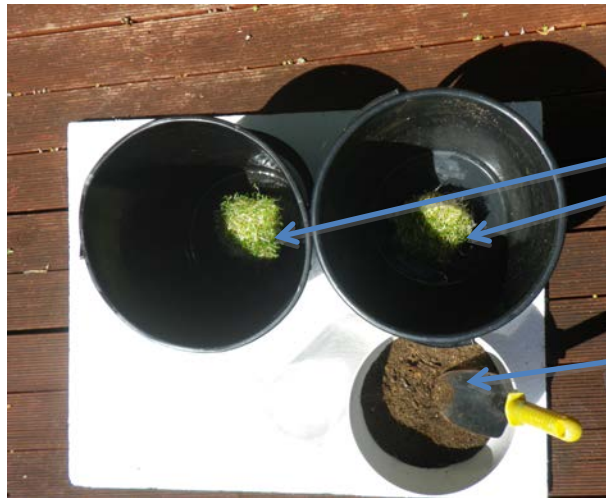


## The Effect of Floodwater on Plants – Teacher Notes



Halves of mung bean punnet in bowls of the same size

Dirty water

We shall be copying the effects of floodwater on plants by leaving one pot of plants under normal water and submerging another pot of plants in floodwater.

What do we have to do to ensure our experiment is a “Fair test?”

**Hint: Cows Moo Softly**

We **Change** one thing  
We **Measure** one thing  
And everything else **Stays** the **Same**



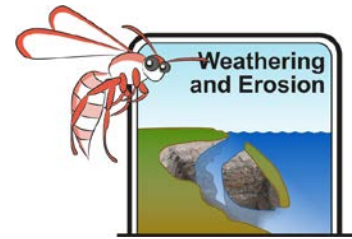
What is the thing we have to change? **One lot of vegetation must be covered in floodwater**  
What is the thing we have to measure? **The condition of the vegetation after spending several days covered in water**  
What do we have to keep the same? **Everything else. We must keep the same kind of vegetation, the same light and heat, and use the same equipment.**

### Materials (suggested)

- Two clumps of vegetation the same type and size. Two sods of grass or weeds are good as is an inexpensive box of sprouted mung beans or alfalfa seeds slit into two equal sized portions
- Two buckets of the same size and colour
- “Floodwater” sufficient to completely immerse the plants. (I recommend mixing three or four handfuls of garden soil in a bucket of water).
- Two heavy objects to pin down the plants to the bottom of the buckets. Trowels are ideal.
- Some water to keep the “dry” plant alive.

### Method

1. Place the two same sized plants each into their own bucket.
2. Place the buckets in a safe place where they will remain.
3. Hold the plants in place at the bottom of the buckets using the trowels
4. Stir up the floodwater mix and pour into one bucket holding the plant at the bottom of the bucket with the trowel. Leave this trowel in place for the rest of the experiment or the plant will float up to the surface.
5. Daily sprinkle the “dry” plant with water to keep it alive and stir up the floodwater to spread the silt about.



## The Effect of Floodwater on Plants – Teacher Notes

### Observations

The floodwater (immersed) plant became flattened, silt covered and rotted away. (The speed of rot depends on temperature). The “dry” plant remained healthy.

### Discussion

How would flooding affect landscape? Plants would die and the soil previously held together by their roots could blow away in the wind.

### Extension

Visit <http://www.floodsafe.com.au/learn-more-about-floods/floodwater-dangers> and list the main cause of human deaths in floodwater.

List four reasons why you should never enter floodwaters.

It can be terribly tempting to want to lower yourself into apparently smooth flowing floodwater or to try to wade or drive across a flooded creek. This is not a good idea.

You cannot tell from the surface:

- How deep the water is.
- How much debris is being swept along that could injure you or snag you.
- How fast the flood is flowing at depth.
- Whether the water is clean or polluted with sewerage.