

How can you increase oil production?

Materials:

Clear spray bottle
Gravel
Vegetable or other liquid cooking oil
Aquarium tubing
Graduated cylinder
Kitchen scale

Instructions:

Use the clear bottle to simulate a crude oil pumping station. Half fill the bottle with gravel. Weigh a half a cup of liquid cooking oil, then add it to the gravel in the bottle. Replace the spray top, making sure that the long bottom tube of the spray straw is as far down as possible.

Attach one end of a piece of aquarium tubing to the outside of the spray nozzle and put the other end of the tubing in the graduated cylinder. Pump the spray handle to increase the pressure within the bottle.

Weigh the graduated cylinder to determine how much oil you were able to pump out.

Hypothesize about different ways to increase the amount of oil you can pump from the bottle. How can you change the viscosity, temperature, or solution to increase the oil yield? Research how oil companies obtain oil from underground reservoirs or shale formations.

