



## Flooded Landscape Model - Teacher's Notes

As well as the geology and soil type in an area, its topography will also play a role in flooding. Topography is the shape and features of a landscape and includes aspects like the height above sea level.

In this activity, students will create their own landscape, sculpting the topography, such as hills and valleys.

### Materials

- Aluminium baking tray or large plastic container with sides of at least 5cm (eg. new kitty litter tray)
- Newspaper or scrap paper (a large amount of plasticine will also work well)
- Tape or glue
- White plastic bag (shopping bag or bin liner) cut open to make a single layer
- Water, coloured with blue food colouring
- Spray bottle
- Watering can or plastic bottle with holes drilled in the lid

### Method

1. Screw paper up into lumps and secure them to the tray to form hills.



You might like to place some close together to form a narrow valley or canyon.

2. Drape the white plastic bag over the tray, lightly pressing it into the lower levels of your artificial landscape. You may need to use tape or glue to secure it at some points.





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3. Add blue food colouring to some water in a spray bottle and spray the water over your landscape. Observe and record how and where the water runs off and flows. Observations may be recorded with words or labelled diagrams.



4. Put some blue coloured water in the watering can, or bottle with perforated lid. Use this to simulate heavy rain by pouring over your landscape.



5. Observe and record the water flow and points where the water collects using words or labelled diagrams.



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### Extension activities

- Students that tested this activity were keen to add houses, trees, animals and other objects to the landscape model to observe the effect of flooding on these.
- A settlement could be placed in a valley and students will have to consider and design a way to protect this settlement from flood waters. They could then build and test their protection designs.
- More time could be spend building the landscape, combining it with an art project, and perhaps even sculpting the landscape from clay or papier-mâché
- If you have access to a sandpit, you may like to sculpt a larger landscape as a class, adding vegetation, buildings and animals then seeing the effect of floods, including erosion.

