

What you need to do:

Procedure: Part A: Preparing “Ocean Water”

1. Collect a 1000 mL beaker from the front counter.
2. Add ~800 mL of tap water to the beaker.
3. Add 2 Tbs. of NaCl to the beaker and stir until dissolved.
(Note: Addition of salt partly simulates ocean water. This volume of 2 Tbs. of NaCl is slightly less salt than what you would find in 800 mL of the ocean. The oceans contain 2.2 lb salt/ft³, which corresponds to 35.2g/L or 28.2g/800 mL. We will assume that the salt in the ocean is mainly NaCl. In 2 Tbs. NaCl, there is approximately 22.5 g.)
4. Add 5-6 drops of blue food dye and stir.
5. Make observations in your notebook.

Procedure: Part B: Preparing “Crude Oil”

1. Place 5 mL of vegetable oil in 250 mL beaker
2. Add 3 spoons of cocoa powder to the oil and mix well.
3. Make observations in your notebook.

Procedure: Part C: Creating an “Oil Spill”

1. VERY SLOWLY pour the “crude oil” onto the surface of the “ocean water”
2. Make observations in your notebook.

Procedure: Part D: Cleaning up an “Oil Spill”

1. Collect a sample of one of the sorbents (items that absorb) from the front counter.
2. Gently place the sorbent into the center of the oil spill.
3. Remove the sorbent with tweezers.
4. Make observations about the efficiency of the sorbent in your notebook.
5. Repeat steps 1 – 4 for each of the sorbents provided.

Procedure: Part E: Cleaning up an “Oil Spill” by chemical means

1. Clean out the beaker with the oil contaminated water and create a new oil spill using the instructions from part A – C.
2. Add detergent to the new oil spill and make observations.

Procedure: Part F: “Oil Spill” effects on Wildlife

1. Collect a feather from the front counter.
2. Dip the feather in the oil spill.
3. Make observations regarding the oil’s affect on the feather.
4. Use one or more of the methods described previously to clean the feather, record observations of the success of your attempts in your lab notebook.