Bioluminescent Works of Art

With items you have at home, make your own bioluminescent works of art. Bioluminescence is a light produced from a chemical reaction inside the body of a living organism. Many ocean animals, including comb jellies & sea slugs, have this ability. For more information about these amazing animals, watch our BIMS Bites Kids “Bioluminescence” episode on Youtube.

Materials
● For each paint color you will need:
○ 1-2 teaspoons of glow in the dark pigment powder
○ 3-4 tablespoons acrylic paint
○ Small jars or other containers for mixing
● Craft sticks for stirring
● Black or dark blue construction paper
● Flashlight
Optional: A BIMS Coloring Sheet printed on dark colored paper

Directions
1. Add 1-2 teaspoons of pigment powder to a container.
2. Slowly start adding your 3-4 tablespoons of paint to the container.
3. Mix everything together with the craft sticks.
4. Repeat steps 2 & 3 for each paint color in a new container.
5. Paint a picture of a fish or a jellyfish on the construction paper or paint one of the coloring sheets.
6. Allow your painting to dry.
7. “Charge” your painting with a flashlight or another light source like a window. The longer the painting “charges”, the longer the glow will last!
8. View your painting in a dark room. Look at it glow!

Tips
When making your paint, use a 1 part powder: 2 parts paint ratio. The more powder you use, the thicker the paint will get. However if you want to have a thinner consistency, add more paint.

Discussion Questions
● Why do we have to “charge” the painting for it to glow?
○ The dark pigment powder absorbs light and re-emits the light to create the glow.
● Name an animal that uses bioluminescence.
● Why would an animal living in the water need to glow?
○ Would this be helpful to those animals living near sunlight at the top of the water or those deep in the depths of the ocean? Why?
● Can you think of any bioluminescent animals that do not live in water? Give an example.
○ One bioluminescent animal that does not live in the water is a firefly. How do fireflies use their bioluminescence?

Modified from Messylittlemonster.com’s “Homemade Glow in the Dark Paint Recipe” (2020)