Soda Fountain

Make a jet of soda pop that shoots into the air!

Activity Guide

Try This!

1. Stand the bottle of soda straight up, or hold it at an angle away from visitors.
2. Drop 4 or more Mentos® into the bottle.

What's Going On?

The Mentos candies cause the carbon dioxide gas in the soda to rapidly form large bubbles, creating a fountain of foamy soda that can rise many feet in the air.

The most important factors in this reaction are:

- The bumpy surface of the candies encourages bubble growth because it disrupts the polar attraction between water molecules, creating nucleation sites for the carbon dioxide gas to form bubbles.
- Diet Coke® works better than regular Coke because the artificial sweetener aspartame lowers the surface tension of the water, which allows large bubbles to form more easily and quickly.
- The coating on Mentos candy contains gum arabic, a surfactant that also reduces surface tension in water. (Mint Mentos have a rougher surface than fruit-flavored Mentos, so they work better.)
- Mentos are dense, so they sink rapidly. Bubbles forming at the bottom of the bottle rise quickly, encouraging further bubble growth as they rise.

Learning Objectives

- A bumpy surface on candy can disrupt the polar attraction between water molecules in soda pop.
- Carbon dioxide comes out of solution at nucleation sites on the bumpy surface of candy.

Materials

- 2 liter bottle of Diet Coke® (other diet colas will work)
- Roll of peppermint Mentos® candy
- 1 large plastic tarp or ground cover to protect your demo area

Background Information

Check out http://www.youtube.com/watch?v=aLo8FExLouA

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