

## Activity R2: Investigating the flow of rivers

This activity allows pupils to investigate the different ways rivers flow and by using different gradients and water flow rates processes such as, erosion, sediment transportation and deposition can be demonstrated. Pupils will also be able to discover how a river can change by observing the development of river features such as bends, undercutting, meanders and deltas. This is an ideal activity to do before visiting a river or stream.

### Equipment:

Long seed tray (available from garden centres) Cut a short section out from one end to allow water to flow away.

2-3 house bricks or blocks of wood (to prop up the end of the tray)

Bucket or plastic stacking box (to catch the water)

Bucket of damp builder's sand (or mixed sand and pea gravel)

Short hose or watering can, jug, water tub with tap

Trowel

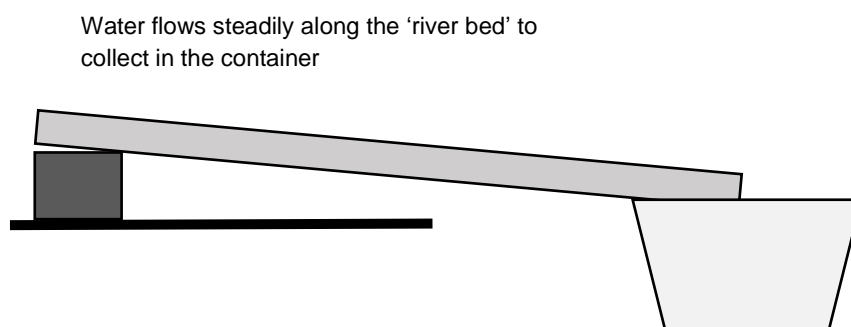
Small pebbles or rocks

Monopoly houses, small blocks or lego bricks (to represent buildings)

Short sticks (e.g. lolly sticks or larger spatulas) that can be used for making models of bridges

### Method:

1) Set up the equipment as follows:



2) Spread a 2-3cm layer of damp sand onto the tray and pack down the sand.

3) Make an initial groove or channel in the sand to model the start of the river.

4) Using jug or hose pour water steadily onto the top of the channel.

5) Ask the students to observe the following:

- Which particles are moved (large or small)
- The changing shape of the channel
- How the water flows round bends (possibly artificially created)
- Which areas are most prone to flooding
- The size of the channel as the water flows down

6) Ask the pupils to predict what might happen if a) the gradient of the river was changed and b) the rate of water flow was slowed or increased.

7) Ask the pupils to use the short sticks and model houses/ blocks to experiment with bridge and house placement in their model of a river.

8) Ask pupils to place obstacles (pebbles) in the river to represent harder rocks and work out if the river's route is affected.