## 1. Leaf sorting activity

Collect together various leaves from around the garden, or a local park/area. Then compare them by colour, size, etc. using a Carroll Diagram.

This activity is discussion-rich because leaves come in all shapes, sizes and colours. As such, children can talk in depth about these differences and how best to categorise them.

### 2. Tree identification

Alternatively, why not conduct a survey of all the different types of trees in your area? (Go to the timetable to a tree identification sheet.) You can record findings on a map with a key and then display the number of different types of tree on a bar chart.

## 3. Matchsticks or just sticks!

If you don't have twigs, why not use rulers or glue sticks.

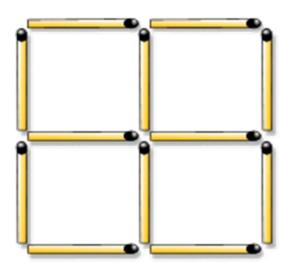
Use twigs to create a variety of 'matchstick' puzzles but on a larger scale.

Show children this math stick picture ask them to copy the shape below with their twigs. Then ask the question below. Then give the instruction:

#### Move two twigs to make 7 square rectangles.

Can they work out what to do?

There are hundreds of matchstick puzzles to try, so you won't run out. Take a look at Maths on Fire or copy some examples from the internet to use as problem solving challenges outside.



# What is a Carroll Diagram?

A Carroll Diagram is a way of sorting objects, numbers and shapes by their traits. It looks like a table and allows people to sort data with more than two criteria into boxes in a visual way using yes/no situations. Numbers or objects are either categorised as 'x' (having an attribute x) or 'not x' (not having an attribute 'x').

|             | Shapes with curved lines | Shapes with straight lines |
|-------------|--------------------------|----------------------------|
| Pink Shapes |                          |                            |
| Blue Shapes |                          |                            |