Outdoor Education Session Outline	**Planned By: Anita McGowan**
Title: "In the Wild"	**Topic:** Beech Forest Biodiversity
Key Competency: Managing self - being aware of safety for themselves in the outdoors. Thinking – ask questions and make sense of information to develop understanding of the environment.	**Achievement Objectives:** **The Living World** **Science Level 3** **Ecology** – Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced. **Environmental Education** AIM 1 – Awareness and sensitivity

Learning Intention/W.A.L.T.:
We are learning to identify the species of plants and animals in the beech forest and how they rely on one another.

Special Features eg. cultural considerations, time required, appropriate venue…
Time: 30 -40 mins for activity plus time allowance for walking to the forest. area selected
Easy track around the forest.

Resources:
Kendrick, J., (no.d). *Birds of New Zealand.* Recordings by: Radio New Zealand and Department of Conservation
Clark, D. A., (2003). *Paradise: New Zealand's Natural Soundscape*. UCA Recording: Porirua, New Zealand
Bird Grid available at: http://www.doc.org.nz/publications/getting-involved/students-and-teachers/activities/recording-bird-information-activity/
Possum Picnic activity available at: http://www.doc.org.nz/publications/getting-involved/students-and-teachers/activities/possum-picnic-activity/
Information and photos sourced from Landcare Research article *Maori Values and Native Forest*
http://www.landcareresearch.co.nz/research/sustainablesoc/social/documents/Biodiversity_Maori_factfile.pdf
http://www.bushmansfriend.co.nz/photos-native-tree-bark-xidc12325.html#
Measuring tape or wheel
Clipboards
Printed sheets – **Bird grid** (note the resource above), **Plant identification sheet** (3 columns –Plant type & name/Features/ Rubbing or drawing)
Pencils
Camera
Books

Assessment /What would success look like:
Children can identify a range of plants and birds easily. Children are able to develop a food web design.

Activity	**Organisation/Management**
There are four species of Beech in New Zealand all of which are endemic. There have been fossils of Beech found in Antarctica and near Chile. Introduction: ▪ Analyse different pictures of plants and animal species, identify their characteristics – teacher hands around various leaf/berry examples to aid identification. ▪ Make predictions about the plants and animals they are likely to see in the beech forest. ▪ Listen to the CD recording of the bird calls. Children attempt to identify each bird. ▪ Predict which birds they are likely to see in the forest. ▪ Discuss other animal species are they likely to find. Are there any differences between the forest here to another forest near the city? Investigation: ▪ Each child has a responsibility, such as below: 1. To record on a Bird Grid 2. To record on a Plant Identification Sheet 3. To be the expert bird listener or photographer. ▪ Children move along the track to the markers. At each station the children carry out the following investigation. ▪ Record the birds they see in the *Bird Grid* and attempt to identify the plant or tree it is perched on or eating. ▪ Record features of different plant species in the *Plant Identification Sheet* and draw or record pencil rubbings of the leaves -collect dropped berries and leaves. ▪ Return to meeting point and share findings – pose questions: What varieties of species did you find? What patterns did we see occurring? How is that specific to the beech forest? How do they rely upon one another? How do seeds get distributed? ▪ Refer back to pictures to identify which ones they saw or did not see. Which ones were hard to identify? Which ones were easy? ▪ In groups the children draw a large food web Extension: Take photos of plants and birds and close up shots of the bark and leaves to identify against the pictures back at camp.	Prior to the investigation the teacher measures (measuring tape or wheel or paces to measure) the distance of the path approx 50-100 metres apart and place coloured sticks at each distance. Teacher outlines safety issues (outlined in risk management) and discuss groupings, materials and expectations. Discuss respect for the environment e.g. not trampling on seedlings, dropping litter or disturbing wildlife. Move about quietly so that birds are not scared away. In groups of three to five (depending on adult to child ratios) All children have responsibilities in the group and they all must help with identifying the plants and animals. Chn have a list of questions to aid observations: 1. What do you notice about the bark? 2. Is there any sign of predators? 3. Is there animal or insects eating the leaves? 4. What plants did you see the birds eating? 5. How many seedlings did you find on the ground? Reflection and food web activity in same groups of three to five.

Risk Management:/People, Environment, Equipment.
Stay on the track at all times. Keep with your group at all times. Rain jackets and parkers.
Umbrella Sturdy footwear Water
First aid kit Map of the tracks Be aware of water safety if near a river.
Be careful of trampling on seedlings, dropping litter or disturbing wildlife. Move about quietly so it will not scare birds away.

Poor Weather Alternative:
Follow the same lesson but use umbrellas/shelter for each group.
Take an assortment of New Zealand plant and wildlife books to identify which would be likely to be there.
Possum Picnic activity as an active food web activity.