

A Shocking Experience: Lightning in My Mouth!

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Purpose: How does lightning work?

Hypothesis:

Lightning is created by warm and cold air along with static electric charges colliding in the air.

Materials:

Mirror

A dark closet or room

Wintergreen or Peppermint Lifesavers

Procedure:

Stand in a dark room and count to exactly 2 minutes to adjust your eyes to the darkness. Then, pop the wintergreen candy or peppermint in your mouth. Next, make big bites and crack the candy very fast while looking in a mirror. You will know if you're doing it right if there are sparks in your mouth. Finally, record the data.

Data:

Table 1

Person 1	Person 2
Trial 1: No result	Trial 1: No result
Trial 2: Sparks	Trial 2: No result
Trial 3: Sparks	Trial 3: Sparks

Conclusion:

The trials that showed no result were due to not opening our mouths wide or fast enough for air to mix with the candy. When you bite the candy the sugar breaks apart. Then the sugar makes a bunch of electrical charges in your mouth when the sugar meets with the charged nitrogen in the air. They create a tiny spark of electricity. The data shows that the hypothesis is supported. To further support my hypothesis, additional trials may be done to see if I get a more consistent result.

Sources:

http://www.nasa.gov/audience/forstudents/k-4/home/F_What_Causes_Lightning_Flash.html

<http://www.weatherwizkids.com/experiments-lightning-mouth.htm>

<http://www.donnayoung.org/apologia/labhow-cr.htm>