



Young Scientist Lab



WHELMERS

Triboluminescence

Detectable flashes of light are released as wintergreen-flavored candies are crushed in darkness.



WHAT YOU NEED

- wintergreen mint candies
- pliers or some other safe method of breaking the mints (you can even crush them with your teeth!)
- a very dark room

WHAT YOU DO

1. When you are in the darkened room, allow a moment for your eyes to adjust to the darkness.
2. Position yourself so you can observe the candies as they break. Crush the candies on a surface or using your teeth.
3. You should be able to observe small flashes of light emitted from the breaking candies.

WHAT HAPPENS

Ingredients used to make wintergreen mints form a crystal that characteristically fractures across points in the molecular structure creating sheer planes that leave a negative charge (excess of electrons) on one side of each break and a positive charge (deficiency of electrons) on the other side of the break. A pulse of invisible ultraviolet (UV) light is generated as the excess electrons jump back as the candy breaks. That UV pulse excites molecules in the mint to emit a pulse of visible light.