Coke and Mentos

Special Interest Areas

ADVENTURE & SPORT

ARTS & LITERATURE

CREATING A BETTER WORLD

ENVIRONMENT

GROWTH & DEVELOPMENT

STEM & INNOVATION

Scouts VICTORIA

http://challengecards.scouthack.com/card/33/

Sections

Joey Scouts

Cub Scouts

Scouts

Venturer Scouts

Rover Scouts

SPICES Growth Areas

SOCIAL

PHYSICAL

INTELLECTUAL

CHARACTER

EMOTIONAL

SPIRITUAL

Challenge Areas

COMMUNITY

PERSONAL GROWTH

OUTDOOR

CREATIVE

Scout Method Elements

COMMUNITY INVOLVEMENT

LEARNING BY DOING

NATURE AND THE OUTDOORS

PATROL SYSTEM

PERSONAL PROGRESSION

PROMISE AND LAW

SYMBOLIC FRAMEWORK

YOUTH LEADING, ADULTS SUPPORTING

The Adventure

This is a classic chemical reaction with easy to obtain ingredients that makes a very satisfying result. With your patrol or unit, get ready to make some mess and learn about this reaction and why it occurs.

Plan

1. Investigate the ingredients of both coke and Mentos. What makes them different to other drinks or breath mints?
2. Investigate drink carbonation including how it is done and what molecules are involved.
3. Investigate the surface of objects and if smooth objects are really smooth. You might like to have a look at this website for more information on what a “smooth” Mentos looks like: https://www.acs.org/content/acs/en/education/whatischemistry/adventures-in-chemistry/experiments/mentos-diet-coke.html
4. Decide on a good location to perform this activity, keeping in mind that it is quite messy. Think about what you could do to minimise the mess and impact to the space or environment as things may get sticky and hard to clean.
5. Read the safety information and discuss with your leaders or another appropriate adult what safety equipment, precautions, and supervision may be required. Ensure that you have these safety measures in place before starting the ‘Do’ section. A risk assessment should also be completed.

Do

1. Make sure everyone knows the safety requirements and are wearing correct protective equipment.
2. Open a fresh bottle of (ideally) diet coke.
3. Quickly drop about 4 Mentos into the bottle of diet coke and stand back.
4. Watch what happens.
5. Clean up.
6. If you want, try the experiment again but with different drinks? Does it make a difference? Does it make a difference if regular coke is used rather than diet coke? What happens if you leave the lid of the bottle for a few minutes before adding the Mentos?

Review

1. Did the reaction occur how you thought it would? Why or why not?
2. What did you enjoy most about this activity and what is one thing you learnt from it?
3. What do you think would happen if you added more or less Mentos? Have a go.

Safety

This reaction occurs quite quickly. Care should be taken to avoid getting anything in eyes.

Variations

- Use the reaction to power something, like a rocket or a Lego car, and see who can get it to go the furthest.
- Create a device to help drop multiple Mentos into the bottle at once. How creative can you get?