

Name: \_\_\_\_\_

## Production of Light Activities



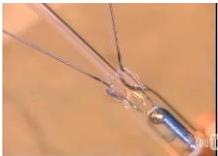
### Station 1: Incandescence, Fluorescence & LED

1. Turn on the 3 light bulbs and complete the table below

	Incandescent Bulb	Compact Fluorescent Bulb	LED Bulb
Sketch the <b>shape</b> of the bulb			
Turn <b>ON</b> the 3 light bulbs and complete the next sections			
<b>Temperature</b> after being on for 2 minutes <i>(use the thermometer)</i>			
<b>Brightness Scale</b> 1 - 5 Very dim – very bright			
Turn <b>OFF</b> the light bulbs			
<b>Cost</b> (Find in flyer)			
<b>PRO</b> (good thing)			
<b>CON</b> (bad thing)			

### Station 2: Electric Discharge

- Watch the video on EdPuzzle: **Neon Signs**
- Put the steps in order – write the numbers 1-5 on the lines



Fuse and add electrodes

\_\_\_\_\_



Bend and shape glass

\_\_\_\_\_



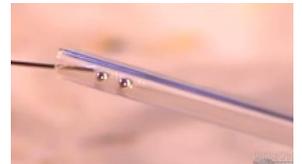
Inject with gas

\_\_\_\_\_



Dip in black paint

\_\_\_\_\_



Inject a drop of mercury

\_\_\_\_\_

### Station 3: Phosphorescence

- Shine a flashlight on the glow in the dark lizards for 1 minute then turn off the light.
- Cover the lizard with your hand but peek under to see it glowing
- How long does it stay glowing after you turn off the light?



Trial #1- Time \_\_\_\_\_

Trial #2 - Time \_\_\_\_\_

### Station 4: Bioluminescence

- Watch the video on EdPuzzle: **Bioluminescent Sharks**
- Why do you think that most creatures living deep in the ocean are bioluminescent?

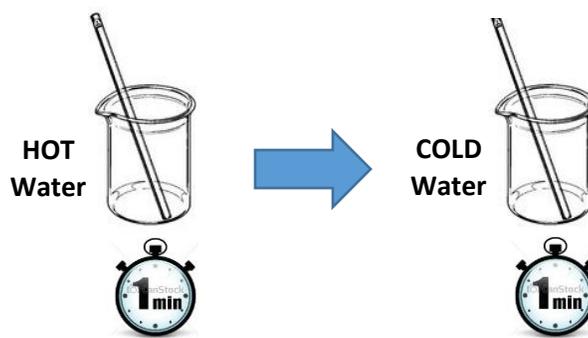
## Station 5: Fluorescence

1. Look at the objects under the “black” light to investigate fluorescence.
2. Complete the chart

Items	What happens when it is put under the UV light? <i>Be specific ie. what parts “glow”, what do you see?</i>	Why do you think fluorescence is used for this type of item?
Passport		
Money		
Laundry detergent		
Stamps		
Highlighter		

## Station 6: Chemiluminescence

1. Crack **ONE** glow stick.
2. Put it in hot water for 1 minute & observe.  
What happened?
3. Put the **SAME** glow stick in cold water & observe.  
What happened?



4. Why do you think putting glow sticks in the fridge or freezer makes them last longer?

## Station 7: LED

1. Look at the tube with red & green LED lights on top.
2. Shake it back & forth to see what happens.
3. Do both lights light up at the same time? \_\_\_\_\_  
Why do you think this happens?



## Station 8: Lasers **\*\*DO NOT SHINE THE LASER AT ANYONE!!!\*\***

1. Shine the flashlight & laser at a wall
2. Which one produces a brighter spot of light on the wall. \_\_\_\_\_
3. Which one shines farther? \_\_\_\_\_
4. Why can lasers be dangerous? (especially to eyes)

