



# TREES AND GRASSLANDS



## Programme One ACTIVITY WORKSHEET 2

Student Name: \_\_\_\_\_

### Tree Trail

#### You will need:

- Pencil
- Tree Name Trail Guide
- A bag (paper or plastic) for collecting samples from your tree

1. Choose a tree to study in your park.
2. Collect a leaf from your tree and if available, some seeds and fruit (late summer/ autumn), from the same tree on the ground layer. Place what ever you have collected in your bag.
3. What is the name of your tree? \_\_\_\_\_  
(Use the Tree Name Trail Guide to identify your tree from the leaves, bark or seeds)

Trees are divided into two main groups. A flattened and wide broadleaf tree loses its leaves every autumn and are called deciduous, but a conifer is evergreen and keeps its needle like leaves all year round.

4. Is your tree a broadleaf or a conifer? \_\_\_\_\_
5. Draw and label two things that have found from your tree. (e.g. leaf, fruit, cone, flower)

1.

2.



## Discover a Woodland

This programme is designed to introduce school children to a woodland habitat. The programme aims to encourage children to use important skills like exploring, observing and recording. It will help them discover the plants and trees in a woodland and the layers in which they are found. They will see the importance of light and plants competing for it. Children will expand the use of their senses to experience the sounds, smells and textures of the woodland and by the end of the programme will have discovered how a woodland works.

### Activities 1 - 3

#### Woodland Structured Layers

Give a talk to your students about the woodland structure while walking through the trees. Looking closely at each layer as described on their worksheet. They will learn about the role of the organisms that make up these layers. They will also be shown how to recognise a number of plants and then be able to record these in their nature diaries.

#### Food Web in the Wood

Following completion of the woodland layers worksheet, the students will participate in the creation of a foodweb and a discussion on how everything in the web is linked and of equal importance. Illustrate what would happen when something dies out. This will also introduce the concept of the foodchain. Firstly, get each student to draw a picture of an animal, insect, plant, tree or bird on a piece of paper or card. When these are complete, they can then be used to illustrate the food chain and how it is formed. The picture cards are handed out to every child. We shall give a piece of the string to each child holding a picture of a plant. We ask all the creatures who like to eat plants to take some string until they are all connected together. Eventually we have everyone connected together right up to the top predators.

#### Ask your students the following questions:

1. What have they constructed?
2. What does it look like? ( a spider's web)
3. What are we in the web?

**Answer:** Food, yes we have created a food web and this is how a woodland works and how energy flows through an ecosystem. We can demonstrate how everything is important and depends on each other in a food web by asking one of the living things in the web to play dead and crouch down. This will put a strain on the string. Then get that group to gently pull on the string, in the end everyone will feel the strain.



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## Programme One

### Teacher Instruction Activities 1-7

#### Activities 4 -7

The following activities are interactive worksheets that are practical investigations into the wonderful world of trees such as measuring the height of their chosen tree, calculating how old the tree is and discovering what lives in the tree. It incorporates ecology, maths and develops the skills and concepts in regard to trees. The activities are self explanatory on the student activity worksheets.

Some of the skills and concepts can be replicated and repeated for shrubs and grasslands.

#### *Curriculum Links:*

SESE Skills and Concepts Development: Geographical investigation skills: questioning, observing, recording and communicating. Strand: Natural Environments: The local natural environment, environmental awareness, Living Things: plants and animals.

Visual Arts Curriculum: Skills and Concepts Development: an awareness of form, texture, pattern and rhythm. Strand: Drawing: making a drawing, looking and responding.



Student Name: \_\_\_\_\_

## Woodland Structure

A woodland is made of four layers that make up the woodland structure. Not all woodlands have every layer. It depends on how much light can reach through to the woodland floor.

1. **Canopy Layer:** You can find Oak, Yew, Ash, Birch, Beech and Scots Pine
2. **Shrub Layer:** You can find younger trees or smaller trees such as Hazel, Hawthorn, Honeysuckle, Holly, Elder
3. **Herb Layer:** You will find ferns and woodland plants at the lower layer. They rely on the upper layers and amount of light that is able to get through so that they can grow. If the canopy or shrub layer is very thick and dark, there will not be many plants in the herb layer.
4. **Ground Layer:** You can find dead leaves and rotting logs, mosses and ground ivy

### Student Instructions:

Take a walk through the trees.

Mark an area 10 x 10 metres with string or sticks using your measuring tape.

Study the woodland structure within this area.

In your study area, identify what trees, plants and other vegetation are in your woodland.

List two trees in the canopy layer: \_\_\_\_\_

List two shrubs in the shrub layer: \_\_\_\_\_

List two plants in the herb layer: \_\_\_\_\_

List two things in the ground layer: \_\_\_\_\_

Observe your study area. It is very important how much light the trees and plants get from the sun. Some need more light than others and that is why trees grow really tall and others are small. Plants and trees use the light from the sun to make their own food as part of a process called photosynthesis. It is a source of food and oxygen for all living organisms on the planet.

Is your study area dark or bright? \_\_\_\_\_



## Programme One Activity Worksheet 3

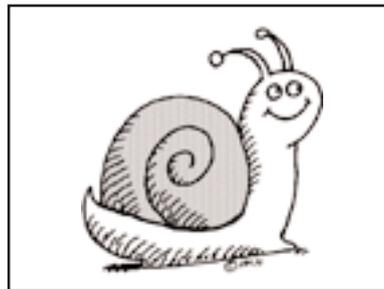
Student Name: \_\_\_\_\_

### Create a Food Web

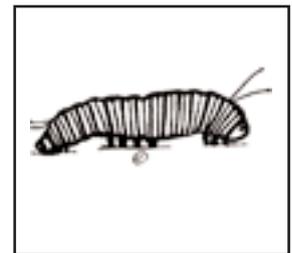
Draw lines to connect the animals and plants together. Start with the plant, what eats plants? Then connect the smaller animals to other animals that eat them. For example: Snails eat plants, the badger eats the snail. What else do badgers eat?



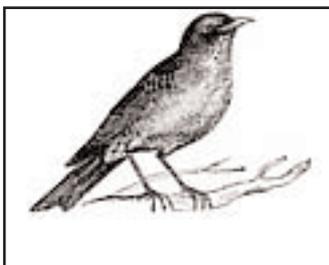
Badger



Snail



Caterpillar



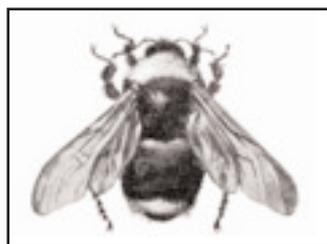
Bird



Plant



Deer



Bee