

# LET'S GET CHEMICAL

**DAY ONE: CHEMISTRY IS A BLAST!**

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# CHEMISTRY IS A BLAST

## Welcome to Let's Get Chemical Day One!

Have you every seen the classic mentos and cola eruption? If you hae, you probably wondered how it works. We can use chemistry to explain what happens. We can thank carbon dioxide for this explosive reaction. Carbonated beverages are packed full of dissolved carbon dioxide gas, which forms bonds with the water. While the soda is in the bottle, the gas is kept in the solution by the bottle's pressurized conditions. When you pour soda into a glass, some gas escapes and forms a foam, but most of it stays trapped by the surface tension of the liquid.

To create bubbles, carbon dioxide has to interact with itself, which means the carbon dioxide's bonds with water in the cola must be broken. A chemical bond is the physical phenomenon of chemical substances being held together by attraction of atoms to each other through sharing, as well as exchanging, of electrons.

Mint candies (Mentos) can help with this. Although the candy may look smooth, if you looked at it under a microscope you'd see tiny bumps coating its entire surface. This rough surface allows the bonds between the carbon dioxide gas and the water to more easily break, helping to rapidly release carbon dioxide bubbles and cause the classic eruption. The speed at which the candies fall through the cola can affect how large the eruption is.

Today, you are going to see this chemical reaction for yourself by creating a cola and Mentos explosion! Let us know how it goes and share with us what you learned on the Microsoft Form and Flipgrid linked at the end of this handout. If you enjoy this activity and want to learn more, check out this video! <https://www.youtube.com/watch?v=LjbJELjLgZg>

## Materials:

- 2-Liter Bottle of Cola
- 1 Pack Original Mentos Candies
- 1 Piece of Paper
- Tape

## Instructions:

- Roll paper into a tube the same size as the mint candies, and tape securely.
- Take the supplies outside to an open space.
- Hold the bottle of diet cola away from you.
- Open the bottle and drop the mint candies into the tube and into the bottle.
- Stand back and observe!

## Vocabulary:

- Surface Tension: property of the surfact of a liquid that allows it to resist external force
- Chemical Bond: atoms stick together to form substances
- Physical Reaction: a change in the form of a chemical substance, but not its chemical composition.
- Chemical Reaction: one or more substances are converted into one or more substances.

