

Making Waves

Objective	Learn that water and oil don't mix. Have some fun trying to make different types of waves.
Supplies	Water. Blue food coloring. Baby oil. One plastic pop bottle. ¹
Directions	<ol style="list-style-type: none">1. Fill the bottle half way with water.2. Add blue food coloring until you like the color. A few drops will work fine.3. Add the oil to the bottle all the way to the top.4. Seal the bottle tightly!5. Let the bottle sit a minute. What happens?6. Next, rock the bottle back and forth like a see-saw.7. Try shaking it!8. Then let it sit still for a little while and start all over again.
Outcome	When you rock the bottle, you make waves. They look kind of like ocean waves. When you shake the bottle, you make bubbles! But, if you let the bottle sit, the oil will go back to the top and the water will be at the bottom.
How does it work?	Water and oil do not mix. The oil floats to the top of the water. This is because it is less dense than water. Water molecules are more attracted to each other than to oil molecules, so they don't mix together even when you shake the bottle.

¹ You can use any size. But, if you use a two-liter bottle, you'll need a lot of oil. I use baby oil, but you could use something cheaper, like vegetable oil. It's important to economize, right?