A day with us could mean so many different things.

LEOTC 'Planning Your Visit'

Kiwi NORTH
Museum • Kiwi House • Heritage Park

P: +64 9 438 9630
E: education@kiwinorth.co.nz
500 State Highway 14
PO Box 10135, Te Mai 0143
Whangarei, Northland, New Zealand

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Contents

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LEOTC Education Programmes Overview

Kiwi North has developed educational programmes for Primary, Intermediate and Secondary aged students that deliver unique Learning Experiences Outside the Classroom (LEOTC).

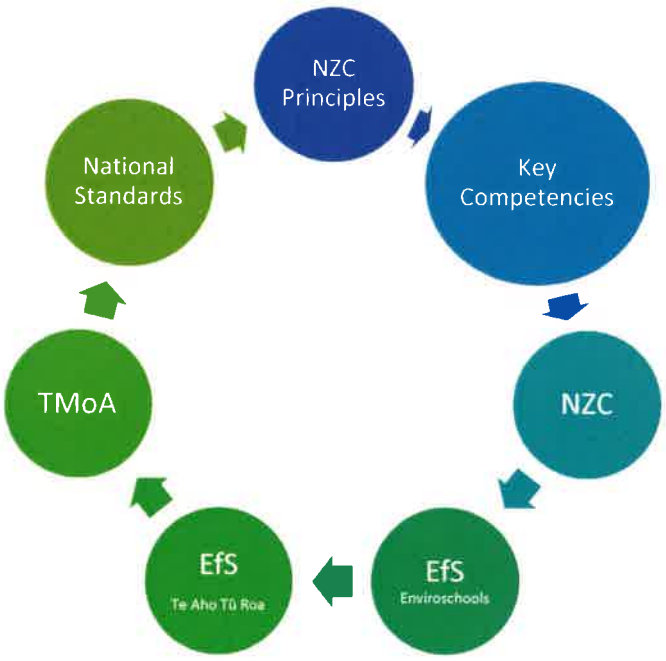
Home schooled students, Gateway, STAR and tertiary students are invited to join with us in traditional class groups, in pastoral/whanau groups and as individuals.

We can offer half-day and whole-day itineraries, school camp programmes over several days and long-term topic pathways.

For every student visiting Kiwi North's nocturnal Kiwi House to experience our rare native species or the Museum to explore our treasured taonga (collection items) these are invaluable sources of inspiration and learning to be remembered for long afterwards.

LEOTC programmes are designed to immerse students in authentic learning experiences, to engage by exploration and experimentation, to extend and apply prior learning in order to achieve depth and range to their knowledge and skill base.

All of our programmes are bespoke: let us know your topic and learning intentions and we will design an experience especially for your students that is linked to these outcomes.



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Our Unique Resources – some examples

Science /pūtaiao

Kiwi House resources

Kiwi, Geckos, Tuatara & Insects – taxonomy, classification
Native Bird & Bush Trail – ecosystems, food webs, life cycles

Museum & Archive resources

Te kohinga taonga Māori – Matariki, hauora- rongoā Māori

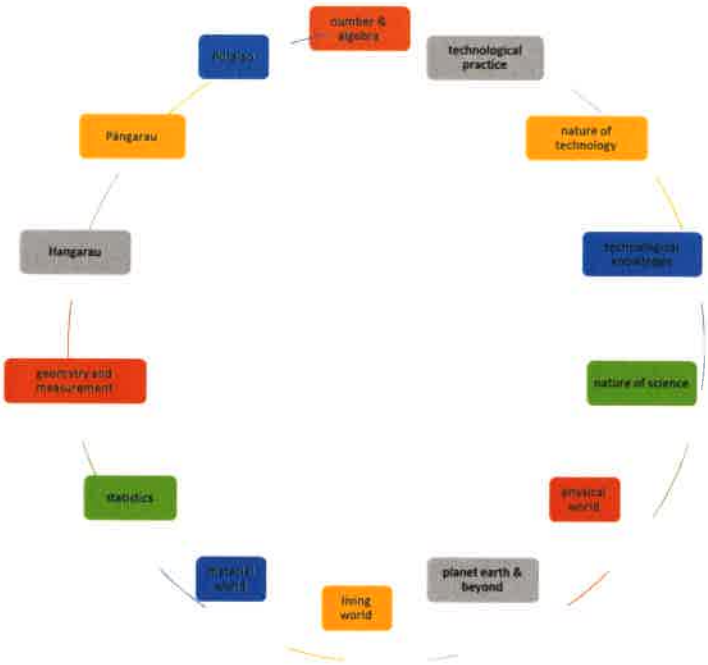
Heritage Park resources

Vintage Car Club – aerodynamics, engineering
Stationary Engines Club – the application of energy and forces
Planetarium North – astronomy, celestial navigation
Rock & Mineral Club – volcanic geology, fossils, pounamu

Technology/ hangarau

Museum & Archive resources

'NZ Morse Code secrets'
'Communication through the ages'
'Toys over time'
'Tukutuku, manu aute, korowai & pukupuku'
'Kaupapa Māori: taonga tuku iho'



Heritage Park resources

Glorat Homestead – sustainable industries
Oruaiti Chapel – building techniques
Riponui Pah School – communication technologies

Mathematics/ pāngarau

Kiwi House resources

Compiling data sets
Recording and comparing data
Shapes, density & patterns in nature

Museum & Archive resources

Horology over time and space
Surveying tools and techniques
Making and using compasses

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Curriculum Areas

We specialise in the STEM learning areas but we know that in the real world no subject exists in isolation so many of our programmes will enable cross-curricular learning.

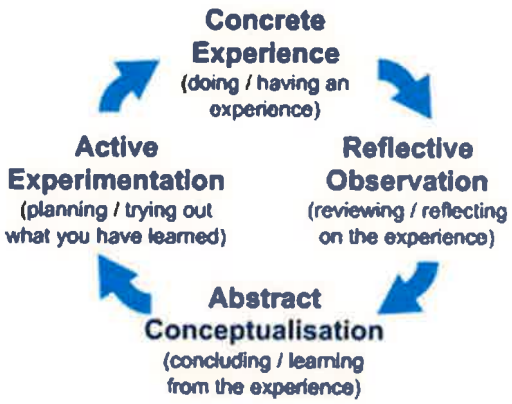
The disciplines may be related through a central theme, issue, problem, process, topic, or experience.

Let us know what your interdisciplinary integration or connection looks like and we can introduce, support or extend the synthesis of knowledge, skills and understandings.

Methodology

- Is there a preferred learning style amongst your students?

We aim for a mix of activities during your programme that will suit a cross-section of preferences.



Where appropriate our programmes include Maori pedagogy; ako, tuakana & teina, whakarongo, titiro, korero, wananga & waiata.

When appropriate we do not include references to scientific principles that are not included in some belief systems.

The rich experiences we provide are particularly suited to the student groups identified as 'priority learners'. We plan our programmes so that every student can experience achievement.

- Remember to book in your pre-visit.

A conversation, a classroom visit or a preparatory visit to Kiwi North offers the opportunity to discuss your and your students' requirements.

Once your intended outcomes are understood we can support your classroom learning so much better.

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Principles

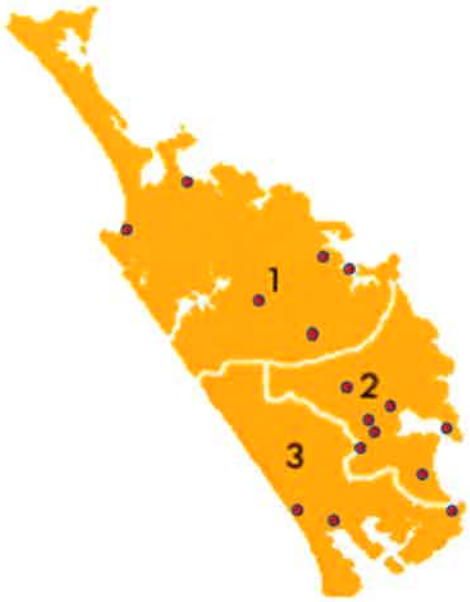
Planning effective learning opportunities does require an understanding of your students and their needs. When you share information with us about your students we take your privacy seriously. When you provide us with feedback we take all of your comments into our organisational Development Action Plan.

Offering you a professional service that provides positive outcomes for all concerned is key to our core purpose.

We are guided by several key principles that come from the Vulnerable Children Act 2014, the Privacy Act 1993, Human Rights Act 1993, Bill of Rights Act 1990 and Te Tiriti o Waitangi.

Partners

We work in partnerships across Northland Tai Tokerau



Environmental Educators, Museums, Iwi, universities, businesses, government departments, charities, professional organisations and others work with us to offer you a quality educational experience at a variety of sites around 1. the Far North, 2. Whangarei and 3. Kaipara.

Through our network we are able to offer your students resources, content and support in a wide range of subject areas.

Take a look at our programme outlines on the following pages to see some examples of what you can do and where you can visit with this LEOTC provision.

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Since July 2015 we have been widening our network of partner organisations in order to bring more expertise and more choice to Northland's education sector.

LEARNING ON THE TAIL OF THE STINGRAY / Tangohia te korero matauranga, ka pupuri ai—Northland / Tai Tokerau Educational Resources Network

STEM Conference Participants 2015

Adam Willetts, Bream Head Conservation Trust
Andrew Tagg, NZ Maths
Anton Bowker, Eco Solutions
Ashlee Lawrence, Northland Regional Council
Barrie Matthews, Learnz
Bernie Buhler, Limestone Island/Matakohe
CORE Education Ltd
Futureintech
Gerry Brackenbury, Pukenui Western
Hills Forest Charitable Trust
Hazel McIntosh, NZASE
Ian Kennedy, Sir Paul Callaghan Academy
Jacque Knight, Secondary Schools Facilitator, Enviroschools
Jessie McKenzie, Royal Society of New Zealand Te Aparangi
Julian Thomson, GNS Science
Michelle Dickinson, Nanogirl
Nigel Studdart, North Tec
Peter Bier, NZ's Next Top Engineering Scientist Competition
Peter Felhofer, Planetarium North
Raewyn Sills, Dargaville Museum
Refining NZ
Ruth Peterson, Ako Aotearoa
Sarah Archer, Clapham's Clocks
ScienceLearn/BioTechLearn
Shaun Gear, Skills Choice
Soozee McIntyre, Mountains to Sea
Stewart Bowden, The Medical Museum
Te Kauri-Waaikuku Trust
Trish Matson, Northcomict
Whangarei Rock & Gemstone Club

Network Committee Members 2016

Auckland University
Bream Head Conservation Trust
Central Northland Science Fair
Chamber of Commerce
Clapham's National Clock Museum
DOC
EcoSolutions
Experiencing Marine Reserves
Kiwi Coast
Kiwi North
Life Education Trust
Matakohe Kauri Museum
Matakohe Limestone Island
Ministry of Primary Industries
Mountains to Sea Conservation Trust
National Science Roadshow
Ngatiwai Education
Northland Innovation Centre
NorthTec
NZ Careers
Packard & Pioneer Museum
Planetarium North
Quarry Arts
Reyburn House Arts Society
Ringa Atawha
Rock & Mineral Club
Te Wananga o Aotearoa
Whangarei Art Museum
Young Enterprise

Potential Network Members 2017

Aroha Island
Art 'n' Tartan
Butler Point Whaling Museum
Creative Northland
Dragonfly Springs Wetlands Reserve
Firehouse Museum
Fish 4 Ever
Food Rescue Northland
Heritage NZ
Hikurangi Museum
Jack Morgan Museum
Kaikohe Pioneer Village
KCC Kiwi Conservation Club
Living Waters
Mangawhai Museum
NIWA
Otago Marine Science
People Potential
Regent Training Centre Limited
Rewa's Village
Taratahi
Te Wananga o Raukawa
Te Whare Wananga o Awanuiarangi
The Design School
Waitangi
Warewere Forest Trust
Whangaroa Museum

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Programme Outlines

Some examples of venues and programmes

MINISTRY OF EDUCATION | LEARNING EXPERIENCES OUTSIDE THE CLASSROOM | LEOTC

Sustainable Pioneers

Learning Areas: technology, hangarau, EfS

How to cook and preserve food as the early settlers would have done

Making housewares using primary materials for lighting, washing and tools

Transformative processes

Programme Outline

Based in the utility rooms of the Clarke family homestead are the equipment for preparing meat, butter, cheese and cream in the butchery and dairy.

In the tack room and washroom are the tools for preparing candles and soap, heating washing water and scrubbing and drying clothing.

See how natural materials such as hides, wool and plant fibres were prepared for use.

Cooking and comparing griddled scones (pikelets) and simple bread as examples of baking that could be done over an open fire by bush men or a range in a homestead.

Preserving food and cooking methods ae explored via photographs and examples from our archives.

Managing storage, environments and transformative processes with simple technology.

The measurement of ingredients and preparation time is considered throughout as we explore the impact of heat and chemical properties on our 'cooking'.

What food items and tools were available to Pākehā settlers and what did they trade with Māori?

What can we learn from their 'no waste' ethos that we can apply to our consumer lifestyles?

The session concludes with small group presentations of a way of preparing a food for taking on a tramp; What health factors and available resources they may need to consider and how culture and social roles would determine what was prepared by whom.

Curriculum links

	L1	L2	L3	L4	L5
Science	*				
Physical World					
Material World					
Technology	*				
Technological Practice					
Technological Knowledge					
Nature of Technology					
Maths	*	*			
Geometry and Measurement					
English	*	*			
Speaking, Writing and Presenting					
Health & Physical Education	*	*			
Personal Health and Physical Development					
Healthy Communities and Environments					
Social Sciences	*	*	*		
Social Studies					

Booking Information

Class age group: 5—14 years
Group size: maximum of 30 students/5 adults
Timing: 10.00am—2.00pm allow 3 hours for practical activities
Venue: Kiwi North (also available at Kaikohe Pioneer Village)
Cost: $5 per student
Book at E: education@kiwinorth.co.nz T: 094389630
Booking form online at www.kiwinorth.co.nz

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MINISTRY OF EDUCATION
LEARNING EXPERIENCES OUTSIDE THE CLASSROOM LEOTC

Clapham's Time Machine

Learning areas: Horology, tāima

How do we measure the passing of time?

Looking at different tools and methods of the measurement of time

Examine the technology used for measuring different lengths of time

CLAPHAMS CLOCKS
The National Clock Museum

Programme Outline

By using the unique resources of the National Clock Museum we can bring the measurement of time to life for students of all ages.

There are many options to make this programme relevant to the age and stage of your students:

Introducing analogue and digital formats

Using knowledge of number patterns and relationships to measure different lengths of time

Natural cycles and Māori Maramataka

Measurement of pendulums and weights

Using materials to create accurate measurements of time

Nocturnal, diurnal and circadian rhythms

Astronomical systems and lunar calendars

Mean solar time (GMT)

The influence of the equator and latitude

Creating timepieces using movement and forces

The use of ethyl chloride & mercury in timepieces

Tours of the museum are combined with workshops in the nearby classroom space and demonstrations of the outside water clock and, weather permitting, the sundial.

Curriculum links

	L1	L2	L3	L4	L5
Science	*	*	*		
Physical World					
Material World					
Planet Earth and Beyond					
Living World					
Technology	*	*			
Technological Practice					
Technological Knowledge					
Nature of Technology					
Maths	*	*	*		
Geometry and Measurement					
Number and Algebra					
English	*	*			
Speaking, Writing and Presenting					
Social Sciences	*	*			
Social Studies					

Booking Information

Class age group: 5—16 years
Group size: maximum of 30 students/5 adults
Timing: 10.00am—2.00pm allow 3 hours for practical activities
Venue: Clapham's National Clock Museum, Whangarei
Cost: $5 per student
Book at E: education@kiwinorth.co.nz T: 094389630
Booking form online at www.kiwinorth.co.nz

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MINISTRY OF EDUCATION
LEARNING EXPERIENCES OUTSIDE THE CLASSROOM | LEOTC

Print Making

whangarei art museum
te manawa toi

Learning areas: technology, hangarau, EfS

Use the current exhibition for inspiration

Cut your own design into a tile for ink printing

Understand the production of materials from natural sources

Examine the various properties and uses of natural materials

Programme Outline

Based in the Education Workshop at Whangarei Art Museum, Whangarei Town Basin, produce your own work of art to take home in six easy steps.

Step 1: Select an artwork

Have a look around the gallery and select an artwork that stands out for you

Step 2: Design

Experiment with designs that will work with this medium

Step 3: Put your design on your linoleum sheet

Remember that it will reverse onto the paper
Step 4: Cut Away

Step 5: Ink up your linocut

Step 6: Print

Additional activities:

Explore the natural materials used in the production of inks and paints, natural canvases and printing materials.

Make paper from raw materials

Investigate the properties of different grasses and timber for craft and tool making.

The session concludes with presentations of your work.

Curriculum links

	L1	L2	L3	L4	L5
Science	*				
Physical World					
Technology	*	*	*	*	
Technological Practice					
Technological Knowledge					
Nature of Technology					
Maths	*	*			
Geometry and Measurement					
English	*	*	*		
Speaking, Writing and Presenting					

Booking Information

Class age group: 5—19 years
Group size: maximum of 30 students/5 adults
Timing: 10.00am—2.00pm allow 3 hours for practical activities
Venue: Whangarei Art Museum
Cost: $5 per student
Book at E: education@kiwinorth.co.nz T: 094389630
Booking form online at www.kiwinorth.co.nz

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Matakohe Limestone Island

Learning areas: Geology, industrial processes, māra (Māori cultivation) and conservation

The Rock Cycle

Uses of rocks and minerals in industry

Māori mahinga kai (food garden)

'Operation Nest Egg', local flora and fauna

FRIENDS OF MATAKOHE - LIMESTONE ISLAND

WHANGAREI HARBOUR CRUISES

Programme Outline

Our day starts at Onerahi Boat Ramp for small groups to travel by Ranger's Ferry to Matakohe Limestone Island or for larger groups we meet at the Town Basin, Whangarei, at Whangarei Harbour Cruises berth.

A cruise aboard the MV Waipapa will give us the opportunity to learn about wetland habitats along the Hātea River, Whangarei Harbour, the technology of the new Te Matau a Pohe bridge, local legends and the history of transport in the area.

We will learn about biosecurity threats: mice, rats and ants and how to check that we are not taking them into predator free environments.

Once at Matakohe Limestone Island the following areas of learning are offered:

- The rock cycle, local geology, properties and uses of rock
- Industrial uses of rocks particularly cement making
- Limestone Island industrial and social history
- Māori settlement at Onerahi, Paura Bay and Matakohe Limestone Island
- Conservation practices
- Studies of Kiwi, Grey Faced Petrels, Fern Birds, Flax Snails, lizards, weta and coastal plant species

Curriculum links

	L1	L2	L3	L4	L5
Science	*	*	*		
Physical World					
Material World					
Technology	*				
Technological Practice					
Technological Knowledge					
Nature of Technology					
Maths		*	*		
Geometry and Measurement					
English		*	*		
Speaking, Writing and Presenting					
Health & Physical Education	*		*		
Personal Health and Physical Development					
Healthy Communities and Environments					
Social Sciences	*	*	*		
Social Studies					

Booking Information

Class age group: 5—19 years
Group size: Rangers Ferry—20 students and 3 adults
Whangarei Harbour Cruises-57 students and 10 adults
Timing: 10.00am—2.00pm allow 2 hours for activities
Venue: Matakohe-Limestone Island, Onerahi, Whangarei
Cost:
$100 ($5 per student) per Ranger's Ferry return trip
$570 ($10 per student) with Whangarei Harbour Cruises Floating Classroom return trip
Book at E: education@kiwinorth.co.nz T: 094389630
Booking form online at www.kiwinorth.co.nz

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A Whale of a Day

Learning areas: natural world pūtaiao, technology hangarau and chemical processes

Cetaceans that live and migrate around NZ

Food webs and life cycles of cetaceans

Whaling as an industry and resulting technology

Butler Point Whaling Museum

Programme Outline

Take a guided tour of the Whaling Museum and Captain Butler's homestead in the scenic bay where he located his home and business supporting the then flourishing whaling industry.

Looking at New Zealand's waters and the marine life that whales and dolphins interact with we explore examples of migration routes, habitat, food webs, life cycles, the impact of different types of fishing and the sources and impact of pollution.

We role-play a whale rescue procedure and learn how to behave as a first responder to such an event.

This workshop is your introduction to Project Jonah and their Marine Mammal Medic course for 15+ year olds.

This is a day in the sun using games as learning tools.

There are picnic facilities in the beautiful grounds where you can also explore an archeologic site.

Curriculum links

	L1	L2	L3	L4	L5
Science	*	*	*		
Physical World					
Material World					
Planet Earth and Beyond					
Living World					
Technology	*	*			
Technological Practice					
Technological Knowledge					
Nature of Technology					
Maths	*				
Geometry and Measurement					
English	*	*			
Speaking, Writing and Presenting					

Booking Information

Class age group: 5—19 years
Group size: maximum of 30 students/5 adults
Timing: 10.00am—2.00pm allow 3 hours for practical activities
Venue: Butler Point Whaling Museum, 31 Marchant Rd, Hihi 0494. Near Mangonui
Cost: $5 per student $10 per adult
Bookings: Jan Ferguson T:0800 687 386
butler.point@xtra.co.nz
education@kiwinorth.co.nz T: 094389630
Booking form online at www.kiwinorth.co.nz