

## Flooded Landscape Model - Student Worksheet

Your task is to create a landscape, sculpting the topography, such as hills and valleys, then observe how rainfall would flow and collect.

### Materials

- Large container
- Newspaper or scrap paper
- Blu-tac, tape or glue
- Sheet of white plastic
- Water coloured with blue food colouring
- Spray bottle
- Watering can or plastic bottle with holes drilling 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 sheet over the tray, lightly pressing it into the lower levels of your artificial landscape. You may need to secure it at some points with blu-tac.
3. Add blue food colouring to some water in a spray bottle and spray the water over your landscape. This represents *light rain*. Observe and record how and where the water runs off and flows.



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- 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.
- Observe and record the water flow and points where the water collects

### Results

Record your observations in the table below with words or diagrams

*Light rain*

*Heavy rain*



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### Discussion

1. Which part of your landscape did the water run off the most quickly?

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2. Which areas (high or low) did you notice the water collected the most?

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3. What were the main differences you observed between the light rain and heavy rain trials?

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4. How do you think you could help an area with this landscape to minimise damage through flooding if they experienced heavy rain?

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