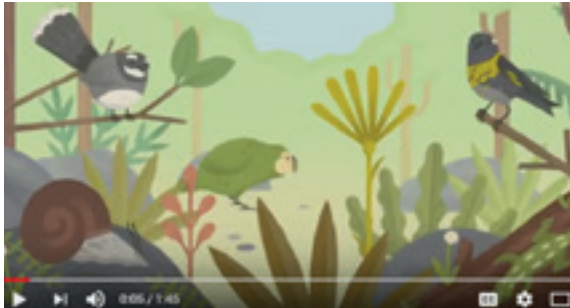


WHY CONTROL PREDATORS IN NEW ZEALAND? HOW CAN WE DO THIS HUMANELY?

Before beginning predator-control activities like trapping, we must understand why New Zealand needs to control predators, and how to trap pests with respect.

New Zealand has the highest rate of threatened species in the world. About 81% of our birds, 88% of our reptiles, and 72% of our freshwater fish are endangered. Approximately 800 species are in serious trouble, and if we don't act now they will face extinction.

Animal pests – like rats, stoats and possums – kill millions of native birds every year. To give our wildlife a chance to survive and thrive, we must remove the threat.



▶ [Why New Zealand needs predator control](#)
Video: DOC

Stoats, rats and possums have no place in New Zealand's landscapes, and they need to be removed. We need to use the tools and techniques that will most effectively protect our threatened species today, but that will also take the welfare of predators into account.

When trapping, we should encourage our children to think about the animal's life that has been taken. It's not easy to kill another living thing, nor should it be. Many indigenous cultures pay respect to the animal they have killed; by encouraging children to respect a deceased animal, we encourage them to respect our native wildlife too.

True **kaitiakitanga** (guardianship) of our native birds, reptiles and invertebrates is making sure they can live in safety; the key to getting this right is to hold onto empathy for other living things along the way.

For more information, see [Nicola Toki's \(DOC's Threatened Species Ambassador\) blog post](#).



WHAT IS CONSERVATION EDUCATION?

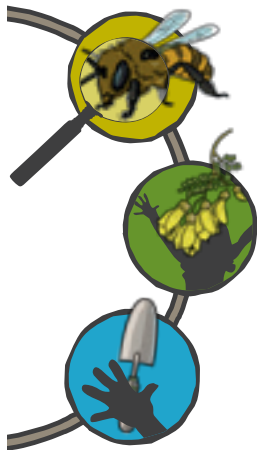
Conservation is about the future of our country. What kind of Aotearoa New Zealand do we want to see in 50 years? DOC sees conservation education as a component of the larger 'Environmental education' (EE) or 'Education for sustainability' (EfS) umbrellas.

Conservation education provides authentic opportunities for learning, and gives education providers opportunities to connect with their communities in meaningful ways. Conservation is about our place now, while also encompassing the past and future of Aotearoa.

Teaching conservation education is not an extra – it gives students the chance to learn in real-life contexts, and apply their learning to authentic needs and projects in their community. Our natural environment is unique, special and fascinating!

THE THREE DIMENSIONS OF CONSERVATION EDUCATION

Conservation education integrates:



Conservation education integrates:

Education ABOUT the environment – developing knowledge and skills

Curriculum-based learning and inquiry, usually in the classroom. Education ABOUT the environment develops awareness and understanding of environmental issues.

Education IN the environment – connecting to nature and place

Learning that takes place outside – place-based learning. Education IN the environment fosters values and attitudes by encouraging personal growth and well-being through direct contact with nature.

Education FOR the environment – taking action to restore, grow and protect

Applying skills, knowledge and values to take environmental action and participate in local restoration. Education FOR the environment increases a sense of responsibility, confidence and empowerment through participating in active citizenship and taking collective action to resolve environmental issues.

The Conservation Dogs school visits fit into the first dimension – 'education **about** the environment' – and will provide ideas and opportunities for learning **in** your environment and taking action **for** your environment.

For more information about conservation education, see: [DOC's Conservation Education website](#).



THE PURPOSE OF THE CONSERVATION DOGS SCHOOL VISITS

Please note: visits are limited by availability and capacity of the Conservation Dogs team. If you are interested in a visit, email conserved@doc.govt.nz. There is high demand for visits each year; you may go on a waitlist.

The learning activities in this resource are applicable for all primary schools interested in learning about Conservation Dogs, Predator Free 2050, biosecurity and taking conservation action in their local communities.



CURRICULUM LINKS

LEVELS 1–4 SCIENCE

Nature of Science: Investigating in science, Communicating in science, Understanding about science, Participating and contributing.

Living World: Ecology

Recognise (and explain) how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.

Science capabilities: Engage with science.

Minor curriculum links

English: Writing, Speaking and Presenting. Reading, Listening and Viewing.

OVERARCHING LEARNING OUTCOMES

- Understand the important role Conservation Dogs play to protect New Zealand's unique nature.
- Understand how pests affect the environment and our native species.
- Identify how to take action to identify and reduce threats to our native species.



MAIN CONCEPTS AND USEFUL VOCABULARY

| | |
|---------------------|---|
| Biodiversity | A measure of the variety of living things in a place. The greater the number of living things, the more 'biodiverse' it is. |
| Biosecurity | Actions to keep New Zealand free of unwanted organisms (animal and plant pests, and diseases like kauri dieback and myrtle rust), and for controlling, managing or removing them if they arrive in the country. |
| Conservation | The protection of animals, plants and natural resources. |
| Endemic | Refers to animals that have evolved in New Zealand and are only found here. |
| Native | Refers to animals that arrived in New Zealand by themselves and are found here as well as in other countries. |
| Pest | Animals and plants that are not wanted, have come from another country, and threaten our living things and environment. Introduced pests have been brought to New Zealand in the past by people (via ships) and in transported goods. |
| Predator | An animal (eg possum, rat, cat, stoat) that preys on others. The terms 'animal pests' and 'predator' are used interchangeably in this resource. |



Conservation Dogs visit to Plimmerton School with Miriam and Leona. Photo: Pete Barton



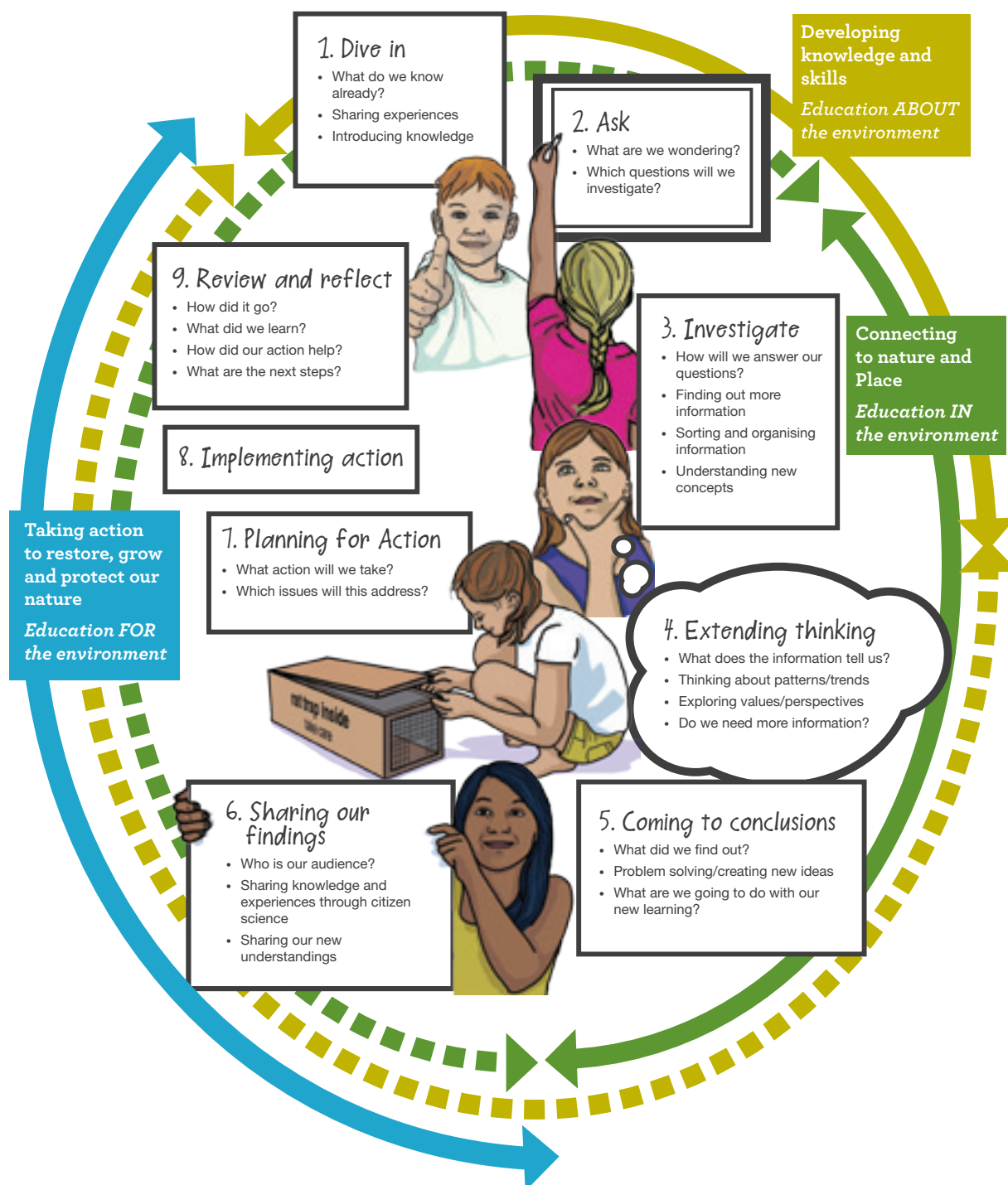


INTEGRATED INQUIRY LEARNING

A Conservation Dogs school visit can contribute to learning as part of an inquiry unit. The pre- and post-learning ideas on pages 13–29 align with the DOC inquiry-learning cycle:

Student inquiry learning cycle

The Environmental Education inquiry cycle is a continuous learning process. The solid lines represent the opportunity for focussed teaching and learning ABOUT, IN or FOR the environment. The dotted lines reflect the potential for ongoing opportunities in these dimensions.



What is the integrated inquiry cycle?

This resource is based on the integrated inquiry learning cycle (see page 13). Inquiry learning is a constructivist approach, where the student is at the centre of learning.

Students develop a learning inquiry to investigate aspects of the topic and build a depth of understanding through questioning, thinking and research, which allows them to apply these and contribute to real-life authentic action. The teacher supports this process and guides the students on their journeys.

This teaching model incorporates a variety of thinking skills and information literacy skills, and integrates well with digital technology.

Using the inquiry cycle

The inquiry cycle follows a thread throughout this resource and each inquiry step is described within activities. For further information about inquiry steps and using DOC's inquiry cycle, see: www.doc.govt.nz/integrated-inquiry-learning-cycle.



PRE-VISIT LEARNING IDEAS

Please note: these are suggestions only, teachers are encouraged to adapt and change material to suit their students.

INTRODUCING STUDENTS TO CONSERVATION DOGS

Learning intentions

Students are learning to:

- ask questions about things they are curious about
- begin to understand Conservation Dogs' role in protecting and restoring nature.


Success criteria

Students can:

- share their prior knowledge/ experiences of working dogs
- form questions about Conservation Dogs to ask the dog handler during their visit
- begin to identify Conservation Dogs' role in protecting and restoring nature.



INQUIRY STAGE 1: DIVE IN

- Using mind maps, students can record what they already know about working dogs. This could be done to establish students' prior knowledge and experiences.
- Students could also tell their stories in groups and then write recounts.
- Alternatively, groups of students could record their prior knowledge and experiences on the worksheet  'Working Dogs – ideas and experiences' (page 18).
- After establishing prior knowledge and experiences, you can use these resources to immerse students in Conservation Dogs:



[DOC Conservation Dogs factsheet](#)



[Conservation Dog team – Miriam and Woody](#)



[Ajax the kea Conservation Dog](#)



[One News story about Maxie \(DOC's first weed detection dog!\)](#)



[DOC Blog story about Maxie](#)



- Ask students to consider these reflection questions after viewing the resources:
 - What characteristics or qualities do the dogs have that make them suited to detecting pests and/or protected species?
 - What is the difference between pest detection, species detection and wild-animal control dogs?
 - How do trained Conservation Dogs benefit the environment and conservation?
 - What can you do to keep our islands and mainland sanctuaries free from pests?
 - What can you do at school or in your own backyard to protect and restore nature?



INQUIRY STAGE 2: ASK

- After students have explored these ideas, ask them about any questions/wonderings. In groups, students could share what they would like to know next about Conservation Dogs. Record them on the worksheet – 🐾 'Working Dogs – ideas and experiences' (page 18).
- Students' questions could be used as a basis for starting a learning inquiry.
- Preparing for the Conservation Dogs school visit:
 - Email the dog handler a list of students' questions, so they can better understand the students' interests and to help the handler prepare for the visit. Email your questions at least 3 days before the visit – one email with a full list of questions is best.
 - Consider how students will record information during the visit.



INTRODUCING STUDENTS TO THEIR OWN ROLE IN PROTECTING AND RESTORING A LOCAL NATURAL ENVIRONMENT

Learning intentions

Students are learning to:

- ask questions about things they are curious about
- start understanding their role in protecting and restoring a local natural environment (eg school grounds, local park/reserve, estuary, beach, etc).

Success criteria

Students can:

- share their prior knowledge/experiences of protecting and restoring a local natural environment
- consider the role they might play to protect and restore the local natural environment.



INQUIRY STAGE 1: DIVE IN

Students could also share their prior experiences about how they and/or their family and friends have protected/restored a local natural environment (eg school grounds, local park/reserve, estuary, beach, etc). Consider the following questions:

- Has anyone put out tracking tunnels and/or traps in their school grounds or backyard, to track and trap animal pests?
- Has anyone planted native plants in their backyard, or made bird feeders to attract birds?

Students could also tell their stories in groups and then write recounts. Alternatively, in groups, students could record their prior knowledge and experiences on this worksheet: 🐾 'Protecting and restoring nature – ideas and experiences' (page 19).



INQUIRY STAGE 2: ASK

Once students have explored these ideas, ask them if they have any questions/wonderings. In groups, students could share what they would like to know next about Conservation Dogs. These questions/wonderings could be recorded on the worksheet 🐾 'Protecting and restoring nature – ideas and experiences' (page 19). Students' questions could form a basis for starting a learning inquiry.





WORKSHEET: WORKING DOGS – IDEAS AND EXPERIENCES

| | |
|----------------------------------|--------------|
| We think... | We know... |
| Our experiences of working dogs: | We wonder... |

MAIN CONCEPTS AND USEFUL VOCABULARY

| | |
|---------------------|---|
| Pest | Animals and plants that are not wanted, have come from another country, and threaten our living things and environment. Introduced pests have been brought to New Zealand in the past by people (via ships) and in transported goods. |
| Predator | An animal (eg possum, rat, cat, stoat) that preys on others. The terms ‘animal pests’ and ‘predator’ are used interchangeably in this resource. |
| Endemic | Refers to animals that have evolved in New Zealand and are only found here. |
| Biodiversity | A measure of the variety of living things in a place. The greater the number of living things, the more ‘biodiverse’ it is. |
| Biosecurity | Actions to keep New Zealand free of unwanted organisms (animal and plant pests, and diseases like kauri dieback and myrtle rust), and for controlling, managing or removing them if they arrive in the country. |
| Conservation | The protection of animals, plants and natural resources. |
| Native | Refers to animals that arrived in New Zealand by themselves, and are found here as well as in other countries. |

Google Docs version of this worksheet:  <https://goo.gl/R2UGtr>





WORKSHEET: PROTECTING AND RESTORING NATURE – IDEAS AND EXPERIENCES

| | |
|---|--------------|
| We think... | We know... |
| Our experiences of protecting and restoring nature: | We wonder... |

MAIN CONCEPTS AND USEFUL VOCABULARY

| | |
|---------------------|---|
| Pest | Animals and plants that are not wanted, have come from another country, and threaten our living things and environment. Introduced pests have been brought to New Zealand in the past by people (via ships) and in transported goods. |
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| Conservation | The protection of animals, plants and natural resources. |
| Native | Refers to animals that arrived in New Zealand by themselves, and are found here as well as in other countries. |

Google Docs version of this worksheet:  <https://goo.gl/6uQAxf>



POST-VISIT LEARNING IDEAS

Please note: these are suggestions only – teachers are encouraged to adapt and change material to suit their students. However, we expect that teachers will follow up the DOC Conservation Dogs visit with post-visit learning and actions and, when possible, share lessons and actions with us.

REFLECTING ON THE CONSERVATION DOGS VISIT AND EXTENDING THINKING

Learning intentions

Students are learning to:

- gather information about Conservation Dogs and understand why they are important
- understand concepts such as biosecurity, conservation, and the effect of pests on the environment and our native species.

Success criteria

Students can:

- describe what Conservation Dogs do, what characteristics make them so well-suited to this role, and why they are important
- describe concepts such as biosecurity, conservation and the effect of pests on our natural environment and native species.



INQUIRY STAGES 3 AND 4: INVESTIGATE AND EXTENDING THINKING

At this stage of the inquiry, students are investigating their questions and further exploring the topic for a deeper understanding. Their interests and inquiry questions should drive their research. Students can follow further lines of inquiry to find out more information from relevant sources.

Students then take the information they have gathered and begin to organise it. The information connects to what they already know or helps them form new concepts.

- Students could reflect on the Conservation Dogs visit, and determine the next steps in their inquiry by considering the following questions:
 - Have our questions been answered?
 - What information is relevant to our inquiry?
 - What new concepts have I understood?
 - How can we sort and organise the information?
 - Do we need more information?






- Students could record their thoughts in a KWLHQ chart – for example:

| What I know about Conservation Dogs | What I want to know about Conservation Dogs | How I will learn this | What I have learned | New questions I now have |
|--|--|------------------------------|----------------------------|---------------------------------|
| | | | | |

Google Docs version of this worksheet:  <https://goo.gl/5dyB8o>

These resources could help student research:

-  [Conservation Dogs Programme website](#)
-  [DOC Blog story: Dogs with conservation jobs](#)
-  [DOC Blog story: Jobs at DOC – Jazz, Conservation Dog](#)

- Find out if there are any conservation projects in students' communities already using Conservation Dogs, and any others that could benefit from a Conservation Dog. How could Conservation Dogs help a local conservation project? You can search for local conservation groups and projects on [Nature Space](#).

TELLING OTHERS ABOUT YOUR NEW UNDERSTANDING OF CONSERVATION DOGS AND THE WORK THEY DO

Learning intentions

Students are learning to:

- communicate their findings about Conservation Dogs and why they are important.

Success criteria

Students can:

- share their findings about Conservation Dogs and why they are important by writing a story, report, letter or factsheet, or by creating a video or presentation.



INQUIRY STAGES 5 AND 6: COMING TO CONCLUSIONS AND SHARING OUR FINDINGS

Students can reflect on their overall findings so far. Are there any patterns or trends emerging from the evidence and data gathered? They may need to share information with each other to understand this.



- Students could begin to draw conclusions by considering the following questions:
 - What did we find out?
 - What will we do with our new learning?
 - How can we communicate our new knowledge and ideas?
- Students could share findings, and increase awareness about the Conservation Dogs Programme in their community by:
 - writing a story or report about the Conservation Dogs visit for the school blog/newsletter
 - creating a profile or factsheet about one Conservation Dog they have been researching
 - writing a story about a day in the life of a Conservation Dog
 - creating a presentation or video to share their learning with another class or to present at school assembly.

These online tools could help them present their findings:

 <https://telligami.com/>

 <http://blabberize.com/>

 <http://www.wordclouds.com/>

 <http://voicethread.com/>

 <http://popplet.com/>

DOC and Kiwibank would love to hear what students have learned about Conservation Dogs, and how they have shared their learning. Email your stories to conserved@doc.govt.nz.



FUTURE-FOCUSED THINKING: PREDATOR FREE 2050 IN YOUR COMMUNITY

Learning intentions

Students are learning to:

- understand the long-term goal of our country being predator free by 2050
- understand they can contribute to Predator Free 2050 in their community by:
 - using appropriate tools to collect information about animal and/or plant pests living in a local environment (such as school grounds, local park or backyard)
 - planning for action to make a local environment predator-free
 - determining important biosecurity actions to keep pest-free sites (such as offshore islands and mainland sanctuaries) pristine when visiting.

Success criteria

Students can:

- describe possible predator-free futures for both New Zealand and their local environment
- identify and describe ways they can contribute to Predator Free 2050 in their community
- gather and interpret data about animal and/or plant pests living in their environment
- participate in informed action for a local environment.







INQUIRY STAGES 7 AND 8: PLANNING FOR ACTION AND IMPLEMENTING ACTION

The future-focus principle asks students to look to the future, predict what could happen, and think about how this might affect them and their community. Considering a range of possible futures – both positive and negative – can help students understand how decisions and actions today can have consequences tomorrow.

 See [NZ Curriculum Online – why the future-focus principle is important](#) for more information.

Considering the long-term goal of being predator free by 2050 is a great way to introduce students to the future-focus principle.

Introduce students to Predator Free 2050 using these resources:

-  [Kiwibank, DOC and Predator Free NZ Trust join forces](#)
-  [Why New Zealand needs predator control](#)
-  [Predator Free 2050 on the DOC website](#)
-  [Predator Free New Zealand website](#)



ACTION IDEAS: TO CONTRIBUTE TO PREDATOR FREE 2050 AND SUPPORT THE CONSERVATION DOGS PROGRAMME IN YOUR COMMUNITY (COVERS INQUIRY STAGES 1-9)

1. Tracking and trapping pests in a local environment

- Imagine a country without introduced predators! What would it be like? How would our native species benefit? Students could brainstorm and/or draw pictures of what they think a 'predator-free' environment would look like. For example:



Katikati College's vision for their green space.

- Investigate animal and/or plant pests in a local environment (eg school grounds, local park, backyard). The resources [Investigating animal pests in your green space](#) and [Investigating plant pests in your green space](#) will help students:
 - gather and interpret data about animal and plant pests living in a local environment
 - identify and learn about introduced pests, and how they affect endemic and native plants and animals
 - understand how animal and plant pests affect the environment and wider ecosystem.



- Once students have identified which animal and/or plant pests are living in their green space, use the [Enhancing biodiversity in your green space](#) resource to form a plan for eliminating pests and enhancing the native animal and plant life in their environment.
- The [Tools for environmental action](#) resource can then be used to support taking action to eliminate pests and increase biodiversity in the students' environment. The resource includes tips for carrying out environmental action, and case studies of effective environmental actions schools have undertaken.



2. Biosecurity: what you can do to keep our offshore islands and mainland sanctuaries safe and pristine

Biosecurity is about keeping New Zealand free of unwanted organisms (animal pests, weeds, didymo, and diseases like kauri dieback and myrtle rust) and for controlling, managing or eradicating them.

- ▶ [Biosecurity: Protecting to grow New Zealand – produced by the Ministry for Primary Industries \(MPI\).](#)

Determine students' prior knowledge and experience:

- Have students visited a pest free island or mainland sanctuary (eg [Tiritiri Matangi Island](#), [Zealandia](#), [Maungatautari Ecological Island Reserve](#) or [Pukaha Mount Bruce](#))? Have they seen any biosecurity measures in place?
- Have students visited a pest-free island and had a Conservation Dog check their bags before boarding a ferry?
- Have students visited an airport and seen quarantine officers or airport dogs checking travellers' bags?



Cleaning shoes at biosecurity station
Photo: DOC





LEFT

Conservation Dog handler Carol Nanning with Pai and Piri checking a boat for animal pests. Photo: Fin Buchanan

RIGHT

Bags and gear are scrupulously cleaned in a quarantine area, prior to visiting Te Hauturu-o-Toi/Little Barrier Island. Photo: George Driver – Wilderness Magazine New Zealand

- Discuss/brainstorm ideas for actions people should take before visiting a pest-free island or mainland sanctuary.
- Introduce students to major biosecurity actions using these resources:

| | |
|-------------------------------------|--|
| <h3>Visiting pest-free islands</h3> | <ul style="list-style-type: none"> 🔗 DOC Information on visiting pest-free islands 🔗 DOC Biosecurity checklist for visiting pest-free islands 🔗 Information on visiting Hauraki Gulf pest-free islands ▶ Guidance video – Island biosecurity: preparing for quarantine |
| <h3>Kauri dieback</h3> | <ul style="list-style-type: none"> 🔗 Information on kauri dieback disease 🔗 Tips on how we can help save our kauri trees |
| <h3>Myrtle rust</h3> | <ul style="list-style-type: none"> 🔗 DOC information and guidance on this fungal disease ▶ Guidance video: "Help Ruud 'the Bug Man' find myrtle rust" 🔗 Information on how to monitor myrtle rust locally |
| <h3>Didymo</h3> | <ul style="list-style-type: none"> ▶ Whenua finds a future by Sarah Ridsdale (a winning film in the Outlook for Someday 2015 competition) |



Students could:

- increase awareness about important biosecurity actions in their community by creating posters, videos and/or factsheets
- raise awareness among other students and their wider community by setting up their own cleaning station at school
- practise biosecurity actions by setting up a checking post/quarantine area before entering their classroom.

Quarantine areas are typically clean spaces with benches/large desks, a vacuum cleaner to remove seeds from bags and shoes, disinfectant spray to clean shoes, a brush to clean clothing, and a rubbish bin and sealed containers for food items not in sealed bags/lunch boxes.

- Two or three students could be assigned as quarantine officers and check bags for rodents, Argentine ants and skinks; check shoes and clothes are clean of dirt and seeds; and check that food is in sealed bags/lunch boxes.
- Students could pick a myrtle (eg pōhutukawa, mānuka, kānuka or rātā) near school or home and monitor it over a school term. Students could record and present their findings. Use recording tools such as the myrtle rust reporter app.

REVIEWING AND REFLECTING ON YOUR ENVIRONMENTAL ACTIONS

Learning intentions

Students are learning to:

- monitor and review their environmental action.

Success criteria

Students can:

- reflect on what they have achieved and identify possible next steps
- reflect and record what worked well, and what they would do differently next time.





INQUIRY STAGE 9: REVIEW AND REFLECT

Reflect on how their environmental action went. This may lead to further inquiry. Reviewing and reflecting is also helpful at each stage of the inquiry learning cycle. Students could consider the following questions:

- How did it go?
- Did you achieve what you hoped to achieve? Look at your brief to see if you met the criteria for action.
- What did we learn?
- What would you do differently next time?
- What is the next step for your environmental journey?
- How can you give back to the people who helped?

For more activity ideas on how to measure, monitor and review your environmental action, see the [Tools for environmental action resource](#).



SHARING SUCCESS

- The Department of Conservation and Kiwibank would love to hear about what conservation actions your school is involved in. Email your stories to conserved@doc.govt.nz.
- Enter the Department of Conservation [Habitat Heroes competition](#) to share your conservation action journey and resulting successes.
- Celebrate your action success with a community event or public announcement.



NEXT STEPS/EXTENDING LEARNING

FOLLOW THE ADVENTURES OF OUR CONSERVATION DOGS

Students can connect with and follow the adventures of our Conservation Dogs on social media. Some of our Conservation Dogs have their own social media pages:



Pai and Piri on [Facebook](#). Pest detection dogs trained to find rodents.



Neo on [Facebook](#) and [Instagram](#). Protected species detection dog trained to find whio, brown kiwi and petrels.



Ajax on [Facebook](#). Protected species detection dog trained to find kea.



Milo on [Facebook](#). Pest detection dog trained to find cats.



Rein on [Instagram](#). Protected species detection dog trained to find rowi and great spotted kiwi.



Maddi and Rua on [Facebook](#). Protected species detection dogs trained to find pāteke, brown kiwi, petrels and penguins.



Gadget's [blog](#). Pest detection dog trained to find rodents.



OTHER RESOURCES TO SUPPORT INQUIRY INTO NATIVE SPECIES AND BIOSECURITY

The following resources can help an inquiry into native species the Conservation Dogs Programme helps to protect:

[Whio Forever education resources](#)



[Kiwi Forever education resource](#)



[Kakapo Recovery education resource](#)



If you are interested in an inquiry into biosecurity, check out these resources:

[Biosecurity – Protecting our local environment resource](#), developed by the Ministry for Primary Industries.



[Keep Kauri Standing](#) – a kauri dieback education resource developed by Auckland Council.



Remember to share any of your learnings about Conservation Dogs, and your conservation actions, with DOC and Kiwibank. Email your stories to conserved@doc.govt.nz.



