



GLOW STICK EXPERIMENTS

MATERIALS:

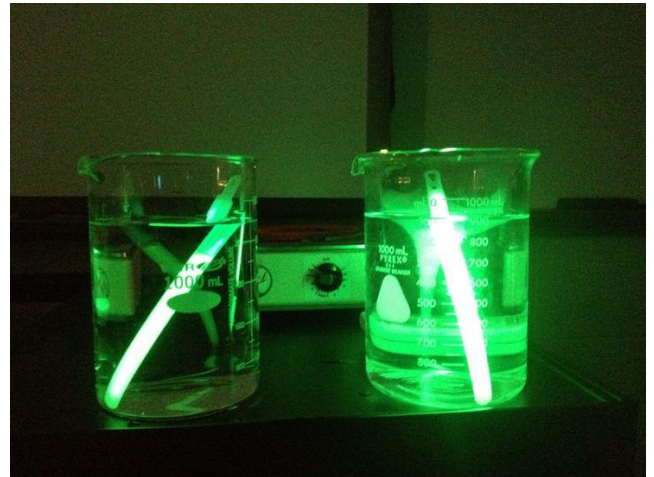
3 mini glow sticks
2 clear glasses
Cold water
Hot water

VOCABULARY:

luminescence	bioluminescence	chemiluminescence
fluorescence	phosphorescence	light
emit	hot	cold
temperature	molecules	Incandescence
Atoms	energy	compounds

DIRECTIONS:

1. Adult supervision is recommended for this experiment.
2. Heat up a cup of water in the microwave.
3. Fill a glass with the heated water.
4. Fill the second glass with cold water from the refrigerator.
5. Crack all 3 glow sticks by bending the glow stick until you hear a popping sound.
6. Place one glow stick in the cold water, place one in the hot water, and lay one of the table next to them.
7. Observe what happens to three glow sticks over the next 30 minutes.



THE STEAM BEHIND THE EXPERIMENT:

Light is a form of energy, which can be emitted through a variety of processes. Incandescence is the emission of light due to heat. Luminescence is any emission of light that is not caused by heating. Fluorescence and phosphorescence is the emission of light in response to radiation light. A glow stick uses a chemical reaction to excite the atoms in a material. The reaction between different compounds in a glow stick causes a substantial release of energy. Atoms in the materials are excited, causing electrons to rise to a higher energy level and then return to their normal levels. When the electrons return levels, they release energy as light. This process is called chemiluminescence. Before a glow stick is activated, two solutions are kept in separate chambers. Once the glow stick is cracked, the solutions mix and react. This experiment demonstrates how hot and cold temperatures can affect the chemiluminescence of glow sticks. Chemical reactions occur slower at lower temperatures and faster at higher temperatures. When you put a glow stick in cold water, the chemical reaction slows down but will last for a longer period of time. When you put a glow stick in hot water, the reaction speeds up but will be over quicker.

MAKE IT AWESOME:

Try placing the third glow stick in a glass of room temperature water for comparison. Leave all three out for 24 hours and keep checking on them to see what happens!

CONNECT WITH US ON SOCIAL MEDIA:



Scan QR code to follow account

TikTok

(727)385-8121



@SCIENCEISFORGIRLS

MakeBakeandDestroy@gmail.com



1. Open app
2. Go to
3. Tap to scan



@MakeBakeandDestroy

www.MakeBakeandDestroy.com



@MakeBakeandDestroy