Keep Scotland Beautiful

Your charity for Scotland's environment

What are trees made of?

Ages: 9 – 16

Time: 1 – 2 hours

Purpose: This activity will help pupils learn the importance of trees as carbon sinks by estimating the carbon content of a tree and discussing the role of forests in climate change. The lesson plan and support sheet were created by LEAF Ireland.

Curricular links

Experiment: MNU 2-4-01a, 2-02a, 2-4-03a, 2-4-07a, 2-4-11a, SCN 3-05a-b, 4-05b

Discussion: LIT 2-4-02a, SCN 3-05a-b, 4-05b, SOC 2-4-08a, SOC2-08b

Experiment – the carbon content of a tree

The What are trees made of? lesson plan from LEAF Ireland has step-by-step instructions on how to estimate the carbon content of a tree, along with a worksheet for pupils to complete as part of the lesson. LEAF Ireland have also produced an accompanying video, which is a helpful introduction to the topic and experiment.

To complete the experiment, pupils select a tree in their school grounds (or outside it) and measure its circumference. The then use the table in the lesson plan to estimate the biomass of the tree from its circumference. They can then calculate the carbon content of the tree by dividing the biomass by two and work out how much carbon dioxide has been stored by the tree by multiplying the carbon content by 3.67.

Please note the PowerPoint presentation mentioned in the lesson plan is no longer available, but the questions and answers for discussion are (see below).

Discussion – questions about forests and climate

The support sheet accompanying the lesson plan from LEAF Ireland contains ten questions and answers on forests and climate change, which can be used as the basis for class discussion. Please note the PowerPoint presentation mentioned in the support sheet is no longer available.

LEARNING ABOUT FORESTS