

## EXPERIMENTS: CLEANING UP AN OIL SPILL

This experiment can be used to support learning for Activity Cards ACCIDENTS or LAND USE.

### PURPOSE

To find the fastest and most effective way to clean up a model oil spill.

### EQUIPMENT

Do this experiment in small groups of 2-4 depending upon availability of resources.

Divide the different 'cleaning up' methods between the groups.

- Aluminium foil to make small 'boats'
- Cooking oil
- Baking dish or other shallow dish for each group
- Water
- Cotton balls/paper towels
- Detergent
- Spoons
- Stopwatches

### PROCEDURE

1. Shape a small piece of foil into a boat.
2. Partly fill baking dish with water.
3. Fill boat with cooking oil.
4. Float the boat on the dish of water.
5. Tip the boat over.
6. Time the 'clean up'.

Three clean up treatments:

- cotton balls or paper towel to soak up the oil.
- dispersing the oil with droplets of detergent before using the cotton balls or paper towels.
- use a spoon to skim the oil off the surface of the water.

### EXTENSION ACTIVITIES:

1. Add a series of different substances to the water, for example, feathers, sticks, oil mixed with cocoa, vegetable dye.
2. Try containing the spill using a barrier such as thick string.

## RESULTS

- Record the time taken for each 'clean up' method.
- Record the amount of cotton balls/ paper towels used to clean up the oil in different treatments.
- List any problems encountered with the clean up.

## CONCLUSIONS

Discuss: Which method was the most effective and fastest?

## RESEARCH:

What methods are used to clean up oil spills?

- How much absorbent material would be required to clean up a real oil spill?
- How clean would the water be after detergent was added?
- How might animals and/or plants survive a spill?
- How would the absorbent material be transferred to the site?
- Which oil spills would be the most difficult to clean up - a spill in a lake, river or ocean?
- What other spills, apart from oil, might create a clean up problem?

## SOLVING THE CRIME

Are there any crime sites where large scale spills or accidents might occur and cause a problem?

Could any of the victims be harmed by an accident or spill?