



Oil, Oil Everywhere

A Hands-On Activity for Children Ages 4-14

Objective: Students will demonstrate the different methods used to clean up after an oil spill and gain an understanding of the difficulties that are encountered.

Time: One 50-minute class period (Allow ten minutes for cleanup as this is a messy activity!)

Background: The 2010 Deepwater Horizon explosion ultimately led to upwards of 5 million barrels (386 Olympic-size swimming pools) of oil saturating the northeastern Gulf of Mexico. This event threatened 8 national parks and 400 species and heavily impacted the economic well being of Gulf States. Cleanup of the spill proved to be a challenge as oil both spread on the surface and settled to the seafloor. Several different products were used, including oil containment booms (temporary floating barriers to contain an oil spill), the dispersant Corexit™, and various natural and synthetic absorbents.

Materials:

- Oil: a mixture of 3 parts vegetable oil to 1 part cocoa powder (place ingredients in a plastic bottle and shake).
- Water
- Aluminum roasting pans (one for each group)
- Laminated Gulf of Mexico map (optional)
- One bag or box for each group containing the following materials:
 - Aluminum foil
 - Paper towels
 - Popsicle™ sticks
 - String
 - Nylon (cut-up pantyhose work best)
 - Loose hair (if possible, to be bundled and made into boom using the nylon)
 - Hay
 - Cotton balls
 - Any other materials that you want to try
 - Dawn™ dish detergent to simulate the dispersant Corexit™
 - Paper plates or aluminum pie plates to gather used materials

Procedure:

1. Provide students with background information on the 2010 Gulf of Mexico oil spill and discuss the different methods that were used to clean up the oil. For more information see the [NOAA Gulf Oil Spill Education Resources site](#).
2. Explain that they will be creating their own mock oil spill and will use the provided materials to clean up the oil.
3. Divide the students into groups of no more than 3 and distribute one pan half full of water and a bag of materials to each group.
4. Pour about a ½ cup of oil into each pan and allow the students to be creative in their cleanup methods. Visit each group and talk about their strategy and what approaches work best.
5. After students have experimented with the different cleanup methods, add one tablespoon of “dispersant” to their oil spill and ask them to observe what happens.
6. Ask students to clean up and then conduct a discussion.

Discussion:

1. What happened when you added the “dispersant”? Did it make the oil harder or easier to remove from the water?
2. If you were in charge, what methods would you have used to clean up the oil in the Gulf of Mexico?
3. What do you think some of the long-term consequences from the spill may be?

Watch a demonstration video: http://www.cpalms.org/CPALMS/perspectives_teacher_SC912L1716_AV_2.aspx

For more information visit our website at www.deep-c.org or contact Amelia Vaughan, Ocean Science Educator at amelia@deep-c.org.