

Mama Teaches Presents: **The Mentos and Diet Soda Experiment**

Have you ever seen pictures of a volcano erupting? Well, today we are going to make soda erupt!

We are going to use soda and Mentos candy to create our geyser. By dropping an entire pack of Mentos into a 2 Liter bottle of diet soda at once, we will see the reaction of a process called nucleation.

Vocabulary Words

Nucleation
Nucleation Sites
Erupt
Geyser
Chemical reaction
Physical reaction

Read and Watch

You can read more about nucleation and nucleation sites on this website:

<http://www.stevespanglerscience.com/lab/experiments/original-mentos-diet-coke-geyser>

Be sure to watch the second video in from the left under the picture at the top.

You might also want to watch this explanation video from Myth Busters, a show that focuses on solving science-related problems:

<http://www.youtube.com/watch?v=LjbJELjLgZg&feature=youtu.be>

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Let's Experiment

To do our experiment we will need:

- 2 Liter bottle of diet soda
- 1 roll of original Mentos*
- 1 geyser tube
- [Tracking Sheet](#)
- [Observation Sheet](#)
- Safety Goggles

**You must use original Mentos, as the flavored ones have a waxy coating that hinders the reaction.*

How To:

1. Take out the [Mentos and Diet Soda Tracking Sheet](#). Fill in the column for the diet soda's name and your prediction as to what will happen based on what you read and watched on the websites above.
2. This experiment is messy, so you will want to do it outside in an open area away from anything that you do not want to get sticky. You will probably want to be in old clothes too...just in case.
3. Put on your safety goggles. Remember, safety first!
4. Open your roll of Mentos and insert them all into the geyser tube.
5. Open the bottle of soda and attach the geyser tube.
6. Stand back and pull the release string on the geyser tube to release the Mentos.
7. Snap a photo as the soda erupts.

Optional:

After you have experimented with one diet soda, try the experiment with different types of soda to see which ones has the most intense reaction.

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Let's Follow-Up!

Wasn't that neat?! Now, we are going to finish up by filling out the Outcome column on the [Tracking Sheet](#). If you experimented with more than one type of diet soda, rank them in order of which produced the most explosive eruption.

Complete the [Observation sheet](#) by drawing what happened. Label the parts of your drawing. Next, write a short (2-3 sentence) summary of what is being shown in your drawing.

Optional Discussion Questions:

1. Describe what happened in the experiment.
2. What could you have done differently?
3. What do you think would have happened if you used a different type of diet soda?
4. What do you think would have happened if you only used half of the pack of Mentos?
5. What do you think would have happened if the soda was flat?