Diet Coke and Mentos Experiments

Lesson plan developed by Sarita Cooper
Valley Oak Elementary School; Davis, California
Sept. 11, 2007

5th Grade California state standards: (there are standards that fit this activity for most grades)

6. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. (Not covered in this activity.)
b. Develop a testable question.
c. Plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.
d. Identify the dependent and controlled variables in an investigation.
e. Identify a single independent variable in a scientific investigation and explain how this variable can be used to collect information to answer a question about the results of the experiment.
f. Select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.
g. Record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.
h. Draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
i. Write a report of an investigation that includes conducting tests, collecting data or examining evidence, and drawing conclusions.

Materials:
Teacher: 1 2 liter bottle diet coke, 5 mentos, stop watches, goggles, rulers,
Students will bring materials which may include several types of sodas in 2 liter bottles, several types of candies,etc.

Procedure:
Day 1- Preparing for the experiment

1. Show students the video of the diet coke experiments at http://eepybird.com .
2. go outside and show the students what happens when you place 5 mentos in a bottle of diet coke
3. Come back into the class and brainstorm things that could change the results of the fountain. Write ideas on the board (ideas might include: type of candy, amount of mints, type of soda….)
4. pass out "Diet Coke and Mentos Experiments" packet and small post-its (in two colors) to each table.
5. Students write ideas from the board on post-its (one on each- USING ONLY ONE COLOR) and place on spaces provided in number 1 in packet