



Looking at Leaves

Key Stage 1 Numeracy

Teachers' notes

This unit of work is based on the **National Numeracy Strategy - Shape and Space**. The work is designed for use in either year 1 or 2. This activity could be undertaken at any time of the year when leaves are on the trees although would perhaps be most useful when leaves are falling in the autumn.

Learning Objectives Covered by this Work

- ☉ use the correct language and vocabulary for shape, space and measures
- ☉ recognise reflective symmetry in familiar 2-D shapes and patterns.
- ☉ recognise movements in a straight line (translations)

Before the Visit

Discuss with the children the concept of symmetry, providing them with the opportunity to describe and create symmetrical patterns, for example using paint, sticky paper, peg boards and cubes.

Brainstorm symmetrical objects that might be found in a woodland e.g. trees, leaves. Use photographs and pictures as a stimulus.

Using the pupil sheet, decide which of the leaves shown are symmetrical and which are not? Are any of the leaves nearly symmetrical but not quite?

In the Woodland

Find an area with a variety of different tree species. If undertaking this work in the autumn, choose an area with plenty of fallen leaves in good condition.

Discuss with the children the ways in which different species of tree can be told apart e.g. leaf shape, size and shape of tree, colour and texture of bark.

How many different leaf shapes can the children find in the area? Can they identify any of their trees by matching their leaves to the pictures on the pupil sheet? In the autumn, the children could match the fallen leaves to those still on the trees.

Collect three different types of leaf each.

Encourage the children to focus on the characteristics of the leaves by means of the pairs of questions below.

- ☉ Which is the largest leaf?
- ☉ Which is the smallest?
- ☉ Which is the thickest?
- ☉ Which is the thinnest?
- ☉ Which leaves have smooth edges?
- ☉ Which leaves have crinkled edges?
- ☉ Which of the leaves are symmetrical?
- ☉ Which are not symmetrical?

Search for examples of symmetrical leaves and draw round these on paper.

Identify other symmetrical and asymmetrical objects within the woodland e.g. tree shape.

Follow-up Work

Before the lesson, cut the collected leaves in half along their line of symmetry. Stick some of the leaves onto paper, leaving adequate space for the children to draw in the missing half.

Retain enough pairs of the half leaves so that each child can be given half a leaf. Hand these out to each child at the start of the lesson and ask the children to compare leaves and find the person who has the other part of their leaf.

Using the half leaves stuck on paper, ask the children to use a mirror to help them draw the outline of the other side of the leaf in pencil. When this has been done and checked, the children should colour the drawn part of the leaf so that as far as possible it matches the colours and shapes of the real half of the leaf. Encourage them to draw in the veins first to provide a framework.

Extension Activity

Create repeating patterns and pictures involving the translation of leaf shapes, using leaf shapes and pictures or by printing with leaves collected in the woodland.

Leaf shapes can also be preserved in 2cm thick tiles made of wet clay, or alternatively a playdough mixture made using 2 cups of plain flour, 1 cup of salt, 1 cup of water and 2 tablespoons of cooking oil. The leaf should be pressed evenly into the surface, vein side down, and rolled with a rolling pin. The tile can then be baked or left to dry, after which the leaf itself should be removed and the tile painted and varnished.

Use the activity as an opportunity to discuss with pupils the differences between deciduous and evergreen trees and between broadleaved and coniferous trees.



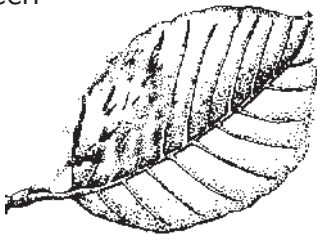
Looking at Leaves

Key Stage 1 Numeracy
Pupil sheet

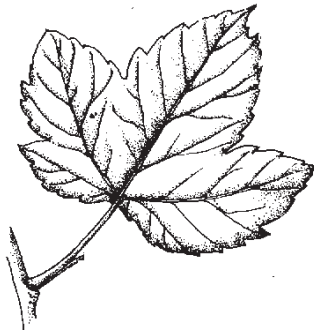
Ash



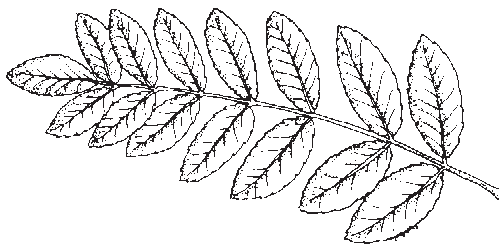
Beech



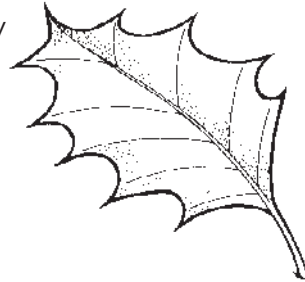
Sycamore



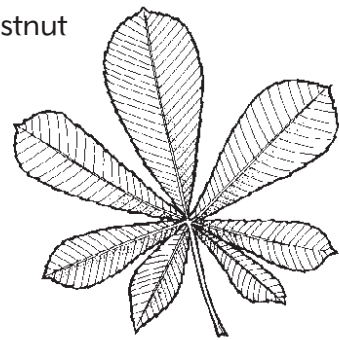
Rowan



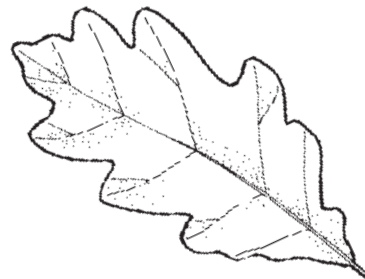
Holly



Horse Chestnut



Oak



Which of these leaves are symmetrical?
Which are not?

Can you find any leaves that look like
these in the wood that you visit?