



Department of
Conservation
Te Papa Atawhai

INTRODUCTION TO THE LESSONS

Leave No Trace promotes and inspires responsible outdoor recreation through education, research and partnerships. Our vision is for an environmentally aware and connected nation that cares for our special places, be they the local beach or park, to the remote wilderness.

There is much media coverage of environmental “crimes” caused by tourists and locals alike. At Leave No Trace, we believe that people want to do the right thing in the outdoors, but lack the skills and knowledge. These lessons are part of an education programme that promotes skills and ethics for people in the outdoors.

Those of us who take groups into the outdoors, have a special responsibility to help educate others to take care of these places. Those who you teach, will then be equipped to make decisions about what actions will protect and preserve the places we go.

Please modify the activities for the context and the group you have. If you find some other activity or new adaption of an existing lesson, please let us know. We continually update our web resources and add new lessons ideas as we go.

Leave No Trace works together with manufacturers, outdoor retailers, clubs, educators and individuals who share a commitment to maintain and protect the outdoors for future generations. You can do your part; inform yourself, seek out training and become an advocate for New Zealand’s precious places.

www.leavenotrace.org.nz

Plan Ahead and Prepare-Primary

“Lighten Your Load”

OBJECTIVE

To teach students the importance of taking the proper items on a day walk.

MATERIALS

A daypack filled with items such as a torch, map, food, water, jacket, first aid kit, radio, heavy bulky food, noisy toys, and a mix of necessary and unnecessary equipment.

AUDIENCE

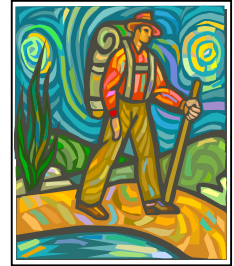
Ages eight – 12yrs. Groups of any size.

DURATION

15 to 20 min.

DIRECTIONS

- Prepare a daypack full of both necessary and unnecessary items for a long walk. Tell the students that you are going on a long walk and that you have your daypack ready.
- Have them each feel how heavy your pack is.
- Have each student, one by one, reach into your daypack and pull out an item.
- Have the student tell everyone why the item would be necessary or unnecessary to take.
- For example, a jacket would be a good thing to take for unexpected weather, but a can of chilli would not be a good item because it is heavy and not packaged for a walk.
- After they have sorted through all the items, have students feel the weight of your daypack and see if they can feel a difference.
- For additional discussion, ask students what items might be important to take when going on an extended trip.

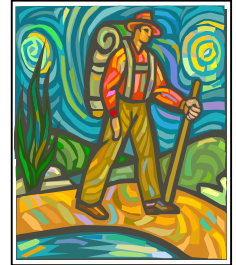


Plan Ahead and Prepare

OBJECTIVE

Identify key areas in preparing for a trip.
Equipment (not limited to):

Boots and gaiters, stove, cooking gear, Fire Permit, maps, weather forecast, compass, fish id sheet, track guide, miniature radio, trowel, toilet paper. Bottle of wine/coke, axe, treats with heaps of wrapping e.g. Easter eggs in foil, or Minties, pillow, iPod, camera.



DIRECTIONS

Explain that PAAP underpins all other aspects of LNT. Tell a story of a long day in the rain, exhausted, hypothermic and ravenous, you pitch your tent wherever, cook messily and rush to the toilet (too tired to bury it). In the morning you are greeted by a mess of epic proportions.

Discuss hierarchy of needs - physical needs and social needs must be met before we can care for the environment.

Set up all items on a tarp or table. Split into groups of two or three. Give each group an item of gear and they need to explore the LNT implications of the items. Give them three minutes.

Items: Axe, iPod, garden trowel, camera, lollies with lots of wrappers, gaiters, bedroll on pack.

Go around the groups and ask for their analysis of the items. Ask other groups to contribute.

CONCLUSION

Summarise Plan Ahead and Prepare key areas:

1. Trip expectations and goals (knowledge of participants)
2. Knowledge of area
3. Weather and conditions
4. Equipment and gear
5. Clothing
6. Food



Be Considerate of Others - Primary

“It’s Not Just You”



OBJECTIVE

To identify the number of different people in the outdoors and the considerations we must make to all work together.

MATERIALS

Flipchart / whiteboard.

AUDIENCE

Any age.

DURATION

30 min and over.

DIRECTIONS

This is a simple discussion, beginning with each person saying the different activities they like to do outdoors.

As each new activity comes up write it on the board. Once everyone is finished, ask: “Have we left any types of activities from the countryside out”? Again go around allowing people to suggest others, such as farmers, ecologists, fishers, hunters, rangers, forestry workers etc.

Now put to your group, some discussion ideas:

- Do our activities impact on any of the others, and how?
- How can we be more aware and considerate of other users?
- What is the difference between recreation and livelihood?
- Does one have more of a right to the land than the other?
- How would they feel if their work could be impacted by the general public?

Be Considerate of Others

HOOK

Seat everyone down in a quiet spot and say “take a minute to use all our senses to appreciate nature. Let’s start by closing our eyes” Once all eyes are closed, trip over your pack, apologise then take a loud cell phone call. Finish up with the question “How did that feel?”



DISCUSSION

Turn to your neighbour and discuss a situation when you have impacted someone else’s experience or they have impacted your experience in the outdoors- think of both positive and negative times. Two to three minutes then ask for a summary of the context.

Discuss motivations for going outdoors

- Physical challenge
- Nature appreciation
- Spiritual reasons
- Food harvesting

Respecting others

- How we travel
- Where we camp
- How we behave in huts
- How much sound we make
- Courtesy - promoting the outdoor community
- Respecting locals and their property (Tangata whenua / farmland...)

CONCLUSION

The key is allowing all people to choose their own experience. An interaction with others has a lasting effect on our memory of a trip and can be positive or negative.

Respect Wildlife & Farm Animals -Primary

“On Display”

OBJECTIVE

To teach students proper behaviour when encountering wildlife.

MATERIALS

An outdoor setting.

AUDIENCE

All ages, groups of any size.

DURATION

30 min to 1 hour.

DIRECTIONS

Have a few students volunteer to sit in the centre of the group.

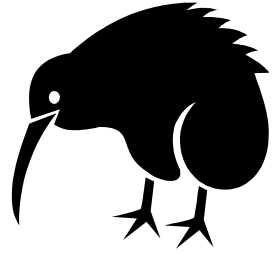
Explain to everyone that it is lunchtime and they are about to enjoy a meal from their favourite restaurant (insert the name of your local restaurant here).

While this is going on, you and several accomplices should sneak around with binoculars and cameras.

Get close to have your picture taken with the “feeding wildlife” and maybe even get brave enough to touch them.

This can be exaggerated so it really hits home just how distracting people can be to wildlife.

Or alternatively carry this out at lunch time, so people can get a real sense of what it’s all about.



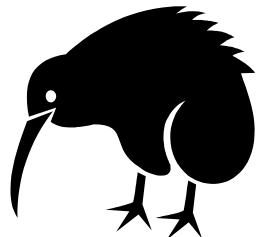
Respect Wildlife and Farm Animals

ACTIVITY

Hand out these far - fetched scenarios and give the groups five minutes to work out how they are going to act this out.

Giving prizes for the Oscar performances can be fun.

Tip: Don’t debrief the scenarios one at a time, but rather at the end. What the main theme was through all of the scenarios.





Respect Wildlife and Farm Animals

SCENARIO 1:

A member of the public has fed a Kea up at the car park of a ski field. Kea has gone nuts and is being so destructive John Campbell has made his way to the ski field to interview bystanders, DOC and people affected by this incident today.

John Campbell – asking questions

Go around asking people what has happen, how have they been affected, what should the public be doing to stop issues like this?

Person who fed Kea

You are oblivious to what you have just done and why it could be wrong, you continue to express your point and you are not in the wrong "the birds were hungry...they won't get food if we don't feed them".

Member of Department of Conservation

You are calm and collected and advise the public that this is why DOC recommends that birds are not fed human food and there a signs placed around.

Member of public whose car has been damaged as a result

You are feeling really angry at the person who fed the Kea; they should have known that it would make the Kea go crazy. You are angry, frustrated and yelling abuse

SCENARIO 2:

Protect wildlife and your food by storing food and rubbish securely.

Person

You were careless around the campsite and left rubbish on the outside of your pack. A sneaky Weka has grabbed some rubbish without you noticing it.

Choking Weka

Come along, steal some rubbish off the pack and swallow some of the plastic. You are a bird in distress, and choking on plastic.

Rescuer

You are passing by and notice the weka in distress. You are trying everything possible to help this bird including CPR

DOC worker

Lecturing the irresponsible person about the importance of storing rubbish and food away from animals' reach. Protects the animals from harming themselves and exposing them to food and chemicals their bodies can't cope with.

SCENARIO 3:

Someone has gone out into the bush for the weekend with his/her dog. Along the journey the dog has gotten out of control upon finding a kiwi nest and has killed the mother kiwi.

Kiwi

Get chased by dog, killed and play dead.

Baby kiwi

Helpless and now without a mother, distressed and upset

Dog

Chases the kiwi, kills it and takes it back to show to their owner.

Person:

Doesn't put a leash on the dog and takes it into the bush. Tries to hide that his/her dog has caught and killed a kiwi.

SCENARIO 4:

Going on a trip, a trumper forgot that it is lambing season. He/she separates a ewe from its lamb and the ewe panics, running away

Tramper(s)

Separates the ewe and the lamb then runs around trying to help but separating more sheep

Ewe

Runs wildly into the distance.

Lamb (s)

Bleats pathetically.

Farmer

Turns up on quad bike and is mightily unimpressed. Talks about banning access for no-good trampers.

Camp & Travel on Durable Ground - Primary

“Dirty Hands”



OBJECTIVE

To learn through direct experience of the sense of touch.

MATERIALS

Blindfolds and an area with a range of different surfaces.

AUDIENCE

Any age.

DURATION

10 to 15 mins.

DIRECTIONS

Everybody partner up.

One person in each group either closes their eyes or puts a blindfold on.

The person who has their eyes open, leads the other person to different types of surfaces - mud, gravel, water, tree roots, dead leaves etc.

The person in the blindfold is to feel each surface to figure out what it is.

When both people from each group have had a go gather everyone together and ask them what surfaces they found.

Then ask what do they think would be best to walk on? What would last the longest, flowers or hard mud?

With an older group you can bring this discussion on by relating it to their own experiences.



Camp and Travel on Durable Ground (Teachable Moment)

STARTER

Choose an area with diverse surfaces such as near a stream with rocks and a variety of vegetation. While walking along a track or area, have a race to see if everyone can stand on a durable surface in five seconds.



DISCUSSION

Each person explains why the surface he or she is standing on is durable. Ask each person in the group to think about what makes a surface more durable. Introduce the concepts of plants being fragile or resilient. Explain about durable surfaces and what the definition of a durable surface is. Explain why it is important for us to tramp and camp on durable surfaces.

FOLLOW ON

“As we travel, collect a list in your mind of surfaces that we have passed through.” At the next break, ask each person to name one surface they have seen. It is always surprising how many different surfaces we walk on.



Leave What You Find - Primary

“Personal Treasure”

OBJECTIVE

To explore the impacts of taking cultural artefacts.

MATERIALS

Assorted natural items or students can collect their own.

AUDIENCE

All ages. Groups of any size.

DURATION

30 – 45 min.

DIRECTIONS

1. Each child has a small area outside or their desk top on which they set up as their own private worlds with their special treasures on it (five minutes).
2. Each child walks around and can't touch but admires each other's "land" and treasures.
3. Then the teacher or one or two children can go and choose an object from someone else's land to "keep".



Discuss how that person who had the object taken feels. Explain how this has happened in New Zealand to special historic places and it affects the feelings of those people who like those places and items that had meaning for them and their ancestors. It is important to leave what you find so that we respect our cultural and historic heritage.



Leave What You Find

STARTER

Imagine that you are the leader of a tribe or group. You need to make a religious/cultural symbol that represents your tribe with the materials in the area (discuss what are appropriate materials – dead and down, small..). (five-10 min) Each person shares their cultural symbol with the rest of the group and explains why it is important. All the tribe leaders then go and have a discussion about the best cultural symbol.

While the 'tribal leaders' are talking the facilitator pretends to be an uninformed trampler and goes through knocking down, removing and defacing the cultural symbols.

DEBRIEF THIS EXPERIENCE

How did it make you feel as a tribal leader?

Explain the Leave No Trace principle: Leave What You Find.

Ask group: Can you think of a time when you have removed something from the environment? Each person shares and discusses.



Explain the Leave No Trace principle: Leave plants, rocks, and animals as they are.

Think about how these things are used in the natural world:

- Shells become calcium in the soil.

- Feathers can be used by birds for their nests.

- Rocks/wood protect insects from other animals and the elements.

Ask each person in the group to think of an introduced species to New Zealand and what that species does. Each person shares and discusses.

Explain that Leave What You Find also means not introducing foreign species. Why do you think that fits in with this principle? (It won't be 'as you found it' if the ecosystem is changed...)

Dispose of Waste Properly - Primary “Breakdown game”

OBJECTIVE

To provide a visual and hands-on method to explain how long it takes for different materials to decompose.

MATERIALS

11 pictures of the following items (the items themselves is even better), some sheets of newspaper, a banana peel, a wool item (socks, cap, etc.), cigarette butt(s), disposable nappy(s), tin can(s), aluminium can(s), glass bottle(s), six pack plastic ring holder(s), hard plastic items (water or juice bottles), a rubber tyre and 11 printed cards or pages. Each card/page contains a single time period (e.g. 10-20 years), to represent the number of years it takes for one of the pictured items to decompose.

AUDIENCE

All ages. Groups of any size. (With up to 22 people, each person can have an active part in this activity).

DURATION

15 to 20 mins.

DIRECTIONS

Distribute each of the pictures, one to each participant, or as many to each participant as necessary to distribute all of them, as evenly as possible. Distribute the cards/pages with the times marked on them in a similar manner. Try to ensure that no one is holding a picture that matches its associated time page/card. Have the participants roam around trying to figure out what pictures match up with what time periods. As they make their matches, you can comment on their accuracy and have them try to correct any errors.

BREAKDOWN TABLE

Cigarette Butts.....	1 to 5 years
Aluminium Can.....	80 to 100 years
Plastic 6-pack Holder.....	100 years
Orange or Banana Peel	Up to 2 years
Plastic Film Container.....	20 to 30 years
Plastic Bags	10 to 20 years
Glass Bottles	1,000,000 years
Plastic Coated Paper.....	5 years
Nylon Fabric.....	30 to 40 years
Leather.....	1 to 5 years
Wool Socks.....	1 to 5 years
Tin Cans.....	50 years



This activity gets the participants to talk to each other to figure out how long each item takes to decompose. When they finish, it would be nice to have them line up in order from the shortest to the longest time.

Dispose of waste properly (Poo Olympics)

OBJECTIVE

Understand how to dispose of human waste in the outdoors

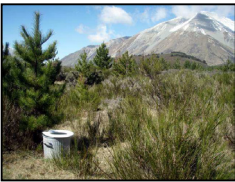
EQUIPMENT

- Prizes (chocolate log?!)
- Trowels
- Poo Pot
- Alcohol soap
- Pacing or GPS for measuring 50m
- Object for dropping



DIRECTIONS

On arrival at camp on the first night, either work individually or split into groups of two or three. The objective is to build the perfect cathole. Points will be awarded for the D's: disclosure (tell someone), direction, distance, depth, diameter, disguise and disinfection as well as comfort and aesthetics of your location.



Before we start, what do you know about direction? (away from what – water, tracks, people, camp?) distance? (50 m)

The first consideration is distance, let's see who can get closest to 50m...

Get participants to count foot steps and all go in the same direction. Points allocated for closest people to 50m

Now find your spot and dig your hole. You have five minutes.
Do a home and garden tour with everyone evaluating.

Emphasise:

- Depth (10-15 cm or one 'hang loose' sign)
- Diameter (large enough to avoid messes)
- Drop (optional challenge for the exhibitionists – object clenched between butt cheeks and dropped into the cathole)
- What to do with TP? (In the hole with the poo)
- Disguise- the judges turn away and then try to locate the cathole.
- Disinfection Arbitrary judgement of aesthetics and comfort. Award prize
- Cat-holes can be left overnight so they are ready for use in the morning (skip the disguise step).

CONCLUSION

Get the group to reiterate the "D"s.

Alert the group to the dangers of getting lost on the way to the toilet and also the practicalities of 50m may not always be possible. Do your best and be proud.

For technical points about decomposition rates and what kinds of disposal are best for different groups in different areas, refer to the Soft Paths book.

Dispose of Waste Properly (Rubbish & Water Care)

HOOK 1

Borrow someone's cup of water (let them in on the plan before you do this!) and do your dishes in it complaining loudly about what a mess my cup is and how dirty. Hand the cup back with dirty dishwater in it. The person is outraged. "but what's your problem, it's biodegradable detergent..."



DISCUSSION

Why is this relevant for Leave No Trace ethics?
Thinking about the plants and animals that live in streams.

CONCLUSIONS

"Imagine the strength a detergent must have to strip day-old grease from a greasy pan. Now imagine what happens when that detergent comes into contact with the slippery skin of a fish or the waxy coating of a plant" (quote from the book "Cradle to cradle"). Waste is dirty water, dinner leftovers, shampoo and soaps. How do we need to dispose of these? Away from water so they can be filtered by the soil. Dilution is the solution to pollution. While biodegradable detergents break down more rapidly in the environment, until they break down, detergents are still harmful to plants and animals in the water.

HOOK 2

"You guys look great, let me take some photos."
Pull camera out of pocket inadvertently pulling out a wadge of rubbish (pretend not to notice and take photos).

DISCUSSION

Accidental rubbish is also a problem: discuss temporarily stuffing rubbish into the lid of your pack, pockets and other places where it is likely to fly around the countryside. If you find some rubbish on the track where would you put it? Brainstorm best options

CONCLUSION

Dispose of Waste Properly, put it somewhere it won't come out and be rubbish somewhere else.

Minimise the Effects of Fire - Primary

“Night Lights”

OBJECTIVE

To demonstrate alternatives to campfires by having each student make their own luminary.

MATERIALS

Brown paper bags (recycled brown ones are inexpensive and easy on the environment); scissors, craft-knives, or other cutting tools, stencils, sand, candles or tea lights (small decorative candles that come in their own recyclable aluminium cups – a safety-conscious alternative to tapered candles); small cutting board(s) or thin pieces of wood that will easily fit into the lunch bags.

AUDIENCE

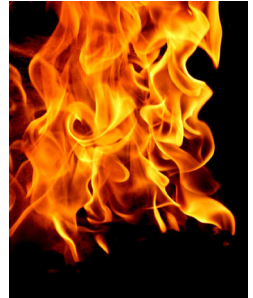
Eight years and over. Groups of any size.

DURATION

30 – 45 min.

DIRECTIONS

1. Give one bag to each participant and tell them that they are going to be making a “campfire” in a bag.
2. Using the cutting board(s) or the pieces of wood and the stencils participants can cut designs into each side of their bag. This will allow light from the candle to shine through. Remind the participants to be careful with the sharp cutting tools.
3. Once the designs have been cut into the bags, fold the top edge of the bags down about an inch for extra sturdiness.
4. Pour sand into the bottom of each bag, approximately one to two inches. The more sand, the more stable the luminary will be.
5. Place a candle or tea light in the middle of the bag, anchored firmly in the sand.
6. Ask participants to put the luminaries where they would like them to go and light carefully. Keep away from flammable vegetation or materials. Not recommended for use in a strong wind. Always obey fire regulations. Discuss how luminaries can provide a nice, easy alternative to campfires, which can be damaging to the environment if not made properly. Luminaries provide light and evening ambiance and are a great campfire substitute.



Minimise the Effects of Fire

Note: Ensure that you check on local fire regulations and conditions before you cover this class. Choosing not to have a fire is often the best practice.

INTRODUCTION

What do you think of campfires? Line up on a continuum from one end (fires every night if possible) to the other end (no fires ever). Explain why you are where you are (start at the extremes). This subject is controversial.

DISCUSS HISTORY

- Pre-history, Maori/Asian/European

ADVANTAGES OF NO CAMPFIRE

- You can hear night birds
- Look at the Milky Way

NEGATIVE ASPECTS OF FIRES

- Soot scarred rocks
- Overflowing with ashes
- Partly burned logs
- Food and rubbish
- Alters environment, alters organic matter to 6cm below.
- Completely sterilizes the topsoil to 2 cm. ecological reasons
- Nurse log Phenomenon
- Soils are robbed of important sources of nitrogen, carbon and organic matter
- Downed logs –help stop soil erosion
- Rotting wood holds greater water holding capacity

MINIMISE IMPACT

- Avoid Fires – environmental conditions, hot summer or fire ban
- Ask: Where is the wood from? Is it sustainable?
- Ask: Do we need a fire and can we minimise the impacts?

State what it means to “minimise campfire impacts”

Demonstrate the ability to minimise the impact of campfire including

- Camp stoves
- Established fire rings, fire pans, fire mounds
- Choice of firewood (dead and dainty-small enough to be broken by hand)

Choosing the right site for fire constructing that will minimise the effect e.g. dry river beds, check wind direction.

DEMONSTRATE A MOUND OR PIT FIRE

Ideally your fire will be in a dry stream bed or beach. If this is not possible, then the mound fire allows you to have a minimum impact fire, but requires considerable work. Gather inorganic soil (sand/gravel) and build a “volcano” with a crater. The bottom of the crater should be at least 15cm above the soil surface. This takes lots of gravel/sand. The fire is made in the crater and by using small pieces of wood; you can burn the wood to ash. After the fire, wet the area thoroughly and use bare hands to confirm that it is cool all the way through. Disperse any ashes and return the gravel to the source.

There should be no trace left of the fire, and you can challenge people to find the location of the fire in the morning once you have cleaned it up.

REVIEW

Fire is potentially the biggest single impact we can have. Treat fires with respect and caution.

