



Erosion by Wind and Water - Teacher's Notes

Erosion by Wind and Water

The two main vectors (carriers) for erosion are wind and water. In both cases the erosive forces are strongest near the base of the flow. Soil that is damp and held together by plant roots is least likely to be eroded. This activity is best done outside on grass or in the sink or trough.



Materials

- A take away container of dry soil.
- A take away container of wet soil.
- A sod of turf/grass or other closely grown vegetation in a take away container.
- Something to raise one end of the containers. I used an old piece of wood.
- Two straws.
- A jug of water or drinking water bottle.





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- Two student demonstrators.

Method

1. Set up your containers so that they have a drainage hole at one end and are slightly raised at the other.
2. The demonstrators take turns to blow on the contents of all three containers. This is modeling wind erosion.
3. Note what happened in the table below.
4. The demonstrators trickle water onto the top of the contents of all three containers. This is modeling water erosion.
5. Note what happened in the table below.

Observations

Content of container	Wind erosion	Water erosion
Dry soil	The soil blew away	The soil washed away
Wet soil	Less soil blew away	Less soil washed away
Turf	Very little soil blew away	Very little soil washed away

Discussion

Which container was most resistant to erosion? **The turf/grassed one.**

Why did we have two demonstrators instead of just one? **In Science we repeat our experiments to provide more accurate results.**

If we found an area suffering from erosion. What would the results of this experiment suggest we should do to make things better? **Plant more plants to hold the soil together.**

Some students may have seen re-vegetation sites near the beach, at reclaimed industrial areas or mine sites.





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Extra for experts

You can extend this activity by examining the colour of water draining from the containers.

Dry soil	Lots of dusty coloured water quickly drains away. Dry soil has little water retention.
Wet soil	Less but more strongly coloured water drains away. Wet soil already has some water which has absorbed material and been coloured by it.
Turf	Mostly clear water drains away but less than either than the other two containers.

Banks of vegetation are used for initially purifying industrial waste water.

