

Cleaning up an Oil spill

Grades: 7-9

Materials

- Aquariums/clear containers
- Water
- Cooking Oil
- Aquarium nets
- Liquid detergent
- Paper towel
- Cotton string
- Feathers
- Pictures of oil spills
- Bowls

Topic: Students will get to learn about oil spills, how they are cleaned up and the impact on the environment.

Description

Oil spill experiment

In this activity, students will be divided into groups. Each team will be responsible for cleaning up an “oil spill” (cooking oil in an aquarium with water). The demonstrator will introduce the topic of oil spills and the properties of water and oil. Each type of cleaning method for oil will be briefly described. It is the students’ task to figure out which method works best. (Oil and waste products can be placed in a separate bowl)

Dispersants (liquid detergent)

Absorbents (paper towel)

Skimmers (aquarium nets)

Booms (cotton string)

To make the activity more realistic, groups can be given a “budget” to purchase materials.

After the experiment, the students will be asked which materials they used and how well it worked. The demonstrator can relate the experiment to real oil spills and how they were cleaned up.

Our feathered friends

Each group will be given a feather and a container of oil/water. The students will be asked to dip the feather in to the container and try to clean it off with a paper towel.

Why do you think that getting oil on their feathers can be a life threatening situation for sea birds?

- Birds use feathers for insulation and flight. They maintain their feathers by spreading oil on them from their preen gland. Since feathers absorb oil very well, they can be clogged when they come into contact with a lot of oil. This makes the feather stick together leaving bare areas for the cold to reach the bird. Birds often die from hypothermia this way. They can also be poisoned when they try to clean the petroleum oil from their feathers.

Suggested links

<http://library.advanced.org/10867/cleanup/methods/index.shtml>

<http://www.chemistry.org/portal/resources/ACS/ACSContent/education/wande/resourcechem/environment/env08.pdf>