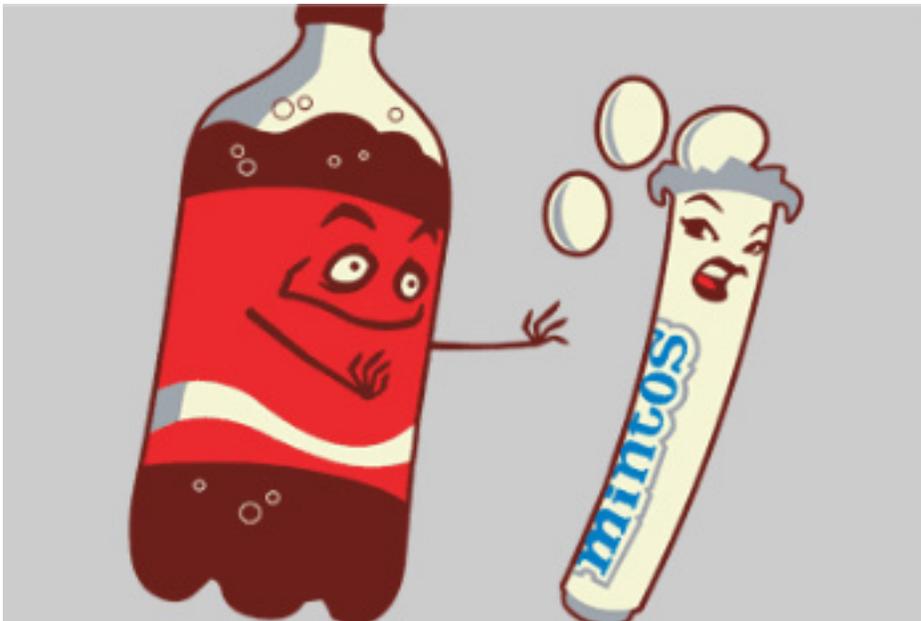


Science Project: Mentos and Diet Coke Geyser

What's better than **soda**, **candy** and **explosions**? What about **soda**, **candy** and **explosions** all at the same time? That's right. This science project may be the most exciting science project you can do and, to add sugar to the sweet, you can find all the materials at the corner store. Amazing!



Diet Coke and Mentos

Courtesy of holyoke.com

Although the explosion is simple to achieve there's quite a bit of interesting science going on in that bottle of cola, which makes this a **perfect science fair project**. Before we get to the exciting stuff where you get covered in soda, let's find out what's happening to make this all so exciting.

The Science:

You may have done a similar experiment where you combine **baking soda and vinegar**. Maybe you did this in a **volcano** model? That reaction is a

chemical reaction where a **new material** is formed. This reaction, the Mentos and Diet Coke reaction is a **physical reaction**, where all the pieces of the reaction remain but are simply **rearranged**.

The Soda:

The soda is filled with **carbon dioxide**. That's what gives the drink all those bubbles and what makes you burp when you drink too much soda. When the bottle is unopened the pressure from the bottle keeps the bubbles in the liquid. When you open a bottle of soda, depending on whether you shook it up beforehand, the bubbles stay in the solution because the surface tension of the liquid traps it in.

The Mentos:

Have you ever seen the surface of a Mentos? Have you ever *really* seen the surface of a Mentos? Though at first glance a Mentos may seem like it has a smooth surface, there are actually a whole bunch of tiny little **dimples** covering its surface. All these little dimples provide a place for the **carbon dioxide** in the soda to latch on and undergo a **physical reaction**. Scientifically speaking each little dimple on the Mentos is called a **nucleation site** (impress your science teacher with that one) where the carbon dioxide from the soda can attach and escape the liquid solution (the soda). Because there are so many dimples on the Mentos and because there is so much carbon dioxide in the soda solution the reaction is a big one, which you can't help but notice when you give this experiment a shot.

Materials:

- **2 liter bottle of Diet Coke** (it's said that the sugar substitute in Diet Coke kick starts the reaction and gives a bigger geyser)
- **1 package of Mentos** (the original mint flavor, the fruit flavored Mentos are covered in a wax which means there aren't as many nucleation sites on them)
- a place where you can get messy (like a picnic table outside or a driveway)

Procedure:

1. Place the bottle of Diet Coke squarely on a flat surface.
2. Open the bottle.
3. Drop the Mentos candies into the bottle.
4. Stand back and watch the geyser spray!

Experiment With It!

Any scientist will tell you that while it's fun to blow things up, you always need to make a **hypothesis** and **compare** a few things in order to have a successful experiment. What could make this a successful experiment? Well, what about trying **different types of soda**? Does regular Coke have the same reaction as Diet Coke? Is the geyser taller? What about the **candy**? Would a Skittle have the same reaction as a Mentos, what about a fruit flavored Mentos?

There are so many different variables you can put into place with this one and who knows, maybe you'll find a combination that yields an even more amazing eruption!

Have Your Say

What **candy-soda combination** do you think will yield the **tallest geyser**? Tell us what you think in the comments section below!