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Derricks to Desks
Attn: Greg Mudge

Extracting the Oil from the Ground

Lesson Objective: Students will observe how oil is extracted from the ground by observing water changes from liquid to a gas and back to a liquid.

Background Information: Water can be found in three natural physical states: liquid, gas, or a solid (ice). The students will observe water in two or its physical states and infer the third state, gas.

Materials: A glass or metal container (preferably glass) ice cubes, paper towels, water, food coloring, and a spoon.

Procedure: Fill the container about half full of water. Put a few drops of food coloring into the water. Note what color the water is. Add the ice cubes. Wipe the outside of the container making sure that it's dry. Observe the container for about five minutes. Water vapor from the container should escape out of the container and condense on the cool surface of the container. The colored water droplets should form on the outside of the container. This experiment or demonstration shows how water is used to extract the oil from the ground.

Extensions:
1) Density of oil compared to water (salad dressing and water in a container)
2) Kern County and the Petroleum Industry
3) Importance of petroleum - petroleum products
4) Video of *Kern County Oil The First 100 Years* by Western States Petroleum Association
5) Oil as an energy source
6) Geology - layers of the Earth (types of sediments)

Conclusion: Hopefully students will somewhat grasp the concept of how oil is extracted from the ground, but more importantly will understand how much oil affects everyday life.