

# OUR CHANGING WORLD

## INTRODUCTION

In this module children will build on work in the Year 4 Who am I? module (Module 6) by going outside and classifying plants in the local area at different times of the year. They will learn that different criteria can be used to classify plants depending on the time of year. This module also builds on work in Year 3 around the functions of different parts of flowering plants, their requirements for life and their life cycle.

When working scientifically children will make careful observations of leaves, bark, buds, tree shape and flowers. They will use these observations to classify the plants and will record this information using keys.

### Key vocabulary:

stalk, simple and compound leaves, leaf edge, leaf shape, leaf arrangement, deciduous, evergreen, bud, twig, tree shape, leaf skeleton, vein pattern, seed, flower, blossom, petal, classification key, observe, record, classify, present

### FACT FILE:

Being able to identify plants at different times of the year is very useful but it can be difficult because they are at different stages of growth and so do not always have their most characteristic parts available for identification purposes.

For example, **deciduous plants** lose their leaves during autumn. In winter it is difficult for the trees to maintain their leaves properly so they become **dormant** during this period and do not grow. In preparation for this the trees shed their leaves. The green **chlorophyll** is no longer produced and the other **pigments** in the leaves give rise to the reds and yellows, which start to become more visible. The leaves begin to die due to lack of nourishment and fall to the ground where they rot, often leaving **leaf skeletons**. During the winter, therefore, other features of the tree such as its **shape** or **bark** have to be used to identify its type.

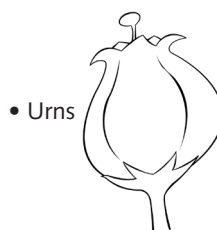
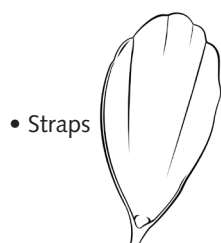
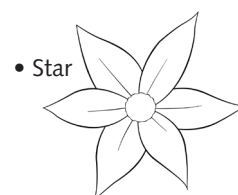
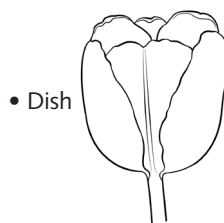
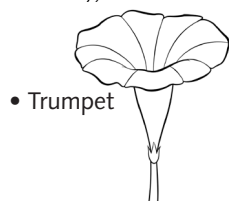
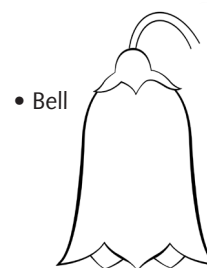
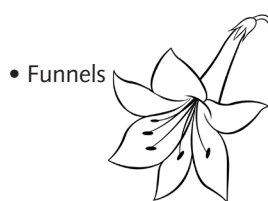
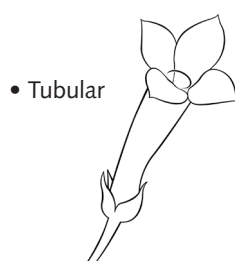
Once the leaves grow back they can be used to identify the tree. There are many different ways to classify leaves. In Lesson 1 the children will be encouraged to look for various features on a leaf, such as shape and whether it has **simple** or **compound leaves** and how are the leaves arranged.

In winter other clues should be used to classify deciduous trees. These include looking at the **shape** of the tree, **bark**, **buds** and the **vein pattern** on **leaf skeletons**.

Trees in urban areas may have been pruned and not be their original shape.

In the spring the **buds** are very useful indicators of the identity of a tree. They can be along a **stem** or **stalk** or just at the end. They can be opposite each other or alternating. The buds can also be different shapes, while **vein patterns** can be seen clearly in leaf skeletons.

Flowering plants have the same basic parts – **petals**, **sepals**, **stamen** and **ovule** – and are often brightly coloured, scented and contain **nectar**, but there is a vast variety of different shapes and sizes. The structure of the flower plays a crucial role in the classification of the plants. A particularly important feature is the shape. Some common flower shapes include:



### Common misconceptions:

- Children may think that deciduous trees die in the winter and then come alive again in the spring. They do not die; they are simply dormant.
- Children often do not realise that seeds, berries and fruits can be found on different plants throughout the year as their lifecycles are at different stages. For example, blackberries are seen on plants from June to November, whereas holly bears its fruit through winter. Conkers, the seeds of chestnut trees, fall in October and November, but dandelions disperse their seeds in spring.

### Big Cat book links

|                                                                                                   |                                                                                                    |
|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Catching Flies</b> June Crebbin<br>978-0-00-746181-3<br>Band 9 Gold                            | A beautiful poetry book exploring the themes of wildlife, the seasons and life's simple pleasures. |
| <b>Star Gazing</b> Celia Warren<br>978-0-00-746531-6<br>Band 12 Copper                            | A beautiful poetry book exploring the themes of wildlife, the seasons and life's simple pleasures. |
| <b>Jaws and Claws and Things with Wings</b><br>Valerie Bloom<br>978-0-00-746539-1<br>Band 14 Ruby | A poetry collection inspired by the strange and wonderful creatures in the natural world.          |
| <b>Life Cycles</b> Sally Morgan<br>978-0-00-73341-8<br>Band 16 Sapphire                           | Explore the fascinating life cycle of the salmon in this highly photographic book.                 |