Matching leaves

Materials needed

- A3 sheet set out in a table with drawings of different types of leaves in each cell. It is preferable to have only outlines on this sheet as the students will then concentrate on the shape, size and veins rather than the colours. Have five or six copies so students are able to work in small groups. It is possible for students to be involved in making this sheet.
- A selection of leaves collected by the students.

Simple leaf

Looking at leaf shapes

Most **simple leaves** have a central 'vein' or midrib from which secondary veins branch off. These veins carry nutrients to and from the tissue of the leaf. Some plants have found it efficient to alter their leaf shapes in order to save energy in collecting and/ or transporting nutrients to sections of the leaf furthest from a major vein.

To transport nutrients and water efficiently, some leaves have a deeply lobed shape with no leaf tissue in the areas far from the major veins.

Lobed leaves

Other plants take this lobing around the secondary veins a stage further so the original leaf looks like a collection of smaller leaves, called leaflets. Such leaves are called compound or pinnate leaves.

In bi-pinnate leaves the leaflets form around tertiary veins, instead of secondary veins. Therefore, what looks like many small leaves are actually leaflets, which are all part of just one compound leaf.

One way to distinguish a leaflet from a simple leaf is to look at the junction between the leaf-bearing twig and the stalk of the leaf. With a simple leaf there is a bud at this junction. There is never a bud at the junction between a leaflet and its stalk (which is really a vein).

Compound leaf

Use other leaf shapes from the environment. Discuss their attributes as a class: the shape, colour, texture, serrated or non-serrated, the veins, the direction they run and the pattern they make. The students draw the leaves, do rubbings or make stamps with them. They match the leaves to a chart using the language they have learned as a class. These activities teach the students to observe carefully and provide them with a common language to discuss plants. The same activity is appropriate for matching and observing seeds, flowers, bark insects and many other natural wonders.

Bi-pinnate leaf

A simple leaf matching game for young students can be found at:
http://pbskids.org/caillou/games/matching.html