

Tree Study

Unit 3

This is a one-day investigation. It could be taken on its own or in conjunction with the Red Ridge Place Study.

Summary of the Day

0900	Introduction to the activity
0930	Fieldwork, collecting data
1230	Lunch
1400	Classwork, investigating and collating data
1800	Dinner

These activities cover science, mathematics and geography

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Introduction

From this study unit the children will develop their knowledge that:

- different trees have different characteristics;
- tree growth and age can be measured, recorded and compared.

Overview

A tree is usually defined as a woody perennial plant, which grows to heights of six feet or more. Trees may be divided into two sub-groups - those that produce seeds that are exposed (in cones) the conifers and those that have their seeds enclosed in fruits, the broadleaf trees.

It is sensible to use the range of trees around the Centre, as here there are a mixture of broadleaf and coniferous trees.

Organisation After the initial talk and walk amongst a variety of trees, the children should be split into small groups and allocated a tree to study.

Resources Tree reference books
Magnifiers
Paper and crayons for bark rubbings
Stethoscope or funnel and tube to make home-made stethoscope
Instruments for measuring trees - eg metre stick, tape measure, clinometers, calipers
Weight and string
Magnetic compass
Clip-boards and paper

Time Whole day activity with field work in the morning and classroom based investigations in the afternoon

Method:

1 Take the whole group of children on a walk around the vicinity of the Centre, identifying as many trees as possible. The children should record:

- What shape is it?
- How tall they think it is
- How they think they can measure its height
- How much shelter they think that it gives
- Does it have buds or flowers?
- What do they look like?
- Is it broadleaved or coniferous?
- What shape are the leaves?
- Take a bark rubbing and collect a few leaves.

2 Allocate each group one tree.

Since they seldom see evidence that a tree is alive and growing, it is valuable for children to experience the living force of a tree. A stethoscope put to a tree trunk enables you to hear the sap rising - a sort of rushing sound, like water in a pipe. The best results are in the Spring and Summer but the sound can be heard at different times of the year.

3 Supply each group with measuring equipment, such as tape measure for measuring the girth, calipers for measuring the diameter and a clinometer for measuring its height.

Ask each group to estimate and record the measurements of girth, diameter of trunk and height of tree and then to check by measuring.

4 Ask the children to stand under their tree, to walk under it and around it. Can they estimate the spread of the tree? How can they measure this?

One method for measuring the spread of a tree is to ask one member of the group to stand about 20 metres from the tree while others move out from the trunk, until the observer tells them to stop when he sees that they are directly under the outermost branches. Another two members of the group measure the distance from the trunk to the children under the branches. These distances can be plotted onto squared paper so that the spread of the tree can be marked out on the paper and the shape of the tree's canopy can be related to the prevailing wind.

5 The children should take bark rubbings of their tree, collect some leaves, cones or fruits, buds or flowers and draw a sketch of the tree as accurately as possible.

6 The final piece of information that the groups require is the location of their tree. They should draw a simple sketch map, which notes the main landmarks and the position of their tree in relation to these landmarks. The sketch map should have a key.

7 On returning to the classroom, the whole group should work together to share the information that they collected during activity 1 - identifying a tree and agreeing its characteristics. These characteristics could then be recorded and agreed.

8 The children now work in their smaller groups and collate all the information that they have about their allocated tree. At the end of an agreed period, each group are to present their findings to the other groups. This should include the tree's:

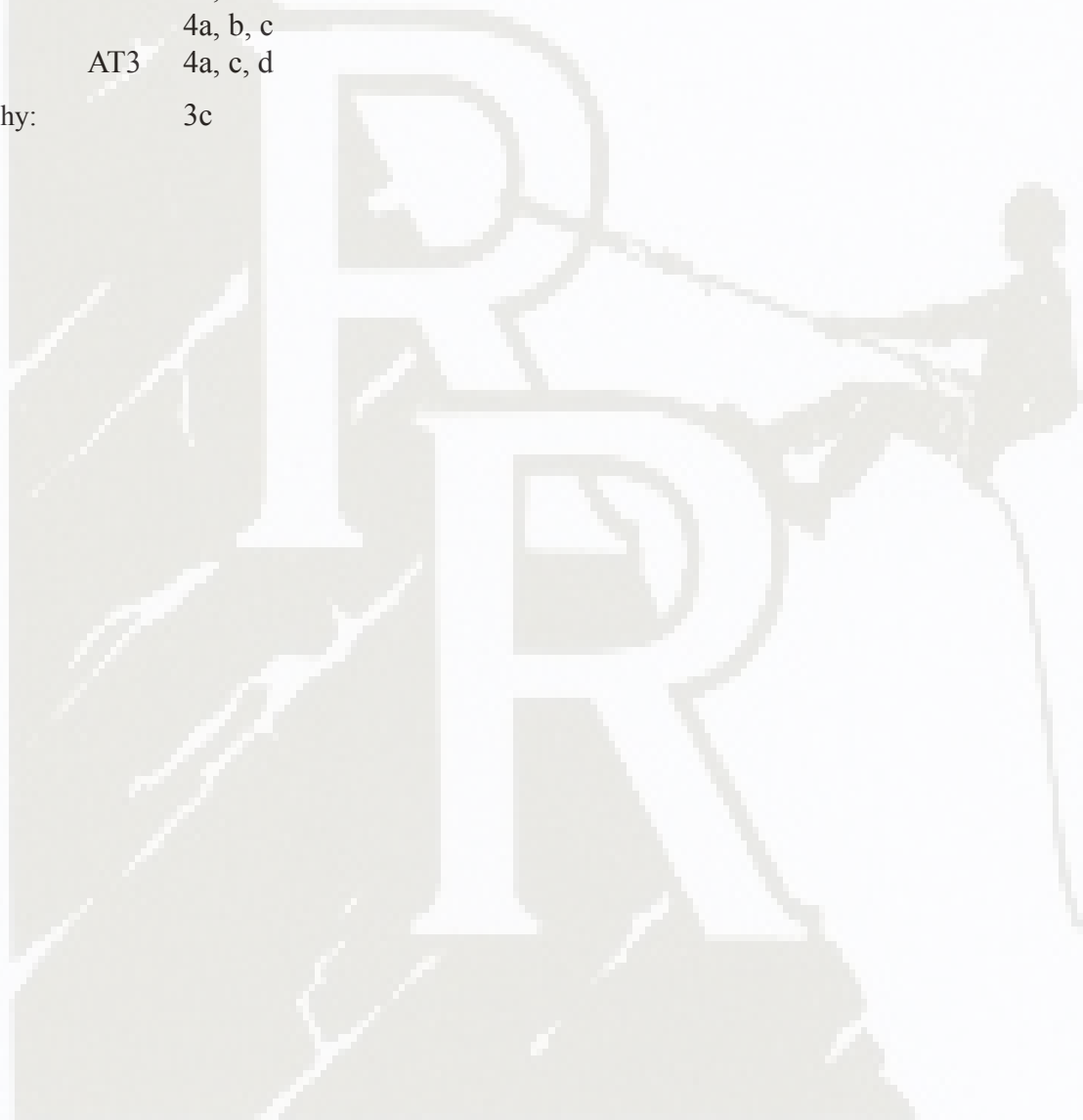
name;
location;
measurements;
canopy;
effects of prevailing winds;
other information.

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National Curriculum References

Science	AT1	1b
		2a, b, c
		3c, d, e
	AT2	1b
		3a, b, c
Mathematics	AT1	1a, c
		3a, c
	AT3	4a, b, c
		4a, c, d
Geography:		3c

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