



“Even though you are a kid...you can still do stuff”

Understanding how to empower, inspire and upskill
young leaders to contribute to a predator free Aotearoa

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Abstract

This report presents key findings from Papa Taiao Earthcare's 2019 Predator Free Secondary Schools Leadership Programme (the Leadership Programme). Predator Free 2050 Ltd funded the research to build knowledge on what works for engaging young people to contribute to a predator free Aotearoa.

A qualitative research approach was used. Researchers conducted a thematic analysis based on in-depth interviews with twelve programme participants and five teachers from participating schools. Programme instructors administered a short survey at the end of three of the nine workshops. Quantitative data on programme attendance and academic achievement was also collected.

The research found that young people want to contribute to the Predator Free 2050 mission for their and future generations' enjoyment and survival. They believe that our unique biodiversity has cultural and economic significance for Aotearoa and that healthy ecosystems are important for the health and survival of the nation. They are also motivated by a sense of responsibility to repair the damage humans have inflicted on other species.

The research also found that the following activities and features of the Leadership Programme are effective at engaging young people to contribute to a sustainable future:

- taking a positive approach to sustainability
- giving students knowledge and skills and freedom to act
- connecting students with sustainability-conscious peers and adults
- providing an opportunity for students to gain qualifications for participating in the programme
- selecting schools where students are supported to implement projects.

When developing future youth engagement strategies, organisations like Papa Taiao Earthcare and Predator Free 2050 Ltd should consider the tension between creating opportunities for youth leadership and autonomy and maintaining focus on a specific goal like predator free 2050.

These research findings can help inform the design and delivery of future programmes aimed at empowering young people to contribute to a predator free Aotearoa.

Introduction

Papa Taiao Earthcare delivers programmes to empower, upskill and inspire rangatahi to contribute to a sustainable future

Papa Taiao Earthcare is a sustainability training organisation that supports secondary school students to design and implement enterprises and projects for a better world. Rangatahi learn about sustainability and develop a product or service to improve social, cultural, environmental and economic sustainability outcomes for them and their communities.

Over the last ten years, Papa Taiao Earthcare has experimented with, and refined strategies to successfully engage young people in sustainable actions and enterprises in Aotearoa, including predator-control activities.

In 2018, Papa Taiao developed and piloted a Predator Free Secondary Schools Leadership Programme in Northland, Waikato and Wellington. This programme aimed to engage young people in predator free activities through developing student-lead enterprises.

A range of organisations are working to engage young people in predator free activities

Papa Taiao Earthcare conducted an overview of the main players involved in predator free youth initiatives in Aotearoa to understand the nationwide state-of-play (list of initiatives appended). They found 38 predator free initiatives with a youth engagement component (Table 1). All regions except Canterbury and Gisborne had at least one initiative. The Wellington region had the greatest number of initiatives.

Thirty six of the 38 providers included secondary school students in their target audience. Papa Taiao Earthcare was the only provider to focus exclusively on secondary school students. Papa Taiao Earthcare was one of two providers to offer a national-scale programme, the Earthcare Academy. The other organisation was Squawk Squad and their national conservation week programme.

Fifteen providers delivered programmes with a practical focus on developing predator control skills and connecting participants to predator free activities. All other programmes were theory-based, delivered presentations and guided tours to participants, usually in an outdoor setting like a predator free sanctuary.

Table 1. Overview of predator free youth and secondary school engagement initiatives in Aotearoa

Region	No. of initiatives	No. of initiatives targeting secondary school students	No. of activity-based initiatives
Nationwide	2	1	1
Auckland	4	4	1
Bay of Plenty	2	2	2
Canterbury	0	0	0
Gisborne	0	0	0
Hawke's Bay	1	1	0
Manawatū-Whanganui	2	2	1
Marlborough	2	2	0
Nelson	3	3	2
Northland	2	2	1
Otago	2	2	0
Southland	4	4	1
Taranaki	3	3	1
Tasman	1	1	0
Waikato	4	4	4
Wellington	5	4	0
West Coast	1	1	1
Total	38	36	15

Papa Taiao Earthcare received research funding to build knowledge on youth engagement in predator free activities

In 2019, Papa Taiao Earthcare received funding from Predator Free 2050 Ltd to build knowledge on what works for engaging young people to contribute to a predator free Aotearoa. Litmus Ltd, an independent research agency supported their work.

Papa Taiao delivered a revised Predator Free Secondary Schools Leadership Programme based on their learnings from the previous year. Based in Wellington, this programme was the vehicle for this research project.

Three key questions guided the research design:

1. What is the most significant benefit of a predator free Aotearoa to the lives of young people in Aotearoa?
2. What activities and features of the Leadership Programme are most effective at engaging young people to contribute to a predator free Aotearoa?
3. What actions should organisations such as Papa Taiao Earthcare take to support young people to contribute to a predator free Aotearoa?

The programme sought to empower young Wellingtonians to design sustainable enterprises for a predator free 2050 Aotearoa

Papa Taiao Earthcare used a range of strategies for youth engagement including creating opportunities for learning in a real-world context, strengthening connections to the local environment and sustainability networks and student agency. Papa Taiao Earthcare's theory of change and logic model describing their approach is appended.

The programme included an overnight whakawhanaungatanga camp on Matiu-Somes Island and nine evening workshops. The camp's purpose was to introduce the programme and for students to connect to each other and their local environment. The camp included icebreakers, snorkelling, wildlife walks, group discussion and project brainstorming.

The purpose of the workshops was to support students with their projects by connecting them with a range of sustainability mentors, developing their business and leadership skills, and creating a space for group work. Sessions ran from 4 pm-7 pm every three weeks and were held in different Wellington venues. Papa Taiao Earthcare facilitated the wānanga and eight of the nine workshops. Enviroschools facilitated the other workshop. Each of the nine workshops covered a different subject or skill. The list of workshop subjects is appended.

Thirteen students from six Wellington schools enrolled in the programme. The cohort included four Year 11, two Year 12 and seven Year 13 students. Twelve students successfully completed the programme.

Research questions two and three were adapted to reflect the projects chosen by programme participants

In line with Papa Taiao Earthcare's commitment to student agency, students were given the freedom to pursue projects that felt most important and relevant to them. While predator free 2050 was introduced as a focus at the camp, only one student chose predator free activities for their project (complete list of student projects is appended).

Research questions two and three were broadened to ensure that youth engagement learnings from students not undertaking predator free activities could also be included. We believe the research findings will still be relevant to Predator Free 2050 Ltd and their mission to engage more young people in predator free activities.

Methods

Papa Taiao Earthcare recruited participants through schools

Programme participants were recruited by Papa Taiao Earthcare through existing and new relationships with local Wellington high schools. Papa Taiao sent information about the programme to school contacts and in most cases spoke at school assemblies or environmental groups. Most students enrolled in the programme because they heard a Papa Taiao Earthcare instructor speak or were shoulder-tapped by a teacher. Some students had prior interest or involvement in sustainability leadership through their school environmental group.

Papa Taiao Earthcare and Litmus used a mixed-method approach

We used a qualitative research approach supplemented with quantitative data. The three data collection methods are outlined below.

Qualitative interviews with student participants and teachers from participating schools

Litmus conducted interviews with the 12 students who completed the Leadership Programme to understand their experiences and learning outcomes related to the three key questions. Litmus developed a discussion guide to steer these interviews (appended). These interview questions were guided by the research questions and the Kirkpatrick training evaluation model (Kirkpatrick & Kirkpatrick 2016).

Papa Taiao Earthcare conducted interviews with five teachers from participating schools, recognising that teachers often play an important role in youth engagement. Papa Taiao Earthcare developed a discussion guide (appended) for these interviews. All interviews were audio-recorded then transcribed. Most interviews lasted about 30 minutes.

Short online surveys after workshops

Litmus designed a short survey for students to complete at the end of each workshop (appended). The purpose of these surveys was to gauge students' level of engagement and learnings from the workshops to inform key questions two and three. The survey questions were guided by the first three levels of the Kirkpatrick training evaluation model (ibid) which focuses on reaction (what did you think of the session?), learning (what did you learn tonight?) and impact (how would you apply these learnings?). As these surveys were only administered after three workshops, these results have been treated as supplementary.

Quantitative data on attendance and NCEA achievement

Student attendance at the camp and workshops was monitored throughout the programme. NCEA achievement information on whether they passed the Education for Sustainability standard, and with what grade, was also collected. This data helped inform key question two as indicators of student engagement in the programme.

Analysis and reporting

Litmus compiled and organised the data in Microsoft Excel and undertook a thematic analysis. The analysis process involved identifying, analysing and interpreting patterns of meaning (or "themes") within the qualitative interview transcripts. Litmus conducted a brief literature review to help interpret the emerging themes (appended). We analysed the quantitative data to supplement the qualitative research findings.

Caveats

Key research themes described in this report were consistent across the interviews, increasing the dependability and rigour of the findings.

This report draws key themes from a small group of Wellington students who were self- or teacher-selected, from mostly medium to high decile schools. Many students already had an interest in sustainability. Caution needs to be used when applying these findings to other regions and contexts.

Findings

This section explores emerging themes from the thematic analysis, shaped around research questions one and two. Supplementary quantitative results are also included.

What is the most significant benefit of a predator free Aotearoa to the lives of young people?

This question aimed to understand the value proposition of a predator free Aotearoa for young people. This will help Predator Free 2050 Ltd develop young-people-centred messages and communications.

Young people care about contributing to a predator free Aotearoa for the following reasons:

- Young people want to contribute to a predator free Aotearoa so they can continue to enjoy the “naturally stunning” environment of Aotearoa. They also feel a sense of guardianship to protect and nurture the environment for generations to come.

‘That moment when I walk through the bush or even down the street with some little clear areas, and I hear a huge amount of bird song... that's the sound of joy to me. Everywhere should sound like that.’ (Year 11 student)

‘I'm not doing this for me; I'm doing this for the younger generations to come... to have the same experiences, to feel the same connections to the land, to feel that aspect of kaitiakitanga, guardianship.’ (Year 13 student)

- Others acknowledge that the unique biodiversity of Aotearoa has cultural and economic significance for Aotearoa. They feel that healthy ecosystems are necessary for the health and even the survival of the nation.
- Young people are also motivated by a sense of responsibility to repair the damage humans have inflicted on other species.

What activities and features of the Leadership Programme are most effective at engaging young people to contribute to a sustainable future?

This question aimed to identify programme components that successfully engaged young people. This will inform the design of effective youth engagement strategies for Predator Free 2050 Ltd and other environmentally oriented organisations.

A range of programme activities and features were effective at engaging students

The following activities and features of the Leadership programme were most effective at engaging young people to contribute to a sustainable future, and are discussed in more detail below:

- taking a positive approach to sustainability
- giving students knowledge, skills and freedom to act
- connecting students with sustainability-conscious peers and adults
- providing an opportunity for students to gain credits for participating in the programme
- selecting schools where students are supported to implement projects.

Taking a positive approach to sustainability

The Leadership Programme exposed students to taonga of the natural world, created a supportive learning environment and a culture of celebration. The programme also framed sustainability positively. Students, therefore, left the programme feeling empowered that they could contribute to sustainability in meaningful ways.

Framing sustainability positively

Papa Taiao Earthcare instructors fostered a positive approach to sustainability throughout the programme. On Matiu Somes Island, instructors created opportunities to showcase the positive outcomes restoration projects can achieve for Wellington's biodiversity.

'The students encountered all the taonga (treasures) the island had to offer; the young, recently restored native bush teeming with kakariki during the day, with an abundance of giant weta and tuatara at night'. (Papa Taiao Earthcare 2019)

Supportive learning environment

Throughout the workshops, students enjoyed the 'chilled' and 'supportive' learning environment created by the instructors and guest speakers. Students valued instructors' flexibility to offer support to a range of different projects and their encouragements to keep the projects progressing.

'It's just amazing to have people who are so supportive and just a backbone for you, to carry you through your work and your journey'. (Year 13 student)

'After they realise you're a student that wants to make a difference...most of them are willing to push everything out of the way to help you out...The enviro-community is so supportive.' (Year 13 student)

Students were asked to rank their experience of the workshop between one and five after three of the workshops. Most students ranked these workshops highly which supports the qualitative findings (appendix 11).

End of year celebration

The Leadership Programme ended with a celebration of the 'awesome accomplishments' of the students. Students presented their projects to an audience which included teachers, mentors, hosts, facilitators and whānau. This celebration created another opportunity for students to foster positive associations with sustainable action.

'After their presentations, students fielded an array of questions and positive comments. We're all buzzing from the night and are so proud of what they have achieved.' (Papa Taiao instructor, an excerpt from the programme summary)

Giving students knowledge, skills and the freedom to act

The Leadership Programme gave students the freedom to design and implement projects that were important to them. A student who worked at a supermarket focused their project on providing compostable gloves to replace the disposable latex gloves used in their workplace. Two students designed Whare Kōrero/Voice Boxes to play recorded pūrākau (stories) at Oruaiti Pā to educate the public about local histories. The freedom to shape their projects helped young leaders feel passionate and empowered about their learning.

'It's very individualised, which means everyone has something that they genuinely want to be there for and genuinely want to do it, which...makes it much more easier to learn because it makes it much more easy to make it more passionate'. (Year 11 student)

‘When we first started here, we felt really confused and lost on what we should do for a project. But then we narrowed it down and brought it back to us and how we feel and our points of view as Māori and empowered [ourselves] to pull that up.’ (Year 13 student).

Experiential learning and building real-world skills

The experiential approach to learning built students’ confidence and competence to act. The process of designing and implementing sustainability actions enabled students to develop real-world skills, from predator trapping and tree planting to project planning, marketing, fundraising and networking. Students valued the ‘practical, hands-on’ approach to learning and felt confident that they could use these skills in the future.

A multi-disciplinary approach to learning

The programme also exposed students to a multi-disciplinary approach to learning. Instructors used the framework of the four pillars of sustainability: environment, society, culture and economy. Students designed their projects to have positive impacts across multiple dimensions. For example, a bank restoration project had three intentions: to restore the ecology of the bank (environment), to bring students closer to nature and each other (social) and to bring back more native taonga species (cultural).

This multi-disciplinary approach helped students understand how sustainability-related to their lives outside of the classroom.

‘Papa Taiao...really focuses around a lot of aspects of life. We learn this diverse range of things like perspectives, and we talk about marketing and advertising. It’s been really helpful because courses normally focus around a tight specific subject, whereas I feel like I can apply the learning I have got from Papa Taiao into...my everyday life.’ (Year 11 student)

Connecting students with sustainability-conscious peers and adults

The Leadership Programme created a platform where students could reinforce and affirm their identities as teenagers who care about sustainability. By bringing students together outside of the school environment, the group could define their own social norms.

Students valued engaging with peers who were “[there] for the same kaupapa.” The peer feedback helped to strengthen their identities as sustainability advocates and empowered them to resist and challenge social norms in the school environment.

'I always used to think that it was just annoying if I was going "don't use plastic," because I don't want to be that white vegan kid...[but] knowing that other people share these views has given me the confidence to tell more people about the issues we have at school.' (Year 12 student)

'What I liked is the kids coming from different schools with the same sort of philosophy, ethics and drive. That's more valuable than anything, because [otherwise] they're in their own bubble and don't have that chance to meet up.' (Teacher)

Working with previous graduates

During the programme, students interacted with graduates from the 2018 Leadership Programme. These graduates spoke to the students about their projects from the year before and what they were doing now. Engaging with these tuakana further reinforced the normality of people their age caring about and contributing to a sustainable future.

'I think the speakers responded to the most were previous students.' (Teacher)

Exposure to changemakers

Students also engaged with adults working for change in councils, not-for-profit organisations, businesses and social enterprises. These "inspiring" role-models praised student projects. After presenting their project in public, the students from Te Kura Kaupapa Māori o Ngā Mokopuna received a mihi from an audience member to acknowledge their mahi. These interactions helped strengthen students' identities as sustainability advocates and reinforced the idea that they all have something to contribute to a sustainable future.

'It's meeting all the different people doing different things to help the environment. It's the idea that there is always a way you can use your skills and expertise to help the environment.' (Year 13 student)

Building connections and resources

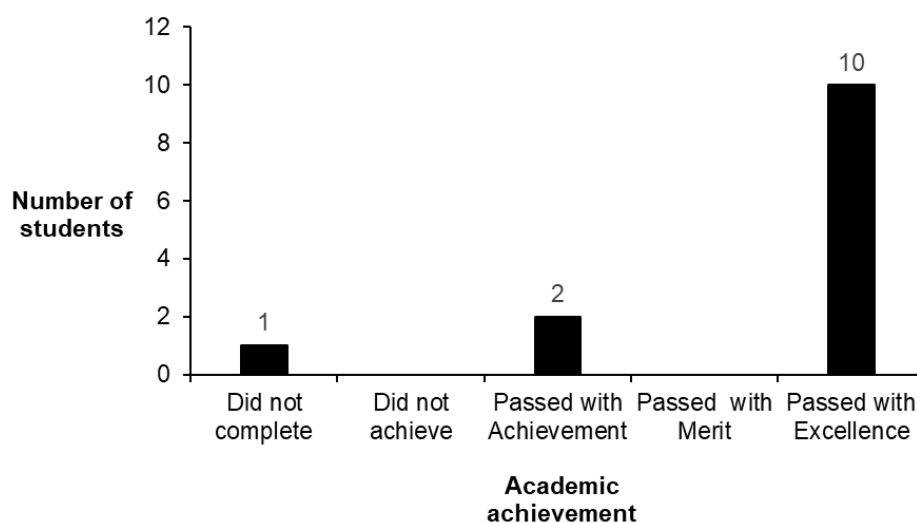
Some of these adults also supported student projects with advice, introductions to other contacts, and resources. For example, one group's new Council contact gave them left-over materials to build their voice-box product. The level of support and confidence in the students shown by adults boosted their sense of being part of a caring community working towards a shared goal.

Providing opportunities for students to gain credits for participating in the programme

Students were not motivated to attend the programme *just* to gain credits. However, being able to earn credits enabled senior students to invest time in the programme. The average workshop attendance rate across all participants was 85%.

Twelve of the thirteen students completed the Education for Sustainability achievement standard, and ten passed with Excellence (Figure 1).

Figure 1. Academic achievement of students participating in the leadership programme



Students indicated that juggling the programme with other school and work commitments was a challenge. Without the attached credits, it was unlikely that the programme would have remained a priority, particularly when completing other assessments and during exams.

Selecting schools where students are supported to implement projects

Teachers provided important in-school support to students throughout the programme. Teachers encouraged students to apply for the programme and supported them with project implementation. Selecting schools with teachers who will support their students throughout the programme is important for the success of some students.

‘[Students] need so much support. And if they don’t, it falls on its face. I think there needs to be a lot of support from teachers.’ (Teacher)

Recommendations

This section answers the third research question with learnings and suggested programme improvements.

What actions should organisations such as Papa Taiao Earthcare take to support young people to contribute to a sustainable future?

This future-focused question explores key learnings from the delivery of the programme and suggested improvements if it is scaled beyond 2019. These learnings can inform the youth engagement strategy of Predator Free 2050 Ltd and similar organisations.

- Continue to 'walk the line' of creating opportunities for youth leadership and autonomy while keeping within the boundaries of the project purpose and scope.
- Continue to engage young people and foster positive emotions through creating opportunities for positive social connection and affirmation, a culture of celebration and engaging them in the natural world.
- Continue to provide an opportunity for young sustainability-conscious people to connect and strengthen their identities as sustainability advocates. This includes continuing to connect students with like-minded peers and adults who can reinforce and role-model sustainability advocacy.
- Continue to keep teachers informed of the programme through emailed progress updates at the end of each term
- Keep the size of the group small. The 2019 group of 13 students helped students connect to their peers and receive tailored support from Papa Taiao instructors. Expanding the group size runs the risk of reducing engagement.
- Focus recruitment on Year 11 students as Year 12 and 13 students have more demands on their time, including paid work, student leadership responsibilities and exam preparation.
- Recruit at least two students per school so they can work together on their project.

- Encourage teachers to shoulder-tap students for the programme who might not get other leadership opportunities.
- Encourage students to consider how they could bring new energy and ideas to existing projects within their school or local community which may already have access to resources and relationships to support action.
- Develop clear expectations with schools about how teachers will support students to implement projects in the school. For example, by meeting with them before and throughout the programme.
- Introduce regular opportunities for students to update the group on their projects to maintain their accountability to the programme.
- For lasting engagement, young people need to feel empowered to take action beyond the scope of any one programme. Creating opportunities for students to develop a variety of skills and lead projects helps them recognise that young people can do something to make their communities more sustainable.

'I always thought that sustainability was like some big-picture thing... I thought it had to be everyone doing it...But it is kind of cool that just two or three people in each area can do something and make their communities more sustainable. This programme has shown us that even though you are a kid or whatever you can still do stuff, which is cool. (Year 12 student)

Conclusion

Papa Taiao Earthcare is currently the only provider offering national-scale predator free programmes exclusively to secondary school students. Papa Taiao Earthcare and Litmus conducted this research to build knowledge on what works for engaging young people to contribute to a predator free Aotearoa.

The research found that the 2019 Predator Free Secondary Schools Leadership Programme participants want to contribute to a predator free Aotearoa for their and future generations' environmental enjoyment. They understand the cultural and economic significance of our unique biodiversity and believe that thriving ecosystems are important for our survival. They also feel a responsibility to help solve the environmental challenges we have created.

The most effective features of the programme for engaging young people to contribute to a sustainable future include:

- taking a positive approach to sustainability
- giving students knowledge and skills and freedom to act
- connecting students with sustainability-conscious peers and adults
- providing an opportunity for students to gain credits for participating in the programme
- selecting schools where students are supported to implement projects.

This research has identified a tension between creating opportunities for youth leadership and autonomy while holding to specific goals like predator free 2050. Organisations like Papa Taiao Earthcare and Predator Free 2050 Ltd should be aware of this tension when designing their youth engagement strategies. Another important consideration is how to maintain the intimacy of the small group when scaling the project.

These research findings and recommendations can help inform the design and delivery of future programmes aimed at empowering young people to contribute to a predator free Aotearoa.

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Appendices

1 Raw data on predator free youth and secondary school engagement initiatives

Region	Location	Type of provider	Provider	Target age group/s	Name of initiative	Activity-based	Offering	Website link to more information
Auckland	Auckland	Zoo	Auckland Zoo	pre-school, primary, secondary, tertiary	Education programme	Yes	A full day/overnight conservation field trip to Tāwharanui Open Sanctuary where students participate in bird and lizard monitoring, pest monitoring and trapping techniques.	aucklandzoo.co.nz/visit/education
Auckland	Auckland	Sanctuary	Tiritiri Matangi Open Sanctuary	primary, secondary	Education programme	No	Talks covering all aspects of restoration, including pest control, closely tied to the curriculum.	tiritirimatangi.org.nz/home
Auckland	Auckland	Sanctuary	Shakespeare Open Sanctuary	pre-school, primary, secondary, tertiary	Education programme	No	Tours of the Sanctuary and talks on a range of topics including the impact of pest eradication on native plants and animals.	sossi.org.nz
Auckland	Auckland	Council	Various regional parks around Auckland	pre-school, primary, secondary	Learning Through Experience school programmes	No	Educators and park rangers take students on a journey through curriculum-based experiences on environmental and sustainability issues including the impacts of pests and how to control them.	aucklandcouncil.govt.nz
Bay of Plenty	Tauranga	Sanctuary	Aongatete Forest Restoration	pre-school, primary, secondary, tertiary	Education programme	Yes	Activity-based programme, can include bird banding and ID, reptile and insect monitoring, rongoa, biosecurity challenges including issues like kauri dieback, and pest management.	aongateteforest.org
Bay of Plenty	Tauranga	Sanctuary	Ōtanewainuku Kiwi Trust	pre-school, primary, secondary	Education programme	Yes	Programmes about New Zealand's biodiversity and conservation challenges. Teaches practical conservation skills, including pest control techniques and monitoring.	kiwitrust.org
Hawke's Bay	Hawke's Bay	Sanctuary	PredatorFree Hawke's Bay	pre-school, primary, secondary	Education programme	No	Professional development workshops for teachers. Enabling teachers to feel confident taking kids outdoors and incorporate links to curriculum. School visits to the Cape sanctuary	pfhb.nz
Manawatu-Whanganui	Manawatu-Whanganui	Council	Manawatu-Wanganui Council Environmental	primary, secondary	Education programme	Yes	Teaches animal tracking (chew cards and tracking tunnels) and trapping. Provides advice and equipment to support trapping in schools.	horizons.govt.nz/managing-natural-resources/environmental-education
Manawatu-Whanganui	Kai iwi	Sanctuary	Bushy Park	primary, secondary	Education programme	No	Full day programme with various rotations of subjects, including predator control.	bushyparksanctuary.org.nz/

Marlborough	Marlborough	Sanctuary	Kaipupu Wildlife Sanctuary	pre-school, primary, secondary	Education programme	No	Environmental education programme including content on conservation methods – translocations, monitoring, predator proof fences, trapping and tracking techniques.	kaipupupoint.co.nz
Marlborough	Picton	Community Group	Picton Dawn Chorus	primary, secondary	Education programme	No	Talks about controlling introduced predators in order to restore our native bird life and opportunity to visit trap lines.	pictondawnchorus.nz/
Nationwide	Nationwide	Predator Control Educator	Papa Taiao	secondary	Predator Free Secondary School Leadership Programme & Earthcare Academies	Yes	A range of courses for secondary schools based around education for sustainability and enterprises while gaining NCEA credits. Predator control short courses (two days, including an overnight stay) are offered throughout the country, in addition to their Predator Free Secondary Schools awards programme.	papataiaoeearthcare.nz
Nationwide	Nationwide	Predator Control Educator	Squawk Squad	primary	Conservation week programme	No	Providing educational resources to teachers to engage tamariki on conservation issues including predator control.	squawksquad.co.nz/
Nelson	Nelson	Council	Nelson Council	primary, secondary	Nelson Nature	Yes	Working with the local community to develop trapping projects to protect Nelson wildlife, which can includes workshops.	nelson.govt.nz/environment/nelson-nature/
Nelson	Nelson	Predator Control Educator	Nelson Marlborough Institute of Technology	secondary, tertiary	Introduction to Predator Trapping Methods	Yes	Workshop provides an overview of NZ pest predators, focusing on rats, stoats and possums, their impacts and control methods. Involves developing an effective predator control plan and gain practical experience. Offered to High School and adult learners. Linked to unit standard qualifications.	nmit.ac.nz/study/short-courses/cfs322-introduction-to-predator-trapping-methods
Nelson	Nelson	Sanctuary	Brook Waimarama Sanctuary	primary, secondary	Education programme	No	Tours at the sanctuary for primary, secondary and tertiary schools. Offer various subjects including conservation and the sanctuaries mission to reintroduce lost species.	brooksanctuary.org
Northland	Bay of Islands	Sanctuary	Project Island Song	primary, secondary	Education programme	Yes	Floating Classrooms focused on biosecurity. Activities include mapping, orientation, building traps, planting trees and learning to identify different bird-song and plants.	projectislandsong.co.nz
Northland	Bream head	Sanctuary	Bream Head Conservation Trust	primary, secondary	Education programme	No	Talks and one-day visits designed around curriculum areas of focus which a range of experts available.	breamheadtrust.nz

Otago	Dunedin	Sanctuary	Orokonui EcoSanctuary	pre-school, primary, secondary, tertiary	Education programme	No	Curriculum-based programmes using the forest's 'living classroom' and Learning Centre/Wharekura. Overall aim is to grow conservation knowledge and provide opportunities for	orokonui.nz
Otago	Dunedin	Collaborative Community Education Model	Open Valley Urban Ecosanctuary (Open VUE)	pre-school, primary, secondary	Education programme	No	Education in schools, teaching children and their families about the wildlife and the introduced predators that visit their gardens.	northeastvalley.org/openvue
Southland	Bluff	Sanctuary	Bluff Hill Motupohue	pre-school, primary, secondary, tertiary	Education programme	Yes	Guided walks for students. High School and Southern Institute of Technology students are invited to be involved in restoration projects.	bluffenvirotrust.org/about-us/
Southland	Southland	Plant Nursery	Southland Community Nursery	pre-school, primary, secondary	Education programme	No	Educational sessions on how the introduction of animal pests is a major threat to our native species and ecology. Learn about what pest species are having an impact and look at pest control operations.	southlandcommunitynursery.org.nz/education-centre/
Southland	Kepler track	Collaborative Community Education Model	Kids Restore the Kepler	pre-school, primary, secondary	Education programme	No	Walks and teaching about species, tracking, trapping and freshwater. Also provides an outdoor classroom for 5 Te Ananu schools from ECE - College.	kidsrestorethekepler.org.nz
Southland	Invercargill	Sanctuary	Bushy Point Restoration Project	pre-school, primary, secondary, tertiary	Education programme	No	Offers school groups tours and education sessions focussing on restoration projects, including planting and pest control.	otataralandcare.org.nz/bushy-point-restoration/
Taranaki	Taranaki	Sanctuary	East Taranaki Environment Trust / Experience Pūrangi	pre-school, primary, secondary	Education programme	No	On site science based learning that fits with NZ curriculum, including the need for predator control.	experiencepurangi.co.nz/
Taranaki	Taranaki	Sanctuary	Rotokare Scenic Reserve Trust	pre-school, primary, secondary, tertiary	Education programme	No	Curriculum-linked environmental education programmes focusing on biodiversity & conservation delivered in a predator-free sanctuary	rotokare.org.nz
Taranaki	Taranaki	Council	TRC environmental education	pre-school, primary, secondary	Education programme	Yes	Environmental educational experiences and resources for students and teachers. All Taranaki schools are invited to be part of Towards a Predator-Free Taranaki and have access to discounted traps.	trc.govt.nz/environment/working-together/environmental-education/
Tasman	Golden bay	Sanctuary	Able Tasman National Park	primary, secondary	Project Janzoon	No	Local primary and secondary schools can 'Adopt a Section' and become active partners in the management of a specific section of the park. Students and families help with tree planting, dune restoration, bird releases and more.	janzoon.org/our-work/education-programme/

Waikato	Raglan	Sanctuary	Karioi Project	pre-school, primary, secondary	Education programme	Yes	Presentations, hands on activities and workshops on and around the mountain for schools, local community and corporates. Offering NCEA based full year enterprise courses working with Papa Taiao. All programmes have predator control aspects.	karioiproject.co.nz/education
Waikato	Waikato	Sanctuary	Sanctuary Mountain Maungatautari	primary, secondary	Education programme	Yes	Experiential conservation education programme about NZ biodiversity and conservation challenges. Students learn new skills in monitoring and pest control to become kaitiaki in their own backyards.	sanctuarymountain.co.nz
Waikato	Waikato	Collaborative Community Education Model	Predator Free Taupō	pre-school, primary, secondary	Kids Greening Taupo	Yes	Restoration projects in school grounds or within walking distance. Workshops to support predator control projects.	kidsgreeningtaupo.org.nz
Waikato	Waikato	Educator	Waitomo Education Centre	pre-school, primary, secondary	Education programme	Yes	Day-trips to week-long camps, linking LEOTC activities in the area with the New Zealand Curriculum including monitoring and predator control training.	waitomocaves.com
Wellington	Kāpiti Island	Sanctuary	Kāpiti Island	primary, secondary	Education programme	No	Day visit for schools, including introductory korero and guided nature/history walks that can focus on a special-interest e.g predator control.	doc.govt.nz/parks-and-recreation/places-to-go/wellington-kapiti/places/kapiti-island-nature-reserve/
Wellington	Wellington	Sanctuary	Zealandia Te Māra a Tāne	pre-school, primary, secondary	Education programme	No	Sleepovers, night walk experiences and self-guided visits. A fully funded programme, Nature at Your Place, for decile 1-6 schools that includes two outreach and a sanctuary visit. The Education Team also works with schools on the Miramar peninsula as part of Predator Free Wellington.	visitzealandia.com
Wellington	Wairarapa	Sanctuary	Pūkaha National Wildlife Centre	pre-school, primary, secondary	Education programme	No	School group visits include an informative guided tour of Pūkaha's forest and the fascinating native plants and animals found along the way. The talk includes a focus on introduced predators and their impact on our native life.	pukaha.org.nz
Wellington	Wellington	Sanctuary	Matiu/Somes Island	primary, secondary	Education programme	No	Educational tours for school groups (primary & secondary) visiting Matiu/Somes Island on the island's unique cultural and natural history (With impacts of predator control) and can be tailored to the groups educational focus.	doc.govt.nz/parks-and-recreation/places-to-go/wellington-kapiti/places/matiu-somes-island/
Wellington	Wellington	Sanctuary	Otari Wilton's Bush	primary	Education programme	No	Resources for a self-guided walk for teachers to use independently with school groups. The kit is designed for use with students aged 8 - 12 years.	owbt.nz
West Coast	Arthur's pass	Sanctuary	Arthur's Pass Outdoor Education Centre	primary, secondary	Education programme	Yes	Education centre in the heart of the Southern Alps for primary and secondary school students. Overnight stays up to 4 nights providing a programme designed around what each school wants to learn e.g predator control. Includes a guided walk. Can also include a visit from DOC and Kea Conservation	ymcachch.org.nz/apoec/

2 Theory of change for Papa Taiao Earthcare

Issues

Building a socially, environmentally and economically sustainable future is the global challenge of this century. Yet many rangatahi in Aotearoa don't believe they have the knowledge, skills, confidence, creativity and connections to design and construct this future.

Vision

To empower, upskill and inspire rangatahi to contribute to a sustainable future by developing enterprises that provide secure livelihoods, connect communities and restore ecosystems.

Strategy

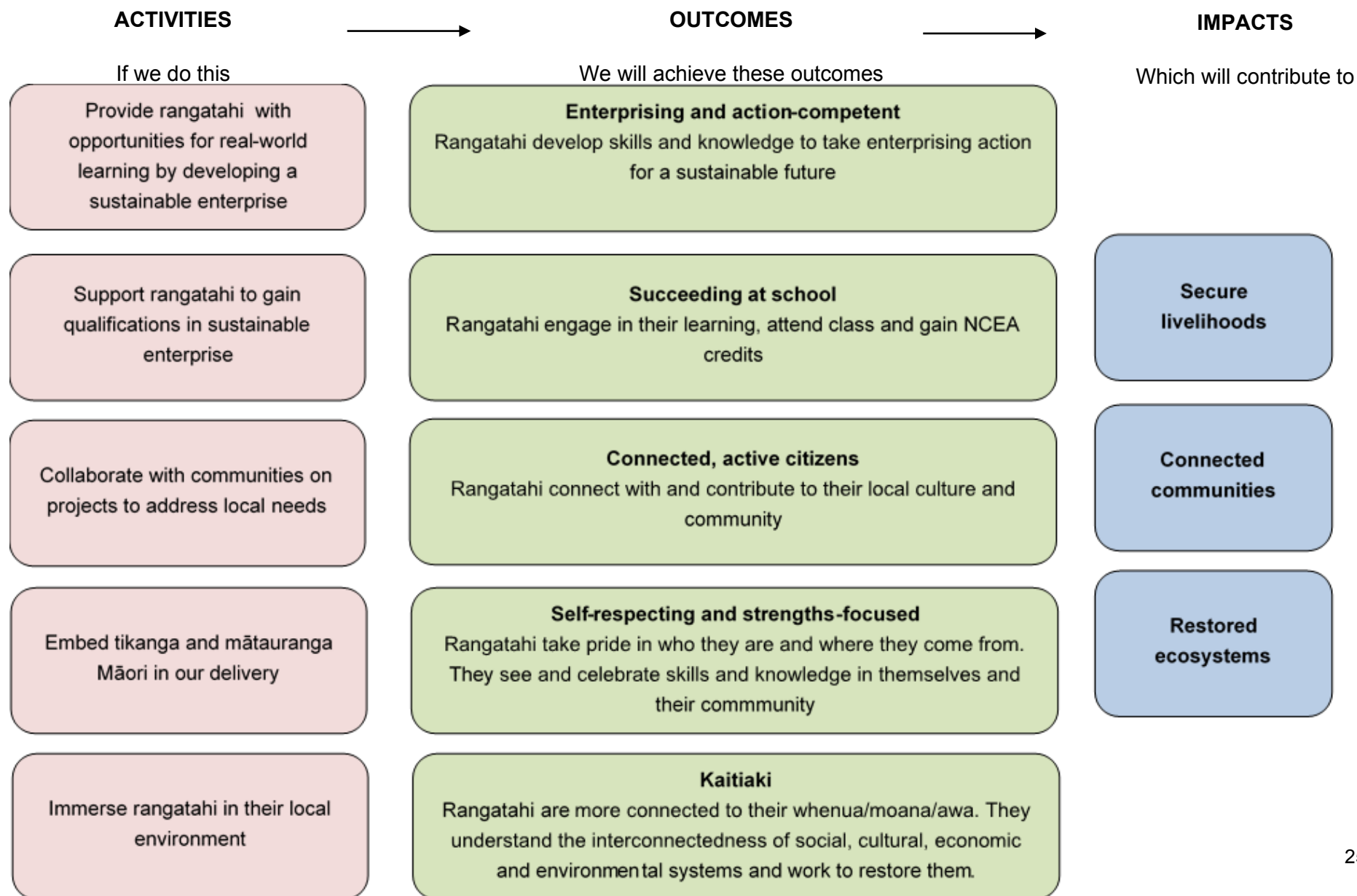
Rangatahi have a key role to play in crafting a sustainable future. We believe the best way we can prepare them is through [experiential, co-operative and inquiry-based learning](#). With our support and encouragement, rangatahi design and implement their own sustainable enterprise, creating meaningful socio-cultural, educational, ecological and economic gains for their community.

Assumptions

- Aotearoa is in social and environmental crisis.
- Current business practices are unsustainable and profit-driven, lacking socio-cultural and environmental objectives.
- Many rangatahi leave school without NCEA, confidence, real world skills or education about sustainability.
- When rangatahi leave school, there are few employment opportunities that contribute to social and environmental

3 Logic model for Papa Taiao Earthcare

The logic model below describes the relationship between the activities Papa Taiao Earthcare delivers and the outcomes and impacts the organisation seeks to achieve.



4 List of programme workshop subjects and locations

1. Project planning at Wellington City Council
2. Visioning workshop at Greater Wellington Regional Council
3. Fundraising at Biz Dojo
4. Marketing at Meridian Energy
5. Measuring success and the future of conservation at the Department of Conservation
6. SWOT analysis at the Sustainability Trust
7. Te Ao Māori and kaitiakitanga at the Energy Efficiency and Conservation Authority
8. Project succession and gathering data at Infratech
9. Project reflection and presentation skills at Credenza

5 List of student projects

- Establishing a school environmental group to deliver a range of projects including pest control
- Delivering a tree planting day with all Year 9 students to encourage biodiversity, offset carbon and give them a connection to the land
- Restoring a school bank by planting native trees and removing weed species to increase the native biodiversity of the area and bring students closer to nature
- Building a community garden to give back to the community in a sustainable way
- Providing biodegradable gloves to catering stores to reduce waste to landfill
- Establishing compost collection at their school to reduce waste to landfill
- Installing whare kōrero/voice boxes at Oruaiti to educate visitors about the history of the area and to raise awareness about local threats to biodiversity like dogs off-leash
- Educating students about reducing their waste by creating visual displays from school waste audits.

6 Discussion guide for student interviews

1. How did you get involved in the Secondary School Predator Free Leadership Programme?
2. How does the course differ from others you do?
3. What was the most engaging thing about this programme?
4. What was the most challenging thing about this programme?
5. What was the quality of the support you received from instructors?
6. What was the quality of the resources and materials?
7. What was your project or enterprise related to?
8. What are the main things you have learned through this programme about making Aotearoa a) predator free and b) more sustainable?
9. How have you used this information to help make Aotearoa predator free/ more sustainable in your project or enterprise? In your day to day life?
10. What impacts do you think your project/enterprise has had?
11. Why does a predator free Aotearoa/ sustainable Aotearoa matter to you?
12. What improvements would you make to this programme (if any?)
13. What can organisations like Papa Taiao do to get more young people contributing to predator free Aotearoa/ sustainability?
14. Is there anything else you would like to say about this programme?

7 Discussion guide for teacher interviews

1. Do you feel like you were well informed about what the programme involved before it started?
2. What role did you play with the students?
3. What worked well?
4. What challenges did you experience?
5. What challenges do you think the student experienced?
6. Do you have any suggested changes to improve the programme?

8 Short online survey

1. What did you think about tonight's session?
2. What did you learn tonight?
3. How would you apply these learnings to your project?
4. Rate this meeting out of 5

9 Brief literature review

Interest and concern about environmental issues decreases with adolescence

Swedish climate activist Greta Thunberg (16 years) and Aotearoa School Strike for Climate organiser Sophie Handford (18 years) demonstrate the impact teenagers can have on crafting a sustainable future. Yet interest in and concern about environmental issues generally decreases in adolescence (Olsson & Gericke 2016; Francis & Davis 2015). Some researchers suggest that this 'adolescent dip' is due to a failure to adapt strategies used to engage younger children in sustainability for an adolescent audience (Olsson & Gericke 2016).

Positive emotions motivate young people to contribute to a sustainable future

Positive emotions promote creativity, cooperation and openness to change, critical qualities for solving complex social and environmental problems (Harré 2011; Carter 2011). Yet the media, politicians and even activists often frame issues negatively. For example, focusing on the tragedy of losing endemic species rather than the joy of experiencing a thriving ecosystem. In young people, these narratives produce emotions like fear and hopelessness. Positive sustainability narratives are an important tool for engaging youth in sustainability.

Adolescents desire opportunities for autonomy and leadership

As children move into adolescence, their desire for autonomy increases (Eccles et al. 1991). Teenagers have a heightened need to do things that feel meaningful and enhance their feelings of competence and confidence (Kaplan & Kaplan 2009). Yet mainstream secondary school education is mostly prescriptive, theory-based, and siloed into discrete subjects. Education for sustainability programmes for adolescents should focus on empowering action competence and engaging with the complexities of sustainability (Olsson & Gericke 2016).

Social norms can strengthen young peoples' identities as sustainability advocates

People's perceptions of social norms have a strong influence on their behaviour (Goldstein & Cialdini 2007). Sustainability consciousness is not the norm in most Wellington high school communities. In 2019, only 13% of secondary schools in Te Ika-a-Māui were EnviroSchools (EnviroSchools 2019). Surrounding young people in sustainability-conscious peers helps to normalise and reinforce their identities as sustainability advocates (Blythe & Harré 2012; De Vreede 2011; Chawla & Cushing 2007). It helps them resist conforming to social norms in communities where sustainability is not valued (Dumas et al. 2012).

10 Raw data from short surveys

Workshop	What did you think about tonight's session?	What did you learn tonight?	How would you apply these learnings to your project?	Rate this meeting out of 5
#6 SWOT analysis	It was a bit iffy at the beginning as it didn't really pertain towards our project, however it was good to re-evaluate and meet our new mentor.	Planning ahead, and prepare for failure, but keep pushing. Trial and error.		3
	Good, was interesting to see sustainability trust and who they are and what they do. Good connection with Kim.	Who/what sustainability trust does/is. Plan ahead. Don't give up and get through barriers to get to the end goal.	Depends, but I will use the learnings.	4
	I felt it was good, I liked how there was a nice balance between working on our projects, games and having a tour and talk with Kim etc.	Learnt that sus trust does a lot more projects than I originally thought. I learnt how an established plan early helps the project in the long run.	I will apply this by approaching my project less flexibly and more with fixed goals.	5
	It was good as the students got to do an activity to help gain a better understanding on how their projects have certain impacts.	To be honest, not much. It was more of a project reflection session than a learning session when we learn something incredibly new.	I already know a majority of the stuff that was said here and Ursula and I already apply this to our projects.	4
	It was informative and a really good time to complete our work,	The 5 R's That many thinks cannot be recycled. Communication and leadership is key.	We will ensure everyone knows whats happening and that they can talk to us if they don't.	5
	I feel like I know what to do when we get back to the project e.g have a vague idea of action plan	I learned about how to plan in a group and how to think critically of the negatives and risks of a project	I will apply this by trying to find solutions of the problems and risks of my project	4
	Was good to have a feel for the area before we started, as it gave us a better understanding of what was being done as well as what was available	That we should prepare for the unprepareable	By keeping the ideas well and alive	5
	Nice session, interesting to see what the Wellington community is doing. I liked the food.	What a SWOT is. What Sustainability trust does. How to forsee problems.	Will apply them to my group - get them thinking	5
	Sweet as bro. Helped me sort out some project stuff.	You need a plan to be able to move forward and you need to just try different things until you get the end result you want.	Communicate to more people and get out and push people to help me. Don't delay things!	4
	I feel like I made some good connections that will help me with my business and in later life.	There are always ways we can be more sustainable. The work Sustainability Trust does. Simplify the problem. SWOT analysis, sort of.	Apply new techniques for minimising threats and weakness. Working with the sustainability trust in the future.	4

#7 Te Ao Māori and kaitiakitanga	was good	learnt about EECA and Te Ao Maori	learnt how to implement some maori world views into my project and the importance of recognising culture and using it	4
	Fun	The story of the kiwi	Maybe we can act out the stories being told	5
	It was alg	The importance of creating and maintaining a relationship with the land	Look again at how our product may connect to the reduction of plastic in NZ landfills, resulting in kaitiakitanga, and the respect of NZ land	4
	Was enjoyable and got a further in-depth understanding of Te Ao Maori, but a little bit harder to implement into the project than other sessions perhaps were.	I learnt new perspectives on the image and the ideal that the land and environment does not belong to us but is it's own entity.	Perhaps using concepts and information from Te Ao Maori in our marketing or the information that we provide in our products.	3
	it was productive when we made the timeline	that giving land its own ownership has very strong cultural effects	by realising cultural significance we can use this in our product to target a new side of our target market with that targeted advertising	4
	It was pretty low-key and a good kick-off to this term	I was given more insight to the Maori aspect of Papa Taiao's values and what they believe will help our projects have more meaning	I would try to apply this to me and Ursula's project, and try to find ways of integrating Maori culture into our project. But not so much where it's always in your face.	4
	It was pretty goof bro. I enjoyed doing the little performance of the Kiwi story. It was helpful to get my head around things a bit more, and with how I can push the project forwards.	[Name] are a wuss. Nah, jk, [Name] are pretty angry things, lol. I learnt that people are more sympathetic to something that is more human and they seem to connect with something more if it was relations to humans. A good story can also help people connect to the thing you are trying to get them to connect with.	I can use the meaning from the stories to try and help people understand why we are doing what we do in the school with trapping and planting and stuff.	5
	It was very informative, interesting and a good time to work on our projects	I learnt more about kaitiakitanga and everyone's relationship to the land	I will emphasise the importance of connection to the students when they	5

#8 Project succession and gathering data	It was really interesting	About what everyone else got from the programme	4
	It was mean	How to collage	5
	Was really good!!!	What type of significant change has occurred in times of my mind set towards this project and how I can implement this	4
	👍👍👍👍	how to better structure my ideas and how things link to each other.	5
	Informative	I learnt that paths aren't always breezy	4
	Very informative	The importance of electronic fuelled energy as opposed to diesel fuelled energy	4
	was enjoyable and diverse, with some useful stuff	The workings of Infra Tech and social enterprises, sort of going over and reemphasising what we have done before	4
	it was good	About social enterprises and their benefits and also about impacts that we hold	4
	It was informative with renewable sources of energy, social enterprise and finding ways of logically measuring progress within our projects	I cannot make a great collage to save my life	5
		In all seriousness I did gain more inspiration than learning heaps, in which the inspiration is making me feel more confident with my actions towards my project	

11 Students' ratings of three leadership programme workshops

