

Land use and flooding practical activity



What you need

- A plastic bottle cut in half lengthways (use three or reuse the same one)
- A clear cup (use three or reuse the same one)
- A large measuring jug
- A piece of turf
- Some soil
- Some dead leaves

Safety and guidance



- Adults should cut the bottles in half using scissors.
- Care should be taken to ensure the bottles are stable and supported to prevent spills.
- The activity should be conducted in the centre of the table or work area.
- Any spills should be reported and cleared immediately.

Introduction

This activity simulates how different types of land affect the amount of run-off. Follow the steps below for each type of simulated run-off (soil, soil & leaves, and turf). Record your observations and conclusions on the table on the next page.

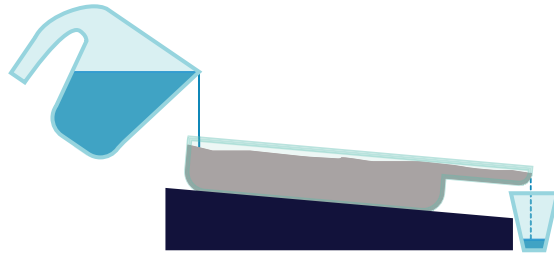
The turf required for this activity can be taken by an adult from an appropriate area of the school grounds. The turf should have good grass cover and at least 2 cm of soil underneath.

Activity steps

1. Place the cut bottle on its side on a slight slope (neck at bottom) and fill it with soil. Place the cup to catch water that runs off.
2. Pour water onto the soil until it starts to run off. Observe how much water has been used and the nature of the run-off.
3. Repeat with the bottle filled with soil and covered with leaf litter.
4. Repeat with the bottle filled with turf (grass side up).

Extend the activity

This activity can be extended by controlling variables, for example the amount of water added, or the rate of water added, and by taking exact measurements. Students can be prompted to make and test predictions, as well as create tables and charts of quantitative results.



Observations

Soil

**Soil
and
leaves**

Turf

Conclusions:

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Limitations of method and conclusions:

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