Deep Sea Learning with Georgia Aquarium

EDUCATION
GEORGIA AQUARIUM

Activity Title: Making Your Own Light (Triboluminescence)

Background:

Triboluminescence: the emission of light resulting from something being smashed or crushed. It is similar to the build-up of electric charge that produces lightning. It occurs when molecules (such as the crystalline sugar molecules in a Wintergreen Lifesaver) are crushed and force some electrons out of their atomic fields. The free electrons bump into nitrogen molecules in the air and when they collide, the electrons deliver energy to the nitrogen molecules, causing them to vibrate. In this excited state and in order to get rid of extra energy, the nitrogen molecules emit light. This light is mostly ultraviolet (non visible) – but with this activity you can see some of the visible light produced by this chemical reaction!

Materials:

- Paper towel
- A dark room
- A mirror, or do the activity with a friend
- Wintergreen Lifesavers

Instructions:

1. First, make sure the inside of your mouth is dry by patting it with a paper towel.
2. Find a room that can be made very dark, with a friend or a mirror (a bathroom without windows is a great place!)
3. Turn out the lights and make the room as dark as possible.
4. Chew a piece of Wintergreen Lifesavers candy with your back teeth.
5. Open your mouth and look in the mirror; or show your friend.
6. Watch closely for the blue sparks that should emit!

Visit https://www.georgiaaquarium.org/at-home-learning-with-georgia-aquarium/ f
for more online resources to use at home!

As seen on Deep Sea Learning with Georgia Aquarium:
*https://www.youtube.com/user/**GeorgiaAquarium***