

Maori Uses of Native Plants

Lesson Plan for Self-Guided Kit



AOs

Living World

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|-----|-----|-----|-----|
| 1.1 | 1.2 | | |
| 2.1 | 2.2 | | |
| 3.1 | 3.2 | 3.3 | |
| 4.1 | 4.2 | 4.3 | 4.4 |

Integrate with:

- Social Studies - history, cultural diversity and resource use.
- Drama - developing ideas
- communicating and interpreting
- Environmental Education
 - interdependence
 - sustainability
 - biodiversity
 - personal and social responsibility for action

Site

Jan - Dec

Lovelock Bush and Native section in Upper Gardens.

Preparation

- ❖ Please collect kit from Information Centre and flax from the upper botanic garden Administration Building.
- ❖ Cut each flax leaf into 2 or 4 strips.
(Note: **Flax harvesting will be done by Botanic Garden Curator**)

Please bring

- ❖ Pencils and photocopied worksheets: Maori Uses of Native Plants (junior or senior)
- ❖ Extra shells (cockle or mussel shells work well).

Activities

1

Back in time - Lovelock Bush

30 - 45 mins

(*always take the left path at each intersection)

- ❖ Before entering Lovelock Bush let the students know you are all going back in time more than 1000 years, just to see what it was like in New Zealand before people arrived here. Ask students what could help them to go back in time (a time machine - which is what they are going to find in the bush!).
- ❖ Upon entering Lovelock Bush, look up at the tall Kanuka. Explain how the trees in this area used to be over 50m tall and were used to make weapons. 130 years ago the early settlers chopped, burnt and scraped the ground. They then decided to leave a green belt around the city which was not allowed to be built on or developed. This is what has grown since. The Kanuka are pioneer plants that provide a nursery cover for the other native trees such as rimu, totara, kahikatea, lancewood etc. Take the main pathway straight ahead.
- ❖ At the first crossroads, stop by the tall Kanuka in the middle. This is the time machine. Why? How can it tell us about the past? Imagine looking through the tree trunk, what will you see inside? (rings - the fatter ones tell us it was a good season, the thinner ones tell us it was a difficult season for growing - the number of rings tell us how old the tree is).
- ❖ Now walk down the path to the left and students can count 100 years back in time for every step they take, up to the next crossroads. (Students will have gone back 2000 to 4000 years depending on size of steps).

- ❖ Get students to close their eyes and visualise a story. Tell them about being on a big waka for months, wanting to find new land. You see land and beach the waka. Step out onto the wet sand and walk up the sand dunes to see what this new land is like. Students then open their eyes and look around them. You are planning to stay here. What will you need? (food, warmth, shelter). Divide students into small groups so they can discuss what they could use to plan a shelter from the bush they see around them as well as from the beach they imagine they have just come from. (Deciding on the roof shape first could help). Come back after a few minutes to share with the whole class. Then discuss food you could find and how to build a fire. What would you build a new waka with to go fishing?
- ❖ Walk on through the native bush taking the left path, around the water tank. Stop by the fence looking out over the harbour. Show the map of New Zealand bush cover over time. Discuss each stage pointing out: The Southern Alps and Lake Taupo on the Pre-Polynesian Settlement map; The burning of forests by the early Maori just to get from place to place and to trap animals; The cutting, burning of forests by Europeans for farms, roads, housing etc resulting in today's forest cover. Look out over the view and ask students what they see that indicates we are no longer the only people here. Ask "Do you think 4 million people in NZ could survive with our natural resources left with today's native NZ forest cover?"
- ❖ Walk up to the pond and over the boardwalk. Look at the Raupo (bullrushes) and ask students if they can guess what early Maori may have used this for. The leaf blades were strung together to make rafts (Mokihi) because they float like cork. The pollen (out of the 'hotdog' looking tops of the flower stalks) was mixed with water to make a pancake type bread. So the early Maori used forest, sea and wetland areas.
- ❖ Move on to the other side of the pond. Look out over the 'Rene Orchiston flax collection' and the cabbage trees (Ti Kouka). These two plants were very important for early Maori's survival. The flax was woven into various items of clothing and for making sails. The cabbage trees were used also for weaving, to make string and for food (the tree trunk was cooked and eaten and the base of the leaves were eaten like we eat artichokes).
- ❖ Cross the road into the native area for the flag trail.

2

Maori Uses of Native Plants Flag Trail

30 – 45 mins

- ❖ In small groups, students find flags in any order and discuss questions on worksheet, writing down their ideas.
- ❖ Each senior group need a yellow laminated plant names sheet, a laminated leaf sheet, senior worksheet, clip board and pencil.
Each junior group need flip guide, junior worksheet, clip board and pencil.
- ❖ Allow time to go through the answers.

3

Stripping Flax to make String (Haro)

30 – 45 mins

- ❖ Harakeke is very strong flax with tough fibre which was made into hanks that look like string to later weave into cloaks. Using the pictures on the next page and the shells, demonstrate stripping the muka (fibre) from the green leaf.



- ❖ Tie a knot at one end of your pile of muka and divide in half. Hold one end with the knot in the middle, get another person to hold the other end and twist in opposite directions. Bring ends together and let go of the knotted end (the string should twist up). Tie a knot in the loose end.
- ❖ Please collect up all flax scraps and return to the upper botanic garden Administration Building. This will be put in the compost pile for safe disposal.

Flax Harvest Protocols:

- Karakia (can be done in whatever language and doesn't have to be a prayer, but an address of respect to the plants)
- Not harvest when menstruating
- No harvesting when the plant is fully flowering
- Not harvest in the rain, snow, hail etc
- Not harvest in the dark

Follow Up

Maori

- Try some simple flax weaving such as flowers or fish.
- Keep a dictionary (possibly picture) of Maori words that will be used throughout the study.
- Draw some of the different methods for bird hunting used by Maori in the past. Present this work on a wall chart. Make sure you explain how the traps were used. Maori hunters carefully followed certain rites which were very important to them. Find out what these rites were and include this information in your work.

Mathematics

- Try your hand at weaving a small placemat - use equal sized strips to create repeating patterns.

English

- Read / hear about different legends that help remind people what specific plants are used for.
- Create your own legend about how you a) discovered the great healing powers of a plant or b) caught a meal with bravery and trickery.

Art

- Create kowhaiwhai designs for your own face that represents your family history and past events in your life - describe to your class why these are important to remember in your future.

Science

- Compare hard and soft woods and select 2 woods that may be able to start a fire.
- Make a list or picture collection of berries students eat. Discuss berries that birds like to eat. Where are these found? Which trees are good for birds? (IMPORTANT NOTE: remind students that many berries are poisonous to them and must not be eaten.)
- Make charcoal for use in art and imagine how it was rubbed into cuts to create moko patterns - ouch!

Technology

- Read / hear about different traditional ways of catching birds.
- Bird Snare Challenge - using only sticks, string and berries for bait design a trap to catch a meal (please don't try on live birds).

For any queries contact : Administration

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