Keep Scotland Beautiful

Your charity for Scotland's environment

How trees prevent flooding and pollution

Ages: 9 – 16

Time: 1 – 2 hours

Purpose: This activity will help pupils learn how trees help to prevent flooding and pollution as part of the water cycle. The lesson plan and support sheet were created by LEAF Ireland.

Curricular links

Discussion: LIT 2-4-02a, SCN 4-01a, 2-02b, 3-02a, 3-4-05b, SOC 2-08a-b, 3-4-08a, 3-4-12a

Experiment: MNU 2-4-01a, 2-11b, 3-4-11a SCN 4-01a, 2-02b, 3-02a, 2-05a, 2-18a, 4-18a

Discussion – Forests and the water cycle

The [support sheet](#) accompanying the experiment lesson plan from LEAF Ireland contains lots of information on forests and the water cycle, which can be used as the basis for class discussion. Potential questions for discussed include:

- What is transpiration and how does this work in a tree?
- What could affect the rate of transpiration?
- How does the removal of trees impact rainfall and other weather patterns, such as wind?
- How can trees help to make clouds?
- How might trees help prevent flooding?
- How might trees help prevent water pollution?

Experiment – Investigating how trees prevent flooding and pollution

The [investigating how trees prevent flooding and pollution lesson plan](#) from LEAF Ireland has step-by-step instructions on how to complete the flooding and pollution experiment, 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 experiment.

To complete the experiment, pupils compare the water run-off between a potted plant and a pot of compost. The volume of water that moves through each pot over time is compared, as is the colour of the resultant run-off.

LEARNING ABOUT FORESTS