Part A: the plan
Part B: set it up
Part C: three runs
A tray, soil, books, a jug, a bowl

Plan a fair test.

Name: _____ Class: _____

A fair test changes **one thing**, measures **one thing**, and keeps everything else the same. Plan yours here, then run it with a real stream table: a tray of soil, propped up at one end, with rain poured from a jug.

Part A · My plan

MY QUESTION (TICK ONE, OR WRITE YOUR OWN)

- ☐ Does a steeper slope lose more soil?
- ☐ Does heavier rain wash away more soil?
- ☐ Do plants slow erosion down?

WHAT I WILL CHANGE (ONE THING ONLY)

WHAT I WILL MEASURE, AND HOW

WHAT I WILL KEEP THE SAME (LIST EVERYTHING YOU CAN THINK OF)

MY PREDICTION: I THINK ... BECAUSE ...

Part B · Set it up

1. Fill a paint tray, a baking tray or a cut-down milk carton with damp soil, patted flat. Prop one end up on a book. That is your slope.
2. Put a bowl or a cut-off bottle at the low end to catch what washes down.
3. Pour one cup of water from a jug with holes in the lid, or a watering can, from the same height each time. That is your rain.
4. Pour the muddy water in the bowl through a coffee filter or a paper towel. Let it dry. Weigh the soil, or compare the piles by eye.
5. Change your one thing (two books, two cups, or a patch of grass laid on the soil) and run it again. Everything else stays the same.

> **Stay safe.** Work outside or on a tarp. Keep soil away from your mouth and eyes, wash your hands afterwards, and ask before you dig up any grass.

Part C · My runs

Do your first run with your one thing at its first setting. Then change it, and run again. If you have time, do a repeat of one run and see how close the two results are.

RUN	MY ONE THING WAS SET TO	SOIL COLLECTED (GRAMS, OR A LITTLE / SOME / A LOT)	WHAT I NOTICED (THE WATER, THE SLOPE, THE BOWL)
1			
2			
3			
Repeat of run —			

Part D · What I found out

1. Which run lost the most soil? Why do you think that was?

2. Was your test fair? What did you keep the same, and was there anything you could not keep the same?

3. Was your prediction right? What does your result tell you about erosion on a real hillside?

4. If you did the repeat run: how close were the two results? What could make them different?

5. What would you test next?

Erosion detective (optional)

Look at a map or an aerial photo of the land around your school. Mark two places where you predict soil is washing or blowing away, and say why. If your class goes to look, find out whose Country the place is on first, and what permission you need.

MY TWO PLACES, AND WHY