



# DRILLING FOR OIL

*Classroom  
Activity*



# Classroom Activity --- Drilling for Oil

This activity is designed to help your students understand that oil is trapped beneath the surface of the earth's crust. Oil can be found and produced to meet the energy needs of the nation, but it takes much scientific knowledge to do so.

Certain geologic conditions are necessary to form pockets of oil. Geologists study the layers of the earth to determine where the right conditions exist to create a field of oil. In addition, they study rock formations and review seismic information to help them locate pockets of oil.

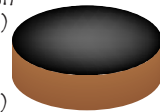
In this activity you will create a portion of the bottom of the Gulf of Mexico where there is an oil deposit. Your students will try to locate the oil by "drilling" for it.



## Materials Needed



Can of black shoe polish (represents oil deposit)



Sticks or pencils (represents drilling rig)

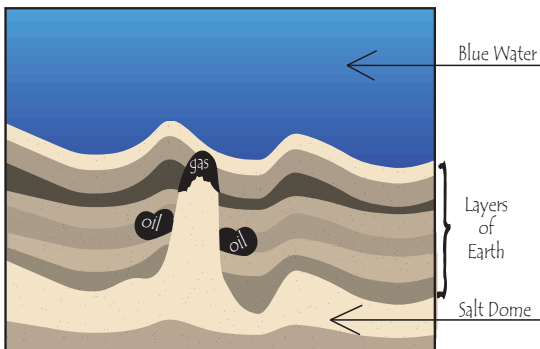
## Set Up

Tape the open can of shoe polish inside the bottom of the box

Fill the box with sand, making sure the can of polish is completely covered

## Basic Action

Allow the students a chance to drill for oil by inserting the stick straight into the sand and pulling it out. If they "find oil" the end of the stick will be black from the shoe polish. If they come up with a "dry hole" you may let them try again, or let another student try.



## Options

For upper classes, make up some clues to help the students find the oil deposit by using their knowledge of geology. You can read one clue at a time and allow a few students a chance to drill. If nothing is found, read a new clue until oil is found. Another option is to cut up the clues and pass them out individually in random order - one to a student. If your class is large, create teams. Let each team try to find the oil with one piece of information. If it is not found, let them form partnerships to share information and try again. When oil is found the group can explain to the class how they deduced where to find the oil.

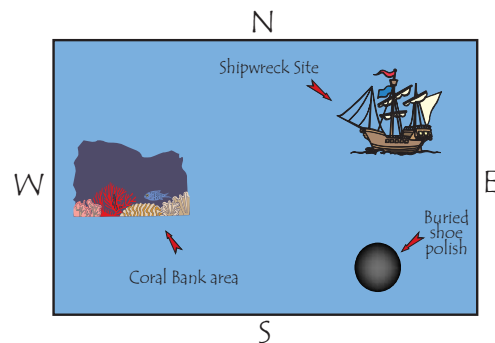


Let your students draw and color cross sections or layers of the earth on the side of the box.

Use more than one can of polish to make it easier to find the oil or cover part of the can to make the "oil" harder to find.

Label the sides of the box north, south, east, and west, and use the directions to give hints as to where the oil is located.

Label certain areas as protected from drilling because of important topographical structures (i.e., coral banks) or prehistoric or historic areas (i.e., Indian dwelling grounds or shipwrecks). MMS does not allow drilling in these areas.



Here are some specific clues if you set up your game in the following scenario.

Label the box north, east, south, west.

Bury the "oil" in the south-central area of the box.

Mark an area to the west as a coral reef by placing a rock or picture on surface.

Mark an area to the north as a shipwreck by placing a model or picture of a ship on surface.

### Sample Clues:

Over the past 200 million years thick layers of sediment have been deposited in the Gulf of Mexico.

Thick sands cover the western and southern areas.

A granite reef that supports abundant coral and other marine life is in the west.

It is protected by MMS and no drilling is allowed.

There are salt domes from the north-central to south-central areas.

There is a 16th-century shipwreck to the north. It is protected by MMS and no drilling allowed.

There are bulges and depressions on the sea floor.

Yellow, orange, red and purple shale is found in the northern areas.

