***Changing landscapes*** Planning ahead and equipment list

## Investigation 1: How plants hold soil together

### Equipment needed per class:

* tray of seedlings

### Equipment needed per group:

* 1 seedling
* 1 bamboo skewer (or paddle pop stick twisted and broken to get a pointy end)
* 2 sheets of newspaper

The seedling should be advanced enough to have a well-developed root system, but not be root bound.

## Investigation 2: Effect of land clearing

### Equipment needed per group:

* 2 shallow trays approximately 20 cm X 10 cm
* sand
* bag of mulch or a mixture of leaves, twigs and grass
* ice cream container of water
* foam cup (prepared with holes in the bottom)
* wooden block
* Student worksheet, [Problem-Solving Scaffold](http://assist.asta.edu.au/sites/assist.asta.edu.au/files/Problem_Solving_Scaffold_yr4_Changing_landscapes.docx)
* Student worksheet, [Observation sheet](http://assist.asta.edu.au/sites/assist.asta.edu.au/files/Observation_Sheet_yr4_Changing_landscapes.docx)

**Prepare the rain cup**

Use a metal skewer or knitting needle to make evenly spread holes in the bottom of the foam cup. The holes should be large enough to allow water to fall through at a constant rate.

**Prepare the sand**

If using sand from a sandpit, it is important to make sure that there are no hidden dangers. Use a trowel or small shovel and an open mesh to sieve the sand before use. Alternatively, bags of sand can be purchased from nurseries.

**Selecting a site**

This investigation is best performed outdoors on a grassy area so that the water used in the experiment can fall onto the grass.

The investigation could be conducted indoors, if it was to be done as a demonstration, and a large plastic tray or tub capable of collecting run off water is available.