Libraries as science communication hubs

Institute of Geological & Nuclear Sciences Limited - Trading as GNS Science

$20,000 (GST exclusive)

GNS will deliver a series of interactive Earth Science workshops at four Hutt Valley librraies servicing low to mid decile school areas. There will be 8 workshops in the September school holidays, and another ten during term time, targeting low decile schools situated near the libraries. Topics include:, dinosaurs, fossil hunting, earthquakes and volcanoes and how rocks are made. Supporting material will be provuded to caregivers accompanying the chilren, to support follow on learning.

A Family Science and Technology Experience

Otago Museum Trust Board

$20,000 (GST exclusive)

The Otago Museum will facilitate and lead a series of family science and technology events, located at local schools across the Otago. It will be a 2 hour, free of charge event with hands on science explorations and investigations available for parents and children to partake in, with guidance from staff. The aim is to promote family conversation and purposeful engagement with science.

Batman and Dotterel - Te Pekapeka Me Te Tuturiwhatu - Young people of Uawa Tolaga Bay using science and technology to monitor rare biodiversity

Groundtruth Limited

$19,750 (GST exclusive)

Groundtruth Limited is carrying out a project to monitor bats, NZ Dotterel and other species in the Kaitawa Estuary, Uawa Tologa Bay. This will involve primary school students participating in a project to install a remote monitoring station to monitor bats and birds, and analyse the results. The project will allow students to increase their understanding of the population and behaviour of the animals studied, but also will allow them to engage with the technology and techniques used to carry out the study, includng remote sensing, computer networks, solar power and interpretation of data.

BIG SCIENCE DAY- Science Alive Christchurch

New Zealand Science & Technology Charitable Trust

$20,000 (GST exclusive)

The applicant will deliver an outdoor event, to be held on 31 October 2015, in the grounds of Shirley Intermediate School. The science day will be based around the Martin jet-pack and the science and engineering principles behind it. There will be demonstrations, showing the science behind the following: rockets, explosions, air and forces. There will also be an career pathways tent. The applicants will be collaborating with a wide variety of businesses, educators as well as emergency and recsue providers (eg Fire Service).

Breaking barriers and inspiring kaitiakitanga

University of Canterbury

$55,021 (GST exclusive)

The aim of the partnership Te Korowai o Te Tai Marokura and University of Canterbury is to inspire youth to be proactive in community conservation projects. The applicant will run a holistic science camp that will give the participants a hands-on experience of science, technology and Mātauranga within a service-learning framework. The students will develop a self-guided QR (Quick Response) nature walk and snorkel path within the hui. They will use QR codes to link webpages that provide information and videos about the location to the nature walk. This project will create a long-lasting tourist attraction. The students will also work as marine mammal scientists to identify whales and dolphins and to assess the role of plastics in their environment.

Code Red

The Association of Public Library Managers Incorporated

$121,905 (GST exclusive)

Using open source coding to create games, participants will learn the basics of coding, game design and strategic thinking. They will also learn how to add games into the international marketplace. Additionally, they will have some understanding of the huge range of opportunities computer science opens up to them. An introduction for young people and teachers to the range of online tools available to continue learning will also work to extend and reinforce the workshops' teachings.

COSMIC: Community Owned Stories of Mathematical Innovation and Curiosity

University of Auckland

$19,700 (GST exclusive)

The Universityof Auckland will partner with 2 lower decile South Auckland Schools to carry out mathematical modelling activities, including a mathematical modelling fair, task design based on issues relevant to students, implementation of the modelling activities, and stories and reflection.

Everyday Science and Tecnology

Matapuna Trust

$20,000 (GST exclusive)

The applicant is a charity that works with 'at risk' youth, between the ages of 16 and 19. They are children that have left school and have no formal qualifications. Funding will be used to develop two science and technology environmental based projects for students to participate in. One project is based on water quality using actual equipment, techniques and processes used by NIWA. The second project is based around trying to make the training centre as environmentally sustainable as possible.

Family Science Workshops

Futureintech

$16,091 (GST exclusive)

This project involves running a series of workshops with 4 primary schools, where students that have been identified as having low engagement with science are inited to attend, together with one caregiver. The students are then introduced to a workshop which introduces concepts of DNA and genetics to students, and then gets the children to participate in extraction of kiwifruit DNA, followed by an awards ceremony.

Hoea te Waka, Piki te Mātau

University of Otago

$53,862 (GST exclusive)

This project will help youth develop an enduring understanding of and interest in New Zealand's marine realm through a partnership with communities who have a strong connection with the coast. The common element within three proposed communities is the usage of waka as the vessel to engage youth in order to strengthen their cultural, historical and scientific connection to the ocean. Waka are travelling scientific classrooms that embody culture as well as the science and custom of the ocean.

Illuminating New Zealand

University of Auckland

$130,464 (GST exclusive)

The University of Auckland plans to design, run and evaluate a celebration of light and light-based technologies in 8 NZ museums, catalysed by global enthusiasm for the 2015 UNESCO International Year of Light. Although smaller in scope, this project adapts some best practices from the wildly successful UK "Explore Your Universe" programme.

The Otago Museum (Dunedin), Carter Observatory (Wellington), MOTAT (Auckland) and South Otago Museum (Balcutha) have agreed to participate. Discussions are underway with Te Papa (Wellington), Auckland Museum (Auckland), Puke Ariki (Taranaki) and the Museum Theatre Gallery (Hawkes Bay).

Light matters Kits will provide children with light-based experiments to last beyond the events (Matariki, Vernal Equinox festival) and an interactive website will be launched.

Interactive Playground

Regional Facilities Auckland Limited

$20,000 (GST exclusive)

This is partnership between the physics department at the University of Auckland, Auckland Live and the Auckland Univserity of Technology. The partners will produce an "interactive playground"incorporating interactive digital technologies, installed for a three week period in Auckland's Aotea Square during the Summer in the Square fesitival in December 2015. This will be supplemented by an education programme, linked to the installation, tailored for preschool, primary, secondary and tertiary students. It will also create public workshops and events led by students and expert mentors to attract community groups that have a low level of participation and understanding of science.

"Backyard Biodiversity" creating and monitoring local ecosystems

Otago Peninsula Biodiversity Group (OPBG)

$18,391 (GST exclusive)

The Otago Peninsula Biodiversity Group and Landscape Comnnection Trust are carrying out a project in which primary school children and their families will be involved in the construction of monitoring devices and the collection and processing of rodent, lizard and insect species data. The project involves 25 lower decile and semi-rural schools in the Otago. The funding requested is to cover the costs of a contractor to support the schools.

Lets get practical

Hutt City Council

$20,000 (GST exclusive)

The development of a range of hands on science and technology education programmes to take into schools. This will involve the transformation of the classroom space into a laboratory with working scientists. The programmes will be linked to a vsiit from a local scientist to engage with the students about science careers.

Wild Eyes

Wild Lab Limited

$83,800 (GST exclusive)

Wild Eyes is an online community aiming to get Kiwi kids to ‘go wild’: connecting them to nature and science. NZ Kids will be inspired to tick off a nature and science bucket list: discovering and exploring in their homes, backyards and beyond; then sharing those activities via a website. On the Wild Eyes website children establish their own profile page and collect virtual 'badges' on the site by undertaking offline activities appealing to a range of abilities and interests (examples below). Completing activities and going back online to submit evidence (photos, video) enables children to complete badges and share achievements. They can ‘like’ other’s videos and follow friends. Whanau will be engaged via a parental dashboard and email/text will notify parents when their child is active on the site. 20 outreach workshops in 10 locations nationwide.

Lift Off! - Junior Rocket Science for Schools

Aerospace Education Limited

$20,000 (GST exclusive)

A project to inspire students via rocket science. Intermediate students from low decile schools will attend a one day workshop, to learn the history of rockets, how they work and their uses. Students will then be tutored to design and build their own rockets, which will be launched, and the flight analysed. Teachers will attend a profressional development workshop, to equip them to continue with rocketry in their school in the future.

New Horizons: STEM Meet-ups for South Auckland Youth

Auckland University of Technology

$19,000 (GST exclusive)

AUT, working with a range of South Auckland community groups, is piloting a programme of inspirational talks by leading scientists and technologists; an associated "making and doing" workshop prgramme of action based learning; and an introduction to pathways, careers and opportunities. Science and technology fields proposed are: Engineering, Physics and Astronomy, wearable technologies, 3D technologies, Maths and Stats and computer science.

Noho Taiao ki Wakatū

The New Zealand Institute for Plant and Food Research Limited

$20,000 (GST exclusive)

Plant and Food Research (PFR) is partnering with Wakatu Incorporated, a whanau owned company based in Nelson, which has developed an intergenerational business strategy, requiring skilled rangatahi coming through who are skilled in science and technology, particularly in the primary sector. PFR and Wakatu will work with teachers from Motueka to deleiver a three day wanaga Noho Taiao ki Wakatu for year 9 and 10 ranagatahi, to engage them with science and technology and encourage them to consider a pathway sector or other science related areas. The wananga will be held at a marae over the three day period and involve hands on science-based activities, involving presenters from PFR and other science based institutions.

NZAquaBots: Submerging rural youth in science and technology through underwater robotics

Ministry of Inspiration

$20,000 (GST exclusive)

An underwater robotics program where teachers and students build an underwater remotely operated vehicles. Students are engaged in competitons, involving 3 challenges: build, testing in an obstacle course, salvage race and heist, and presentation on the trials, errors and physics of underwater robots. Funding is beig provided to enable the existing programme to spread into rural araes.

PEST - People Engaging with Science and Technology

University of Auckland

$20,000 (GST exclusive)

This is a project designed to develop the capacity of young people to communicate about the socioscientific issue (1080 conrol of predator pests) by helping them to appreciate the variety of viewpoints that people hold, to collect information about rhe issue and practice strategies for presenting their ideas. The project involves holding workshops and field trips, to develop the students' skills in data collection and evidence, to allow interaction with scientists, and to develop their science communication skills.

SHS Mindstormers

South Hornby School

$1,500 (GST exclusive)

South Hornby School is partnering with the University of Canterbury mechatronics department to run an after school programme for 12 - 15 students, to design working robotics programmes to complete differing tasks. The prgramme uses Lego Mindstorm kits and will also involve students visiting the University of Canterbury Mechanatronics Department. The funding will pay for the project tutors' fees and bus transportation.

SOL-SCI: Science camp for primary and intermediate school girls in provincial New Zealand

University of Otago

$6,430 (GST exclusive)

This programme involves a 2 day science camp for girls, to be held at Solway College in the Wairarapa. The camp with include fun engaging STEM activities, including a trip to Stonehenge Aotearoa for observation of our solar system. Female scientists from the University of Otago will attend and share their work with the gitrls. Activities include: an introduction to microbiology, forensic science, kitchen chemistry, DNA extraction from strawberries, rocket science, bridge building activities, coding and computers and astronomy.

Student stream surveillance programme: using spores to track down the kauri dieback Phytophthora

Landcare Research New Zealand Ltd

$18,100 (GST exclusive)

A Partnership between Landcare Research New Zealand and the Dawson Primary School in Otara, South Auckland. Students will conduct field - based, scientific experiement in the west Auckland catchments, to survey streams for the presence of kauri dieback. They will use kid-friendly devices designed by students at the primary school, working with engineers from Fisher & Paykel, and the Auckland University of Technology 3D printing unit. The devices will be used to test for kauri dieback with samples being analysed by landcare Research. This is a pilot study, to be followed by developing a network of schools in the Northland and Coromandels.

Te Oranga o te Awa - Wainuiomata

Kokiri Marae Keriana Olsen Trust

$20,000 (GST exclusive)

A trust, operating in Wainuiomata out of the Korkiri Marae will carry out a community project based around the wainuiomata awa (river). The project aims to engage Maori youth aged between the ages of 10 and 16 with science by carrying out workshops to: investigate the history and health of the awa, introducing previous wildlife back into the river and develop a resource that can be used in schools to educate children to sustain the awa. The project will use a kaupapa Maori methodology, that will incorporate kaitiakitanga, wairua, tupuna/whakapapa, mana and whanaungatanga and tikanga.

Te Tahi Tamaiti - A pilot project engaging Māori and Pasifika primary students with science and technology who attend the Building Champions Program

Allamanda Faapea Faatoese

$7,027 (GST exclusive)

Leveraging an existing programme, known as the Building Champions Programme (BCP), the Te Tahi Tamaiti project aims to build science and technology engagement for Māori and Paskifika primary/intermediate school students. Supervised by Maori and Pasifika youth leaders (aged 16-18), the children will participate in hands on science activities, covering earthquakes, volcanoes, DNA, bugschemical reactions and light diffusion.

The Creation Room

Adroit Creations Limited

$20,000 (GST exclusive)

Technology and Services company, Adroit Creations Limited are creating a free and open space for individuals in rural areas to discover and access technology and creative pathways. Participants in the Paeroa and Karangahake areas will be able to gain confidence in technology through learning how to write code, understanding programmeing, developing/designing websites, blogging etc. Targted groups withon the community will be invited to use the room, including youth, parents, semi-retired people.

Under the Wing

Rotorua Museum Te Whare Taonga O Te Arawa

$19,955 (GST exclusive)

Rotorua Museum works with the Wingspan National Bird of Prey Centre to bring endangered kārearea (New Zealand Falcon), back into the everyday lives of New Zealanders. Operating from Rotorua Museum in the school holidays, Rotorua youth between the ages of 10 and 14 and their families will be targeted for this project. The project involves hands on inquiry activities, using falcons as a focus. Science topics covered are biology, physics, maths, geology, chemistry and ecology. The project will also cover understanding and use of telemetry and GPS.

Lab-in-a-box: Taking Science to the Country.

University of Otago

$149,236 (GST exclusive)

Lab-in-a-Box will deliver exciting, relevant science activities in rural communities. It will transform a shipping container into a mobile teaching and research laboratory and take it to schools to educate and inspire. Lab-in-a-box is a flexible learning and engagement space deliverable to any location and used for almost any purpose. The applicant will refit a 40-foot shipping container as a flexible laboratory space.

He Whanau Pūtaiao, He Whanau Hihiri, He Whanau Ora

Ahu Whakamua Limited

$20,000 (GST exclusive)

This project is designed to engage with approximately 50 whānau members of year 7 to 13 students attending 2 kura kaupapa Māori in the Far North area; Te Kura Kaupapa Māori o Te Rangi Aniwaniwa and Te Kura Kaupapa Māori o Pukemiro. The project will run as 4 wānanga aiming to discuss Pūtaiao and Science and how they are significant in our everyday lives. The outcome of the programme is to build on the Pūtaiao knowledge,

skills and understandings of the whānau, so they are able to engage in meaningful learning conversations with their tamariki, mokopuna and support them. The project is being led by Ahu Whakamua Limited and supported by Te Runanga o Te Rarawa.

Capturing minds through sustainable science and technology

Clean Technology Centre NZ

$20,000 (GST exclusive)

Energise Otaki in partnership with the Clean Technology Centre will assist Year 9 and 10 students at Otaki College to participate in practical projects with local clean technology businesses. Through off-site workplace experience complemented by a classroom-based programme, the initiative introduces relevant areas of science in hands-on, pragmatic ways to students with only limited interest in pursuing STEM subjects (Science, Technology, Engineering, and Maths). Four projects attracting up to 40 students will be delivered in cooperation with local clean technology businesses.

Code Club Aotearoa - Capability Building For The Future of New Zealand

Code Club Aotearoa Limited

$150,000 (GST exclusive)

The aim of the Code Club is to give primary school children aged 9-12 in New Zealand the opportunity to learn to code through free volunteer-led after-school coding clubs. We aim to grow our number of clubs through training and supporting volunteers from the IT industry to partner with local Primary and Intermediate teachers. Code Club will also develop and provide step by step, project based curriculum which takes students through the fundamental concepts of software development and web design. This pedagogical approach is endorsed by researchers, teachers and industry.

Digital Natives Academy - Teaching Tamariki Maori to Code

Digital Natives Academy

$20,000 (GST exclusive)

Digital Natives Academy (DNA) aims to make fun and engaging opportunities explore the wonder of computer science as it relates to STEAM subjects (Science, Technology, Engineering, Arts, and Maths). Throughout Computer Science Education Week Hour of Code workshops will be offered. Weekly sessions will be held between Nov 2015 and June 2016 providing tamariki and rangatahi access to coding, robotics, innovation & Minecraft wānanga. DNA aims to encourage young Maori and whānau to become creators, developers and producers of technology, and not just consumers and users of it.

Tablets In School

Digital Office

$18,600 (GST exclusive)

Tablets In Schools provides students in low socio-economic areas with the opportunity to experience new technology on tablet devices. They work with schools in Otago to form a computer club to self-manage the devices and decide how the devices can be used at school and in their wider community. Device users are supported to develop digital technology skills and participate in out of school learning by taking the devices home for the whole family to access. The scheme allows students to think for themselves, and use technology is a positive way at school and also in their community.

Forging a New Path: Putting the STEM in STEAM

Dunedin Gasworks Museum Trust

$19,999 (GST exclusive)

The Gasworks Museum in South Dunedin is set to outfit a Science, Technology, Engineering and Math Learning Centre (STEM), with Innovative engineering and technology tools encouraging children and their families to engage in science and technology, hands-on. As a museum, the Gasworks is well-suited to communicating scientific ideas outside of stereotypical learning environments, and with people who do not typically engage with science or scientists. They aim to enthuse children and their families about science and technology by increasing awareness of the diversity, creativity, and innovative mind-set inherent in contemporary science and technology, and the people who practice it.

HBRSNZ Year 7 & 8 Science and Technology Camp

Hawke's Bay Branch of the Royal Society of New Zealand Incorporated

$19,270 (GST exclusive)

This project aims to inspire engagement with science in 150 Year 7 & 8 students and 10 - 20 teachers in Hawke’s Bay through a two day hands-on science and technology camp in Napier. Each group of 15 students will attend 4 different workshops, covering different strands of the science and technology curricula, over the 2 days. The students will come from approximately 15 schools in Napier, Hastings and Waipukurau. Workshops will be run by local museums, the National Aquarium, tertiary education providers and others.

Science Outreach programme in low decile schooling community

House of Science Tauranga Charitable Trust

$18,400 (GST exclusive)

The House of Science outreach project will run a weekly afterschool programme that includes robots, food science, forensics, flight and many other topics at the Merivale Community Centre in Tauranga. It leverages House of Science's current success in reaching almost 1000 teachers and 25,000 students. The low decile Merivale community wishes to help promote science to its students and it is anticipated the programme will reach 60 students directly and run once a week for two school terms.

Our Geothermal Area: A Pilot Project

Institute of Geological & Nuclear Sciences Limited - Trading as GNS Science

$20,000 (GST exclusive)

GNS Science, in partnership with Taupō-Nui-a-Tia College will provide a unique opportunity for a group of Taupō high school students to ‘adopt’ a local thermal area. Using an integrated teaching approach that combines science and mathematics lessons, students will regularly assess the health of the thermal area. This will be done using scientific monitoring techniques, as well as initiating a clean-up of dumped waste. Students will disseminate their findings to the local community via a dedicated database, website and other social media They will also be encouraged to actively engage with the public to inform and increase awareness about their local geothermal environment. The project provides opportunities for participants to build partnerships with scientists, stakeholders and the local community, and to discover science career pathways..

Buildings for Sustainability

Koraunui School Board of Trustees

$20,000 (GST exclusive)

This project aims to foster the development of science capabilities with children, through deep engagement in real world scenarios in Koraunui Primary School. In conjunction with the new development of a community garden in the school grounds, students will investigate the science and engineering of structures which can be built by the children to service the garden. The project will involve local engineers, Hutt City Council personnel and local tradespeople. It follows the successful trial of Sugata Mitra's Self-Organised Learning Environments (SOLE) which helps children understand that failure is a key part of the process of learning, as is re-working and refining which has had spin-off was the increasing engagement of school families.

Discover new life: Kick-starting a passion for science

Landcare Research New Zealand Ltd

$92,000 (GST exclusive)

This project aims to kick-start an interest in science through identification and publication of new fungal species. We will bring hands-on participation in discovery of new species to harder-to-reach students, especially of Maori and Pasifika ethnicities, in low decile schools. The project will work with students of three age ranges: Years 5-6 of a primary school in South Auckland, Years 7-8 at an intermediate school in Northland, and Years 11-12 at a secondary school in Hawkes Bay. It will be conducted in close collaboration with specialist fungal scientists using best practice scientific methods.

Each of three pilot projects will begin as a 2-day school and field-based activity followed by assisting students to collect fungi and fungal-inhabiting substrates (leaves, soil, water) from nearby localities. Selected students will visit the laboratories of Landcare Research in Auckland to pursue methods of fungal identification and view the national collection of fungi, and one student from each school will join us for the national Fungal Foray in May 2016. Students will assist us with the choice of name for each new species, and will be included as authors of the scientific paper in which it will be described.

Pukekura Park - living science

Mapping Analysis Information Network Trust, NZ

$16,820 (GST exclusive)

A wealth of information about New Plymouth's Pukekura Park's flora, fauna, history and recreational activities in exists within the local community. Using Geographic Information System (GIS) technology, the MAIN Trust (Mapping, Analysis and Information Trust NZ), together with The Friends of Pukekura Park will engage community and schools to gather local knowledge and make it publically available on personal mobile devices using the latest technology. Collecting data and information once for use in many ways, Pukerua Park's 'Living Science' initiative will see rich sources of data and content supporting recreational activity and scientific enquiry in the Park. The project will enrich people's experience of Pukekura Park as it interactively 'comes to life' for Park visitors, schools and budding conservationists.

Who am I and where do I come from?

Massey University

$35,000 (GST exclusive)

This project aims to engage high school students across the country in science through the amazing story of human origin, and encourage them to take selfies and express their own stories. The stories of our origins and different journeys are in our DNA. We want the students to tell us their own personal story, and feel that their story is just as important as that of any other New Zealander. The project will involve school visits where talks will be held about "the human journey", how similar we are under the skin, the science of DNA. Students will be given the opportunity to photograph themselves and record their own stories. This work stems from a 2000-DNA-sample study of the ancient ancestry of New Zealanders currently being conducted by anthropologist Professor Lisa Matisoo-Smith under a James Cook Fellowship.

Our Biotech Future

New Zealand Forest Research Institute Ltd Trading as Scion

$20,000 (GST exclusive)

Crown Research Institute Scion, specialising in forest science and biotechnology, will open its doors to local schools where students will be able to move between different stations highlighting different areas of biotechnological innovation. Hosted by working scientists, the stations will be a mix of interactive displays and short presentations. Scion's research facilities like the fermentation labs and Genetically Modified Organism field trial site will be used as demonstrations. Students will leave equipped to share conversation about the real-world application of science, centred on what biotechnology actually is, and what it offers now and into the future.

Thinking Laterally Across the Pacific

Spirit of Rangatahi Charitable Trust

$18,400 (GST exclusive)

The Spirit of Rangatahi Charitable Trust will support 20-30 high-achieving intermediate and senior school Pasifica and Maori students from Porirua, Wellington, to think laterally in a six-month leadership course exposing them to creative thinking and problem solving models. Utilising the ‘De Bono six thinking hats’ concepts, Samoan, Tokelau, Maori, and Cook Island Maori participants will apply new thinking skills to topics relevant to our Pacific future including weather, bio-diversity, and digital technology. Following a one-week intensive course, participants will apply their new skills in an after-school programme, and at home where they will be encouraged to engage their family, whanau and aiga in their learning and enquiry. The course culminates with a final presentation to families and local community.

Kaitiaki o te whenua Greening Taupo

Taupo Primary School

$2,000 (GST exclusive)

As part of the larger Greening Taupo initiative, Taupo Primary School is enabling Year 3 and 4 children aged 6-8 years to engage with their environment through native land restoration around Taupo, supporting a more diverse and beneficial habitat for animals, plants, birds and people alike. Greening Taupo involves collaboration between the Department of Conservation (DOC), Taupo District Council, Tuwharetoa Iwi, two early childhood facilities, one College and one additional primary school. Taupo Primary School’s goal is to build student science and technology engagement, and the skills necessary for young students to achieve their environmental goals. The practical activities embrace all the processes needed to get from seed to tree, including biosourcing and composting.

Science Spinners - let me spin you some science!

The Hamilton Science Awards Trust

$20,000 (GST exclusive)

"Science Spinners" is a fun and competitive way to encourage Waikato students in lower decile schools to make simple science discoveries, every day. Over two days, an orienteering course stationed by real-world scientists and peppered with hands-on experiments introducing everyday science will be run in Waikato. Students will work their way through the course, carrying out hands-on experiments in an effort to answer questions like: "why does my breath smell?", "why does milk taste off after its use by date?" Students are encouraged to quiz the scientists they meet on the way, but beware – they may 'spin some science' which may or may not be true!

Unlocking scientific curiosity with the Ngā Mātāpuna o Ngā Pākihi Learning Community Cluster; pupils, teachers and parents.

The New Zealand Institute for Plant and Food Research Limited

$20,000 (GST exclusive)

This project aims to inspire children Years 7 and 8 in the Ngā Mātāpuna o Ngā Pākihi Learning Community Cluster with science and give them a greater appreciation of the role of science in their daily lives. And empower teachers in the six full primary schools (yr 1-8) of the Cluster to better engage children in science. Approximately 50 children from each of the cluster's six primary schools along with approximately 14 teachers and 36 parent helpers will be invited to experience of hands-on research activities run by Plant and Food Research scientists. After experiencing a snapshot of science that is conducted in their local area we will invite fourteen teachers to become their school's science champions and collectively form a "science champions group" within the Cluster.

CatchIT Schools - Traps, Maps, and Stats: transforming data into decisions for primary school children and all New Zealanders

University of Auckland

$150,000 (GST exclusive)

We aim to create a pathway for schoolchildren that transforms them from hands-on trappers to environmental decision-makers. We will use technology to enliven data capture, and develop software for interactive maps and child-friendly statistical analyses using CatchIT – a data management and analysis system developed by our team for community pest control schemes. This project will focus on primary school children (Years 1-8) in rural and/or low-decile schools through in-school, outside school and at-home activities.

Engagement in science and technology through sport

University of Canterbury

$18,642 (GST exclusive)

Twenty Pasifika students in a five day programme of hands-on scientific investigations related to sport at the University of Canterbury. They will investigate physical performance enhancement and conditioning using a range of science inquiry methods and a range of technologies. At the end of the intensive programme, they will be given opportunities to share these findings with their friends and families.

Bodies and bugs: Cool kids doing cool things!

University of Otago

$4,450 (GST exclusive)

Bodies and bugs: Cool kids doing cool things! will run as a new weekly Science club will that will explore how our bodies work, especially the heart and lungs, and with an emphasis on the relationship between exercise and health. It will also explore links between hygiene and health, including oral health. The project will be working with 15 children in each of two primary schools in the Wellington region aged 7-11years that have self-identified as enthusiastic young scientists through enrolment with their school science clubs. It will develop the existing relationships between our academic and clinical institutes and partner schools and involve a day visit to the University of Otago's new Centre for Translational Physiology.

Creating Stories about our National Parks: proof-of-concept of an innovative and inexpensive technique to turn high school students onto science

University of Otago

$70,979 (GST exclusive)

This project aims to influence science subject choices and test whether a iPad based filmmaking exercise could be a low barrier way to facilitate scientific engagement. 40 students from Queens High School, an all-girl decile 5 school having a mixture of 63% pakeha and 24% Maori (ERO report). Students will all attend a day-long workshop, and then be split in two groups. One will undertake a iPad based filmmaking exercise. The other half of the group will be given iPads for one month, but will additionally travel to the Fox and Franz Joseph Glaciers of Westland National Park for one week to take their own footage. All students will have Skype access to three scientists to discuss geology, the glaciers, and climate change.

Science for Supper

University of Otago

$19,455 (GST exclusive)

Science for Supper is a series of supper-time drop-in sessions for kids and their family/ whanau to see science in action beyond the school curriculum, in Otago. Topics relevant to the community - like sea-level rise, renewable energy and ocean acidification – will see family/whanau learning together and improving their understanding of the science and technology all around us, and at play in our everyday lives. Fostering a love of science and technology learning within and beyond the school environment reinforces the fun and importance of STEM (science, technology, engineering and math) skills and learning.

SciTeen: Enhancing the resilience of biodiversity through engagement with the next generation

University of Otago

$40,417 (GST exclusive)

SciTeen aims to create ambassadors for science, conservation, and biodiversity aged between 13 and 18. The project focuses on native frogs, a group that have changed very little in the last 70 million years and are classified as threatened in the New Zealand Threat Classification System and the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. Activities in the project include monitoring frog populations, assessing habitat and application of non-invasive methods for recognizing frog individuals in four localities: Marokopa, Otawa, Mangakino and Pukeokahu.

Creating Communities of Young Engineers - Waikato-Tainui Rohe

Y-Squiggle Limited

$52,879 (GST exclusive)

Creating Communities of Young Engineers (‘CCYE’) aims to address the needs of Māori representation in science, technology, engineering and maths (STEM) related careers and also increase success for Māori in secondary and tertiary education. CCYE is delivered through a hands-on, practical, customized 20 week learning programme that uses Lego as the medium. The project will work with 100 Māori children in the Waikato-Tainui rohe aged 6-12 year old (Primary School age – Year 2-8) in areas where there are high density of reo-speaking children (e.g. Huntly, Ngaruawahia, Hamilton East, Nawton).