

# Glow in the dark Mountain dew

Liz Skinner ACE Lead Instructor

I tried this experiment during our Super Science Saturday STEM lab; it was so much fun although we made rather a mess! 😊

I had the children wear goggles and gloves for safety.

The hardest part for me was cutting open the glow stick to access its contents. Please be careful!

## Supplies

Small bottles of Mountain Dew

Glow sticks (I used 1 per child)

Hydrogen Peroxide

Baking Soda

Dish soap

## Procedure

Empty most of the Mountain Dew from the bottle

Snap/cut open a glow stick

Add the contents of the glow stick to the Mountain Dew

Squirt in a little dish-washing liquid

Add 1 to 3 capfuls of hydrogen peroxide

Mix in a dash of baking soda

Seal the bottle and shake it up

Take them somewhere dark and listen to the oohs and aah's!

## Scientific Explanation

When a chemical reaction emits light, the type of science is called chemiluminescence

chem·i·lum·i·nes·cence

Is the emission of light during a chemical reaction that does not produce significant quantities of heat

You get Mountain Dew to glow using a fluorescent dye such as Luminol.

When Luminol is oxidized by the hydrogen peroxide, the electrons in the dye become excited and emit a glow! Different fluorescent dyes emit different colors.

Glow sticks contain luminol, a chemical substance used at crime scenes which glows when mixed with blood. This powdery substance made of carbon, hydrogen, oxygen, and nitrogen, is mixed with a liquid that contains hydrogen peroxide and a hydroxide, plus some other chemicals.

