

**Project FOCUS  
Best Lessons  
KINDERGARTEN**

**Title of Lesson:** Mentos Geyser

**Theme:** Physical Science

**Unit Number:** 1      **Unit Title:** Physical Properties of Matter

**Performance Standard(s) Covered (enter codes):**

SKCS1

SKP1

**Enduring Standards (objectives of activity):**

**Habits of Mind**

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

**Content (key terms and topics covered):**

Bubbles, liquids and gases

**Learning Activity (Description in Steps)**

**Abstract (limit 100 characters):** This lesson shows how much gas (bubbles) is stored in soda.

**Details:** The thing that makes soda bubbly is invisible carbon dioxide gas, which is pumped into bottles at the bottling factory using tons of pressure. Until you open the bottle and pour a glass of soda, the gas stays suspended in the liquid and cannot expand to form more bubbles, which gases naturally do.

If you shake the bottle and then open it, the gas is released from the protective hold of the water molecules and escapes with a whoosh, taking some of the soda along with it. What other ways can you cause the gas to escape? Just drop something into a glass of soda and notice how the bubbles immediately form on the surface of the object.

When you drop the Mentos into the soda, the gelatin and gum arabic from the dissolving candy break the surface tension. Each Mentos candy has thousands of tiny pits all over the surface. These tiny pits are called nucleation sites- perfect places for carbon dioxide bubbles to form. As soon as the Mentos hits the soda, bubbles form all over the surface of the candy. Couple this with the fact that the Mentos candies are heavy and sink to the bottom of the bottle and you've got a double-whammy. When all this gas is released, it literally pushes all of the liquid up and out of the bottle in an incredible soda blast.

**Materials Needed (Type and Quantity):**

**Box or roll of Mentos**

**Diet Coke (regular will work, but is more sticky to clean up)**

**Notes and Tips (suggested changes, alternative methods, cautions):**

**This activity should be done outside in an open area. There are no safety issues except don't get sprayed in the eyes with the soda.**

**Sources/References:**

- 1)
- 2)
- 3)