Candle Chemistry

Sections

Joey Scouts
Cub Scouts
Scouts
Venturer Scouts
Rover Scouts

Scouts VICTORIA

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Challenge Areas

COMMUNITY
CREATIVE
OUTDOOR
PERSONAL GROWTH

Scout Method Elements

COMMUNITY INVOLVEMENT
LEARNING BY DOING
NATURE AND THE OUTDOORS
PROMISE AND LAW
PERSONAL PROGRESSION
PATROL SYSTEM
SYMBOLIC FRAMEWORK
YOUTH LEADING, ADULTS SUPPORTING

SPICES Growth Areas

CHARACTER
EMOTIONAL
INTELLECTUAL
PHYSICAL
SOCIAL
SPIRITUAL

The Adventure

With your patrol or unit, learn about candles including how to relight them without even touching the wick and what happens when you put a jar over it.

Plan

1. Investigate the components of a candle. What is it made out of and why does it burn and stay alight?
2. Investigate fire and what it needs to burn. What happens if you remove one of these elements? What is produced by fire? What chemical reactions are occurring?
3. 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. Light a tea candle and let it burn for about 30 seconds.
2. Blow out the flame. You should see wisps of smoke rising from the wick.
3. Place a lit match into this smoke but without touching the wick and observe what happens.
4. Light another tea candle and place a small jar over the candle and observe what happens.
5. Light a series of tea candles and, at the same time as the rest of your patrol, place jars of different sizes over the candles. Watch to see how long each one burns. If you are doing this by yourself, try each jar size separately and use a stopwatch to record how long it takes for the candle to extinguish.

Review

1. Did the fire react to the addition of the jar as you thought it would, why or why not?
2. Which jar allowed the candle to burn for the longest? Why do you think this is?
3. What did you enjoy the most about this experiment? What did you learn?

Safety

- Fire hazard: This activity involves fire and therefore there is a burn risk. Care should be taken, and supervision provided to prevent this.

Variations

- This challenge card pairs well with other fire-based challenge cards – especially 'Make Your Own CO2 Extinguisher' for a large program around fire and fire extinguishing.