



STEM Activity Idea:

SODA AND CANDY SCIENCE

Suggested Program Level: Daisy

Use soda and candy to create some spectacular science experiments.

Supplies (one set for each girl, or small group of girls):

- Pop-Rocks
- balloon
- small bottle of soda (variety is good)
- funnel
- 1 tube of Mentos
- 2-liter Diet Coke (or other diet soda)
- Paper to form funnels for Mentos

Instructions:

1. This is an experiment best suited for the outdoors. Girls may get soda spilled on them, so this would be a perfect activity to do at the end of a day, or before a water activity.
2. Show the girls how to use a funnel to pour a packet of Pop-Rocks into the empty balloon.
3. Let the girls carefully attach the mouth of the balloon to the small open bottle of soda.
4. Tell the girls to lift the balloon so the candy drops into the soda, and then they will start to see a chemical reaction. The girls will need to watch the soda in the bottle, as well as notice what happens to the balloon that is still attached to the bottle.
5. Gather the girls after that experiment and explain that the candy and the soda reacted for form a chemical reaction that made the soda bubble, and the bubbles were captured by the balloon.
6. Prepare the girls for a bigger reaction, explaining that when you add Mentos to Diet Coke, the reaction is very fast and very easy to see. You may want to have adults or older girls help, and then it may be best to have each girl or group of girls go one at a time so the rest of the girls can watch the reaction.
7. Unwrap a tube of Mentos and open the bottle of Diet Coke. Use paper to form a funnel the Mentos can be poured into. Place the Diet Coke on the ground, and if it not stable someone will need to hold onto it to make sure it stays upright. (This person will get wet!)
8. Let one of the girls drop the Mentos into the paper funnel, and then watch the reaction!
9. After the materials have been cleaned up, discuss how the two soda/candy experiments are similar and how they are different.

Why?

Both types of candy contain ingredients that cause a chemical reaction with the carbon dioxide in the soda. If you use different sodas, there might be different levels of carbon dioxide that cause slightly different reactions. If you use a type of soda that has sugar in it for the Mentos experiment it will be a very sticky reaction.