

# A STEM in the Park

## Take Home Activity

# STEM

in the **PARK**™

Science, Technology, Engineering, and Mathematics

# How to Clean Up an Oil Spill



*\*Experiment is adapted from <http://weirdsciencekids.com/Oilspillexperiment.html>*

### **Materials:**

- Plastic Plates
- Water
- Vegetable Oil
- Paper Towels
- Cotton Balls
- Fur
- Polypropylene Sock
- Gloves (optional)
- Goggles (optional)

### **Essential Question:**

What is the best way to cleanup an oil spill?

### **Hypothesis:**

Take a guess! (You decide which material you think will absorb the oil the best and give a reason to support your answer).

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## **Experiment & Procedure:**

Now try it.

1. Fill a plastic plate or dish with water.
2. Pour in 1-2 tablespoons of oil.
3. Observe how the oil separates from the water.
4. Attempt to absorb the oil with each item i.e., paper towel square, cotton ball, fur, Polypropylene sock.

## **Research and Observations:**

Which material did you observe worked the best at absorbing or cleaning up the oil? Did it match your hypothesis (or your guess)? Find out why or why not.

## **Results:**

Which material cleaned the oil the best and why?

*As you will probably notice, the polypropylene absorbed the oil the best. The polymer and oil are both made up of the same two elements: carbon and hydrogen (two elements that attract one another) whereas water and oil are made up of different elements, so they tend to repel each other. This explains why the polypropylene absorbs the oil better than any other material.*

## **Further Investigation:**

What else do you think that you could clean up using the same method you used to clean up the oil? Conduct another experiment to test your hypothesis.

***This activity is brought to you by St. Aloysius***

