



Welcome to / Haere mai ki



PROJECT ISLAND SONG

www.projectislandsong.co.nz

Floating Classroom Educator's Pack



kids
restore
New Zealand
www.kidsrestorenz.org.nz

Pre-trip Session

Setting: At school

Learning Outcomes:

- Introduce Project Island Song
- Provide background to pest control, island restoration, health & safety
- Fun

Resources Used:

- Powerpoint presentation on memory stick
- Leadership Role Descriptions: Health & Safety, Media, Biosecurity, Penguin Nesting Box
- Stop, Check, Go game rules
- Sample rat trap
- Sample mouse/stoat trap
- Sample tracking tunnel
- Sample penguin nesting box

Time	Teacher Instructions/Student Activities	Resources
20 mins	Present Powerpoint	Memory stick
10 mins	Q & A with students	
10 mins	Leadership opportunities: <ul style="list-style-type: none">• Media• Biosecurity• Health & Safety• Penguin nesting box construction	Role descriptions Sample trap and nesting boxes
10 mins	Stop, Check and Go game <ul style="list-style-type: none">• Outside on field/courts (if dry)• Inside hall (if wet)	Game rules
Follow-up	Floating classroom trip and post-trip session	See relevant lesson plan

Educator's Notes

- Background information is provided with every slide in the powerpoint presentation.
- Check following websites for more background information:

www.projectislandsong.co.nz

<http://www.doc.govt.nz/projectislandsong>

<http://www.facebook.com/Project.Island.Song>

- Go through leader role descriptions with students and leave with teacher to allocate as they see fit. The biosecurity role description will need the most students.

Stop, Check and Go Game

Aim

To learn the biosecurity messaging of **STOP** (before you leave the mainland), **CHECK** (your gear and vessel for pests and weed seeds), and then **GO** (and have fun!).

Rules

1. Children line up along a stretched-out rope or straight edge on the ground.
2. One child (the ranger) stands as far away from the other children as possible facing away from the other children.
3. The ranger uses gestures to control the other children:

“STOP”	= Hand held up in a stop sign
“CHECK”	= Hands on head
“GO”	= Circle the arm from the shoulder to beckon the children forward.
4. Ranger starts the game by using the “Go” gesture.
5. Children move as fast and as quietly as they can towards the ranger.
6. As the children move toward the ranger, the ranger uses the “Stop” “Check” “Go” signals in any order and as quickly or slowly as they like. The children have to follow these commands:

“STOP”	= stop and stand where you are, in whatever position
“CHECK”	= touch your head, shoulders, knees and toes
“GO”	= you can move again
7. If anyone moves when they should be stopped, they have to move back to the start line and begin again.
8. The first child to reach the ranger and tag the ranger becomes the ranger. Everyone else goes back behind the line/rope and the game starts again.

Project Island Song Floating Classroom Session

Setting:

Explore boat – D3

Key competencies:

Thinking
Using language, symbols, texts
Managing self
Relating to others
Participating and contributing

Strand:

Science: Living World – Ecology – interdependence of living things in an ecosystem;
Nature of Science – understanding of socio-scientific issues
Social Sciences: Events have causes and effects; individual and collective responses to community challenges;
Ideas and actions in the past impact on people's lives

Level:

3-5 (Years 7-10)

Learning Outcomes:

- Conservation issues in Bay of Islands e.g. island restoration, island kiwi ecology/biology awareness/understanding
- Pests and their control
- Commitment to applying learnings at home/school
- Fun

Resources (GOBOI):

- Peanut butter
- Activity booklet x 50
- Pens/pencils x 50
- Stop Check Go teardrop banner
- Project Island Song folding brochure x 50
- Sample stoat/mouse traps in box
- Stoat
- Project Island Song map
- Stop Check Go backpack with plastic rat, mouse and ants
- Sample rat trap in box
- Sample tracking card tunnel
- Tracking cards
- Argentine ant information x 5
- A4 paper x ream
- Rubbish bags x 10
- Weed brochures x 50
- Boxes & lids to hold resources
- Clipboards x 6
- Inventory lists
- First Aid kit
- Camera
- Stickies x 100
- Translocation Map
- Dotterel brochures x 50
- Flatpack stoat/mouse trap box
- Flatpack rat trap box
- Flatpack penguin nesting box
- Flatpack tracking card tunnel
- Screws (for Flatpacks)
- Screwdrivers x 4
- Outdoor felt pen x 2
- Species photo cards
- Certificates x 50
- Feedback forms x 50
- Hammers x 4
- Plant me instead booklets x 10
- Badges
- Fluoro vests x 5

Resources (DOC):

- Kiwi walking puppet
- Kiwi & egg
- Rats x 3 (Norway, ship, kiore)
- Model footprints and sand box
- MP3 player with kiwi calls and amplifier
- Blue penguin
- Giant rubber rat

Location	Teacher Instructions/Student activity	Student leader role	Resources
Before boarding	Whole group: <ul style="list-style-type: none"> • Biosecurity bag check on wharf/rodent dog if available • Health & Safety checklist • Report to skipper 	Biosecurity Health & Safety	Stop check go teardrop banner Badges Folding brochures Fluro vests
Inner Bay of Islands	Whole group: <ul style="list-style-type: none"> • Outline how trip will work: seated for 15 min sessions at various points along the way; able to move around boat and work on activity booklet in-between times and at Otehei Bay • Hand out activity booklets and pens. • Explain how booklets work • Resources available – explain Project Island Song brochures etc • Introduce student leaders and their roles during trip • Explain involvement of partnership: DOC, Guardians, Hapu • Thank Kid's Restore funding for making the trip possible • Everyone can be a Lynette Smith. Individuals can make a difference. 	Health & Safety Biosecurity Media Penguin nesting box	Activity booklets Pens/pencils Resources
Past Tapeka	Whole group: <ul style="list-style-type: none"> • Everything is connected – rainfall, weeds, pests 		Project Island Song Map
Roberton/Motuarohia Island – Cook's Cove	Whole group: <ul style="list-style-type: none"> • Project Island Song background • Successes • Future 		Project Island Song Map Folding brochures Translocation Map Species photos
Roberton/Motuarohia Island – Twin Lagoons	Whole group: Issues and solutions associated with island-bound populations <ul style="list-style-type: none"> • Make kiwi sounds – male/female calls • Talk through physical features – small wing, nostrils on end of beak, feathers, egg size. Use props • Q&A from students 		Kiwi puppet Kiwi MP3 and kiwi calls Kiwi egg
Moturua Island	Whole group: <ul style="list-style-type: none"> • Robin reintroduction – what's involved, why do it 		NI Robin photo Folding brochures

Location	Teacher Instructions/Student activity	Student leader role	Resources
Otehei Bay Wharf	Whole group: <ul style="list-style-type: none"> • Pests – dogs, stoats, argentine ant and rats. Why they need to be controlled, how this is done on islands • How many rats/mice/stoats/cats have got back to the islands? • Planting – bird food etc • Dotterels • Weed issues – garden escapes, bamboo/mothplant/tradescantia • H&S regarding island visit 	Health & Safety	Weeds brochure Plant me instead instead booklets Stoat Stoat/mouse trap Rat Rat trap Tracking cards/tunnel Dotterel brochure Activity booklet Fluoro vests First Aid kit
Otehei Bay	In leadership groups: <ul style="list-style-type: none"> • Media • Biosecurity • Penguin nesting boxes • Health & Safety 	Media Biosecurity Penguin nesting boxes Health & Safety	Flatpack trap boxes Flatpack penguin Screwdrivers Screws
Outside cafe	Penguin nesting box group: <ul style="list-style-type: none"> • Make up box • Place in appropriate place • Disguise the entrance 	Penguin nesting boxes	Flatpack penguin nesting box Screwdrivers Screws Outdoor felt pens
Outside cafe	Biosecurity group: <ul style="list-style-type: none"> • Make up rat trap box • Make up tracking card box • Make up stoat trap box 	Biosecurity	Flatpack trap boxes Outdoor felt pens Nails Hammers
At planting area	Main group: <ul style="list-style-type: none"> • Health & Safety • Planting/weed identification 	Health & Safety	Spades First Aid kit Gloves Weed brochure
At planting area	Media group: <ul style="list-style-type: none"> • Take photos and quotes 	Media	Camera Clipboard Paper Pen
At planting area	Biosecurity group: <ul style="list-style-type: none"> • Place traps and tracking tunnel in appropriate places 	Biosecurity	Made up traps Made up tracking tunnel Outdoor pen
Outside cafe	Whole group: <ul style="list-style-type: none"> • Check back onto boat 	Health & Safety	Fluoro vests Clipboard

Location	Teacher Instructions/Student activity	Student leader role	Resources
On boat on the way back	Whole group: <ul style="list-style-type: none"> • Keep an eye out for dolphins • Fill in feedback forms 		Activity booklet Feedback forms
At wharf	Whole group: <ul style="list-style-type: none"> • Thank yous to skipper and crew • If time allows have demo of raps • Hand out certificates 		Activity booklet Certificates
On wharf	Individuals: <ul style="list-style-type: none"> • What can you do to help? Make a pledge/commitment on a sticky. • Place stickies on map • Have group photo taken • Hand in feedback forms 		Map Stickies Pens/pencils Camera Feedback forms

Notes

Post-trip Activities

Setting: At school

Learning Outcomes:

- Reinforce learnings from trip
- Determine how to apply learnings in own school; home
- Fun

Resources Used:

- Poster sheets
- Stickies
- Felt pens
- Kauri height chart poster
- Stickers

Time	Teacher Instructions/Student Activities	Resources
5 mins	Student leaders tell class: <ul style="list-style-type: none"> • What they learnt from their trip 	
5 mins	Whole class discuss: <ul style="list-style-type: none"> • What kinds of things did they learn from the trip and which are already being done at school? At home? 	
10 mins	In small groups, each group having a student leader who has gone on the floating classroom trip: <ul style="list-style-type: none"> • Put ideas onto stickies 	Stickies Felt pens
10 mins	Come together as a whole group: <ul style="list-style-type: none"> • Put stickies onto headed poster sheets and explain as doing so why they chose that idea. 	Poster sheets
10 mins	Choose which poster to work on as a new group: <ul style="list-style-type: none"> • What new learning can be applied at home? At school? • Decide on some actions e.g. write a blog about the trip, write a press release for the local paper; design and plan a planting trip in their backyard/garden and plan with their families. 	Poster sheets Stickies Felt pens
10 mins	As individuals add to the class commitments tree: <ul style="list-style-type: none"> • Students choose individual actions and write on a sticky today's date, name and date the action is to be completed. • Put on commitments tree. • Photo class in front of commitments tree 	Kauri height chart poster Stickies Felt pens
Follow-up	As individuals complete their commitment: <ul style="list-style-type: none"> • Report back to class as part of class daily routine. • Receive achievement sticker 	Stickers

Notes

Before boarding

- Open all bag zips and fastenings, pat down from the outside.
- Explain to those boarding of the need to check all bags and shoes for stowaways. Rat can get through a hole the size of its own head; a mouse can get through an even smaller hole. Rodents can “dislocate” their limbs and get through extremely small spaces.
- Check for ants – patting bags will encourage ants to come “boiling” out. Argentine ants eat native birds, insects etc from the soft parts (eyes, mouth) inwards.

Inner Bay of Islands

- See lesson plan for details.
- Activity booklet to be used in conjunction with educator input. Map in centre to be used as a “diary” of the trip. Students can use symbols, text, pictures to illustrate their note-taking.

Past Tapeka

- Everything is connected. Rainfall on mainland, silt carried down streams to rivers to the sea impacting on water quality. Negatively affecting shellfish beds, eelgrass areas, increases spread of mangroves. Mangroves act as “kidneys” filtering the silt from the water, helping keep the marine environment healthy. Weeds, travel by different routes – by air, caught on clothes, animal fur, by water, landing on islands creating problems by out-competing native plants. Pests including rats, stoats can swim; mice hitch a ride in bags, fishing nets; rainbow skinks in potting mix; Argentine ants in plants, building supplies. Once established on the islands pests can out-compete native animals for food, places to live.

Roberton/Motuarohia Island – Cook’s Cove

- Power of the individual. Project Island Song started through the efforts of one person – Lynnette Smith. Five years talking with DOC and local hapu Patukeha and Ngati Kuta about the pest-ridden islands led to formation of Guardians of the Bay of Islands – a community group.
- Why get rid of pests? Rats and mice eat native plant seeds and seedlings, stoats and rats kill native birds (fantails in trees, NZ dotterel on beaches). Not just adult eaten but fledgling and eggs destroying all future generations coming from that nest.
- Unless pests got rid of and kept away, restoring the islands can’t happen.
- Auckland University research carried out research to see whether rats could be killed off island by island, but DNA research on island rats showed that the rats were swimming between the islands so all the islands would need to be treated at the same time.

Notes

- Pateke (brown teal) removed from islands as might be affected by rat poison.
- 2009 – rat poison used on all islands to kill rats. Poison spread by helicopter. Highly successful operation.
- Project given name - Project Island Song – Get rid of rats, plant trees, bring back the birds.
- After two years pest-free species can be brought back. In 2012 pateke were brought back (from a breeding programme). Released in Entico Bay on Urupukapuka Island. In 2014 North Island robin toutouwai were released on Moturua Island to join the few remaining toutouwai that had been released some years before.
- Although pests (rats, mice, stoats) have made it back to the islands and will do so as long as they are on the nearby mainland and elsewhere, they have not established a viable on-going population, so can call the islands pest-free.
- Future is looking bright – range of native species can be brought back. Need to come back in a certain order to make sure if one is food for another enough of that specie have survived to make a viable population.
- As more species are brought back so tourism potential increases. People like pest-free islands (90% in a 2012 survey of Fullers and Explore visitors to Urupukapuka Island said they would prefer to visit pest-free islands).

Roberton/Motuarohia Island – Twin Lagoons

- Motuarohia (Roberton) and Moturua Islands have Northland Brown kiwi on them. Problem is they can't fly or swim.
- Very low original founder populations – 3 and 4 respectively.
- Issues with potential in-breeding; low fertility; potential mutations
- Kiwi population needs to be managed – still be decided how to do this – may take some off, put on mainland; may swap between islands.
- What happens in the future? Need to continue management.
- A special bird more like a cat than a bird: nostrils at the end of its bill, vibration sensors and whiskers help bird find food. Can fight using its bill and feet; run very fast; poor sight; male incubates the egg; highly territorial; can live up to 40 years. Vestigial wing. Nest in burrows, may only be in piles of vegetation. Eat worms, beetles, grubs, fish. Egg can take a huge percentage of the adult's body size. In Northland female may lay two in a year.
- Male and female call differently – can be any time from dusk to early hours.

Notes

- Main threats are cats (kiwi under 1kg); dogs and stoats (adult kiwi); cars (roadkill). In Northland dogs are the worst threat. Breastbone of kiwi is very fragile, dogs can easily crush kiwi by biting them. If handled wrongly can crush the breastbone and kill the bird. Dogs on boats brought ashore can be a real issue as kiwi smell very strongly, dogs can hunt them down easily in their burrows.

Moturua Island

- 16 North Island robin were first released on Moturua in the 1980s. Rats ate them. Only a very few left.
- Guardians decided to help this population out by catching more from the Pureora Forest and releasing them onto Moturua.
- Took a week to train the birds to eat the mealworms to make it easier to catch them using clap nets. 30,000 were grown for this translocation.
- 43 toutouwai were released July 2014 to Moturua Island.
- Brought up from Pureora Forest near Taupo overnight in an air-conditioned campervan to keep them cool. Each in a separate cat carrying box as they are territorial. Russell School children and Kerikeri Shadehouse Volunteers made the boxes up. The birds have spread all over the island and are establishing territories prior to breeding.
- Moturua is a very weedy island as it has had a number of gardens and garden plants escaping. Some of the worst are tradescantia (wandering willie) which smothers everything, likes growing under the bush and re-roots really easily from broken stems. Mothplant spreads in a different way – hundreds of parachute-like seeds; grows into a vine that makes the canopy collapse through its weight.

Otehei Bay Wharf

- Three types of rats: Norway (water rat). Good swimmer, can swim 2 kms so easy for them to get from mainland to islands (less than 400m between mainland and island at nearest point), doesn't climb trees, eats ground-nesting birds (dotterel) and their eggs. Also eat native seeds and seedlings. Ship rat (bush rat) smaller, slither, climbs trees, not as good a swimmer more likely to stowaway in boats, also eats adult birds (fantails), fledglings and eggs – all future generations as well. Kiore (Polynesian rat) not so much of an issue as very few left. Norway rats out-compete them.
- Caught in snap traps – baited with peanut butter. Can take several weeks to catch. May need to use other baits – macadamia nut butter, especially for rodents living in macadamia nut orchards. Cheese not good – goes off rapidly in the summer, very expensive, rats prefer peanut butter.
- Mice can't swim well, stowaway in nets, boats, bags. Caught in mousetraps (small versions of rat traps). Eat seeds and flowers – out-competing native animals for food.

Notes

- Stoat can swim up to 10 kms – one seen still swimming out to sea. Eat only meat – teeth show they are carnivores. Attracted to eggs, these are used in stoat DOC 200 traps as well as salted rabbit or possum meat. This lasts well in summer heat. Kill even when not hungry and cache food. Kill birds, eggs.
- Tracking card tunnels are used to find out what animals are out there. Baited with peanut butter. Does not harm the animals. They eat bait and leave footprints behind. If pest footprints found this triggers the emergency incursion response – extra traps, rodent dog checks etc. Until pest found and killed. Island must be clear of pests for three months before being declared pest-free again.
- Restoration planting being done on islands to bring back the bird food. Mice and rats eat seeds and seedlings, humans acting as kukupa/kereru to help the forest recover more quickly. 22000 native plants have gone in last five years.
- Look out for dotterels when landing – on left hand side of beach. Eggs just in shallow scrape of a nest, well camouflaged. Keep away from birds especially if they look like they have a broken wing – their method of leading you away from the nest. Very rare – less than 1500 left in the world. Now that there is pest-control on the islands more chicks are surviving. Highly territorial so not enough room on the beaches for them, starting to populate mainland beaches. Dogs are also a major problem for dotterel.

Project Island Song Partnership

- The partners are: Guardians of the Bay of Islands (community group), Nga Hapu o Te Rawhiti (Patukeha and Ngati Kuta) and DOC (Bay of Islands office).

Guardians of the Bay of Islands activities

- Volunteers weed, monitor pest control, plant, assist with translocations, take part in displays and events, talk to visitors to the Bay about the project. If interested contact www.projectislandsong.co.nz

Other supporters of Project Island Song

- Kerikeri Shadehouse Volunteers – grow native plants used in the restoration of the islands.
- Russell Landcare Trust, Living Waters, Bay Bush Action; some of the community groups that get involved in planting days and weed control on the islands.
- Northland Regional Council, Eastern Bay of Islands Preservation Society involved in weed and pest control on the nearby mainland.
- Local landowners in eastern Bay of Islands mainland carry out pest control and weed control on their own land.
- Businesses: Fullers Great Sights, Explore - transport volunteers for planting, weeding, translocation etc.
- Funded by Kids Restore NZ, Air NZ Environment Trust, ASB Trust, amongb others.

Notes

Otehei Bay - pre-eradication

Otehei Bay - pre-eradication

A man told me how he got up at midnight when staying at one of the cabins at Otehei Bay, Urupukapuka Island. It was a full moon and he thought to himself “How beautiful the moonlight is shining on the waves on the shore line.” He then realised that it wasn’t full tide, those weren’t waves but in fact the backs of rats on the beach. They were on the beach feeding on the sandhoppers – the only food they could find. There were so many rats on the islands at that time that they would become so disparate that they would eat each other.

Urupukapuka Bay – pre-eradication

Campers have many stories to tell. Rats eating through tents to get to the foodstores. Rats once inside the tents eating through the plastic food containers. Campers waking up to find a rat on the pillow next to their head; being kept awake by the sound of rats running over their tents at night.

Urupukapuka Bay – post-eradication

A woman camper got out of her tent, stepped on the groundsheet and felt something soft under her feet. She peeled back the groundsheet and found a paralysed rat.

She did three things right: killed the rat; called 0800DOCHOT; kept the rat.

The rat tail provided DNA, and when compared to other DNA collected it showed the rat came from outside the BOI. The camper came from Whangarei! The rat probably travelled up in the trailer and camping gear. This was the first rat back to the islands after eradication.

Cable Bay – pre-eradication

A kayaking group went for a night-time paddle leaving one of their group on the beach. When they came back he had retreated to the edge of the sea. They found him with his back to the sea, brandishing a torch at the ring of rats that were menacing him!

Moturua Island – post-eradication

One mouse took eight weeks to catch. It travelled most of the island leaving its footprints behind in tracking tunnels. A rat which also took a long time to catch was finally caught using macadamia nut butter – a very expensive bait at \$60 a kilo. Cheese, peanut butter, chocolate were all used but didn’t work.

People living on the island have “complained” about the noise of the birdsong at dawn waking them too early!

Roberton/Motuarohia Island- post-eradication

People living on the island are now “complaining” that they have to check their gumboots and shake out any weta in them. Something that hasn’t happened for over 40 years.

Pest incursions (as at August 2014)

Rats - 14 Mice - 3 Cat - 1 Stoat - 1

Leader Role Description

Biosecurity

Setting: Before leaving mainland at wharf; on island

Learning Outcomes:

- Understand reason for and apply biosecurity measures
- Role-playing leads to internalising of rationale for biosecurity
- Fun

Resources Used:

- Flyspray
- Backpack
- Project Island Song folding brochures
- Flatpack rat and stoat/mouse trap boxes
- Flatpack tracking tunnel
- Screws / nails
- Screwdriver
- Peanut butter
- Tracking card
- Outdoor feltpen
- Hammer
- Badge
- Completed rat and stoat / mouse trap boxes
- Completed tracking tunnel

Activities:

Before boarding

- Help DOC ranger or educator check bags and shoes of those boarding.
Explain why the check is being done to the people boarding.
- Handout out folding brochure to passengers

On island

- Build rat trap
- Build stoat/mouse trap
- Build tracking tunnel
- Write school name and own names on boxes and “Keep hands clear”
- Install boxes

Leader Role Description

Health & Safety

Setting: Before leaving mainland at wharf; re-boarding boat at island; getting off boat at mainland

Learning Outcomes:

- Understand reason for and apply health & safety measures
- Role-playing leads to internalising of rationale for health & safety
- Fun

Resources Used:

- Fluoro vests
- First aid kit
- Check in lists
- Pens
- Clipboards
- Badge

Activities:

Before boarding

- Work with teacher/Guardians member to check students onto boat

On board

- Help Explore crew with safety briefing

On island

- Carry first aid kit. Be the point of contact in case of first aid i.e. know who to get help from.
- Help with safe digging and tool handling demonstration.

Leaving island

- Work with teacher/Guardians member to check students onto boat

Returning to mainland

- Work with teacher/Guardians member to check students off boat.

Leader Role Description

Penguin Box Construction

Setting: On island

Learning Outcomes:

- Understand reason for constructing penguin nesting boxes
- Understand where best to place boxes
- Role-playing leads to internalising of rationale for box construction
- Fun

Resources Used:

- Flatpack penguin nesting box
- Outdoor felt pen
- Screws
- Screwdriver
- Badges
- Completed nesting box

Activities:

- Construct a penguin nesting box
- Label and name box
- Install in appropriate place; build entranceway using local materials

Leader Role Description

Media

Setting: Before leaving mainland at wharf; re-boarding boat at island; getting off boat at mainland

Learning Outcomes:

- Understand reason for using media
- Role-playing leads to internalising of rationale for media
- Fun

Resources Used:

- Camera
- Pen
- Badge
- Paper
- Clipboard

Activities:

- Make up a photo story of the day. Look for people doing things – checking bags, planting, making boxes. Make sure the photo is in focus, shows the whole head/face, is a high resolution (1mB or more).
- Interview anyone who wants to be interviewed. Ask lots of questions – what their names are, where do they come from, how they are feeling about the day, what they are doing, why they are doing it, would they like to do this again?
- Then at school use your interview notes and photos for Facebook, school newsletter, local newspaper.