## Learning Intentions

#### For students to:

- Explain how a living thing works
- Collect and record evidence

Analyse evidence and draw conclusions

Context:

- Outside in the environment
- Tree identification books

## Resources

### Provided

Students worksheet

### Needed

- Access to trees for students to study
- Tree identification books
- Paper for students to draw, make notes and to do bark rubbing
- Viewfinders one per student

### Links to National Curriculum subjects

#### Science KS2

Ideas and evidence in science (1a, 1b) Investigative skills (2b, 2c, 2j, 2k, 2l) Life processes and living things (1c, 3c) **Science KS3** Scientific thinking (1.1b) Practical and enquiry skills (2.1c) Communication (2.3a)

The environment, Earth and the universe (3.4c)

Geography KS2

Enquiry and skills (1a, 1b, 1c, 1e, 2a) Environmental change and sustainable development (5a, 5b)

Geography KS3 Enquiry and skills (1a, 1c, 1f) Knowledge and understanding of

places (3a, 3c, 3d,) Patterns and processes (4b) Environmental change and sustainable development (5a) Breadth of study (6d, 6j, 6k)





## Climate change teacher material

Key Stage 2 and 3

## 7. The life of trees

### **Overview**

'The life of trees' encourages students to look closely at trees and think carefully about the functions of different parts of trees as well as the overall importance of trees. Students use view finders to observe two trees and carry out a number of small scale investigations. They then make comparisons and discuss their findings.

### **Teaching activity**

- It is best to do this activity in the spring or summer when deciduous trees are in full leaf.
- Give each student a worksheet and a view finder. Information is provided on the worksheet for students to understand how trees help regulate the environment.
- Ask students to find two different trees, and carry out the activities on their worksheet with each tree.
- Following the activity ask the students to discuss their findings in groups.

### Visits to botanic gardens

A botanic garden would be an ideal place in which to carry out this activity.

# 7. The life of trees

Leaves absorb CO<sub>2</sub>. This is how plants mainly store carbon. By doing this, they play a major role in minimising climate change.

The leaves and branches delay water arriving at the ground and help rivers cope after a sudden downpour. Wind passing through the canopy loses speed and pollutants it is carrying are deposited on the leaves.

Pollutants may be trapped by hairs, waxy surfaces and films of moisture on the leaves.

A fissured bark will trap more dirt particles from the air.

Tree roots absorb water and this helps delay the impact of heavy rain on rivers.

### Things to do

Look for two trees to compare. Perhaps choose a large tree and a small tree.

Use a view finder to make sketches of your trees, then carry out the following activities:

- Estimate the number of large branches around the edge of the tree.
- Estimate the number of leaves on a branch
- Draw and label a leaf.

### Questions to consider

- What are the main differences between your trees?
- How do the trees delay water getting to the ground?
- Would one tree be more efficient than the other in delaying water getting to the ground?

- Look for evidence of the size of the roots.
- Examine the bark. Take a bark rubbing and describe the pattern.
- Compare the noise levels and shade under your tree and out in the open. Is there a difference?
- Find out the name of your trees.
- Do either of the trees have roots sticking up from the ground? What implications does this have for any human activity under the tree (eg. mowing grass, parking cars)?
- What do you think happens to rain if there are no trees? Consider the impact on rivers.
- Why do you think it is important to plant trees in cities?



