

Oil Spill Activity  
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Adapted from:

[http://www.amsa.gov.au/Marine\\_Environment\\_Protection/Educational\\_resources\\_and\\_information/Teachers/Classroom\\_Projects/Clean\\_up\\_oil\\_spill\\_exercise.asp](http://www.amsa.gov.au/Marine_Environment_Protection/Educational_resources_and_information/Teachers/Classroom_Projects/Clean_up_oil_spill_exercise.asp)

**Objectives:**

- Students will understand the challenges of cleaning up an oil spill
- Students will be able to see how oil sits on top of the water
- Students will make decisions about what types of materials to use to clean up the oil spill
- Students will work as a team to solve the problem

**Procedure:**

1. Discuss aspects of the Deep Horizon Oil Spill
2. Place laminated Gulf of Mexico Map in clear plastic box (use hot glue to glue washers, coins or fishing weights to the backside of the map to keep the map in place when you add water).
3. Cover map with water
4. Show students what type of boom material and/or absorbent is available to use
  - a. Absorbents such as: cotton, bandages, diapers, hay, mulch, coffee filters, pet or human hair, paper towels, cloth, etc.
  - b. Booms can be made by wrapping absorbent materials in gauze, pantyhose, cloth etc. Use pipe cleaners to pull the boom materials
5. Explain the different roles for each student and that students will work in teams
6. Have students pick materials to use in their clean-up, they will try to boom off the oil from the coastal areas and/or remove the oil with absorbents
7. Place 3-4 drops of oil into water somewhere in the Gulf of Mexico (have an adult do this)
8. One student in each group should have a watch and time the activity
9. Add small pom-poms to each pan to represent marine animals

**Roles of each student in the group:**

Oil Company/Contractor - makes the decision on what type of boom and absorbent materials and how it is deployed

Researcher - records data on the data sheet

Reporter – takes notes on observations & reports back to the large group  
County Commissioner – times how long the activity takes to clean up the oil  
Weather – blow the oil around through a straw

If you have more students, some other possible roles:

Community Member - Would like to volunteer to help, but is not allowed  
Environmental Regulator – Conducts water quality monitoring and ensures that folks are not using incorrect materials (may need some additional materials)  
Fisherman – help with clean-up operations  
Tourist -  
Business owner -  
Coast Guard – Helps coordinate clean-up efforts

**Materials:**

Cocoa

Vegetable oil - **To mix oil:** add 3 tablespoons of vegetable oil to a coffee mug, add 2 tablespoons of cocoa, mix, then store in a container that will allow you to drop the oil in the Gulf of Mexico

Clear plastic storage or baking pan – 1 for each group

Laminated map of the Gulf of Mexico – 1 for each group

**Any of these materials for boom and absorbents:**

Pipe cleaners can be used to attach to the boom

Diapers

Panty-hose cut into 3-4" strips

Cotton balls and/or pads

Coffee filters

Shredded paper

Balloons can be used as a boat

Yarn or string to tie boom material

Pet and/or human hair

Paper towels

Hay

Mulch

Sargassam or seaweed

Sponges

Straws

Dawn dish detergent

Small pom-poms for marine animals (optional) (I drop these after the oil has spilled and the students are working to clean it up).

**Discussion points:**

- Disposal methods (make sure that you tell students that this is not oil from the Deepwater Horizon oil spill, we can dispose of the materials we used in the garbage. Oil is a hazardous waste and must be disposed of in a certified landfill.
- Have a list of products that are made from petroleum
- Discuss what materials they used to clean up the spill, what worked and did not work
- What type of impacts will the oil have on communities? Fisheries? Wildlife?

**Extensions:**

- Students can use the scientific method to determine how to clean up the spill
- Have students bring in materials to clean the spill

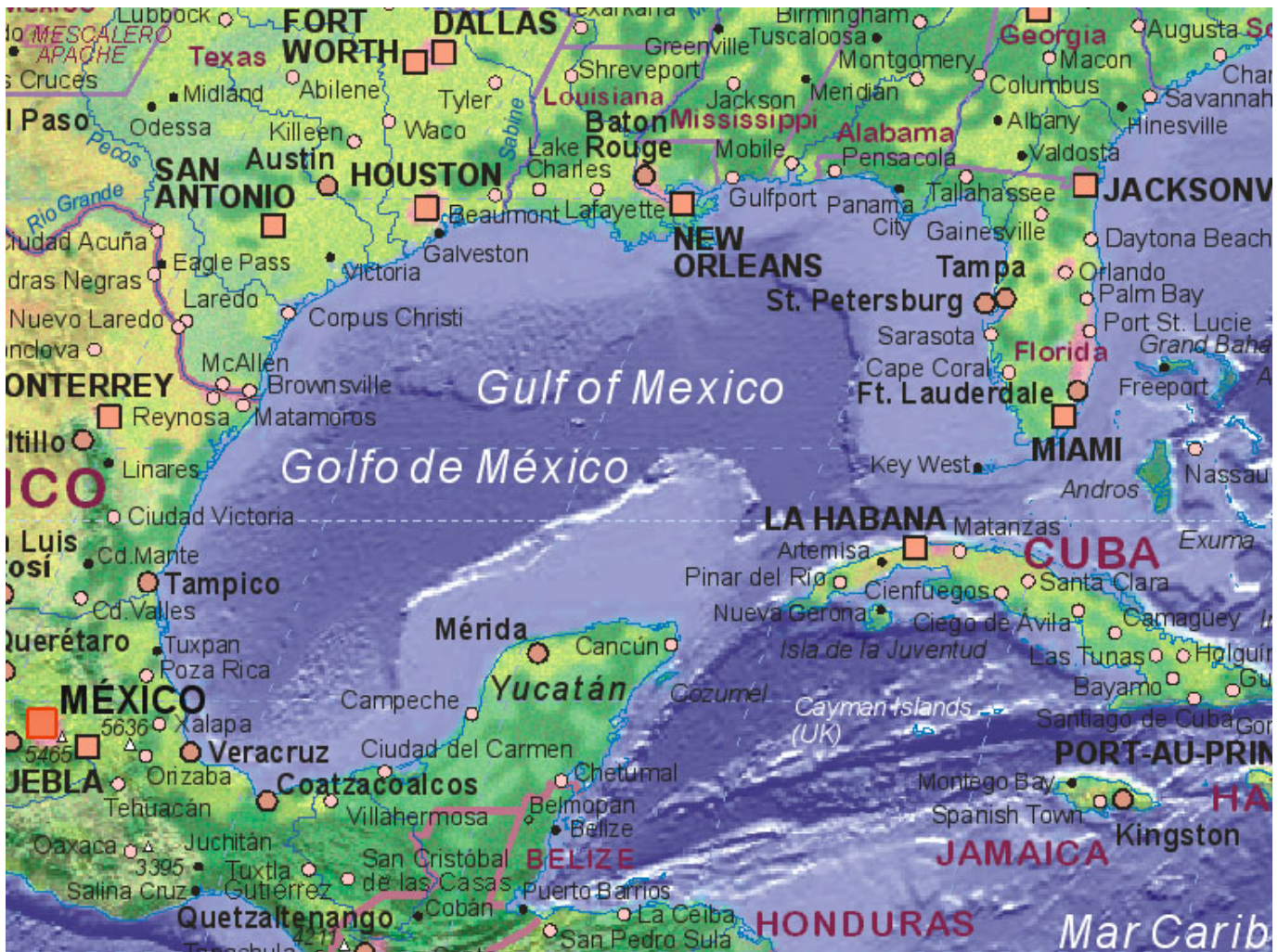


Pour water over the laminated map.



12.5" x 10" sterilite container, Wal Mart \$3.50

Use Google maps for a GOM map or use this and size in MS Publisher



Oil Spill Data Sheet (5<sup>th</sup> grade)

List group members (first name and last initial, separated by commas:

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1. Where approximately in the Gulf of Mexico is your oil spill located:

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2. List what types of absorbent your group used to remove the oil.

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3. How much oil did the absorbent clean-up? How long did it take?

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4. Does the absorbent material pick up water also? How can you tell?

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5. Does the absorbent material sink or float?

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6. Which absorbent worked the best?

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7. What other materials could you use as absorbents?

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8. List additional observations on the back of this sheet:

## Oil Spill Data Sheet (high school)

On your own sheet of paper list group members  
(first name and last initial, separated by commas):

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1. Where approximately in the Gulf of Mexico is your oil spill located?
  
2. Make a data table for your observations to include the following:
  - a. List what types of absorbents your group used to remove the oil.
  - b. How much oil did the absorbent clean-up?
  - c. How long did it take?
  - d. Does the absorbent material pick up water also? If yes, how much?
  - e. Does the absorbent material sink or float?
  - f. If it did not absorb, what did it do?
  
3. Which absorbent worked the best?
4. What other materials could you use as absorbents?
5. If the material did not absorb, could you still use it to clean up the oil? How?
6. Look back at each of the materials that you used and determine if it is Environmentally Friendly ☺ (look them up on the internet or use other resources)
7. Which materials were good absorbents but were not a good choice because they would have a negative impact on the environment? **Defend your answers with scientific facts not opinions! Use the internet or other resources if needed.**
8. How many of your animals were impacted?
9. List any additional observations you have.
10. Write a summary “Wrap Up” for this activity. (Your personal opinion is encouraged here!)

