



Discover amazing things that glow bright in the dark and come to light! Probe the properties of light and explore some unusual applications of glow-in-the-dark technology!

SUMMARY:

This class concentrates on how we perceive light and its effect on objects. The concept of how colors are perceived in white light is presented using a hands-on, tricolor experiment. Next, the nature of *fluorescence* and *phosphorescence* are unveiled in a black light demonstration. A discussion on the commercial applications of glow-in-the-dark products is followed by a challenge to find fluorescing materials among common objects. *Chemiluminescence* is demystified using a flashlight analogy. The students take part in a role-playing game that provides them with an understanding of the security features used in making real money.

EDUCATIONAL VALUE:

This class introduces children to the luminescent properties of natural and synthetic materials. These concepts will be presented through a hands-on exploration of household objects, paper products, and earth minerals. The children will be given a brief history of fluorescence followed by a demonstration of chemiluminescence, the chemical aspect of luminescence. This program wraps up with a thought-provoking discussion and an activity on the applications of the science of light.

TAKE-HOME MESSAGE:

- 1 An object is the color that it reflects. All other colors, besides the one(s) the object reflects, are absorbed by the object.
- 2 An object that shines a different color under black light is fluorescent.
- 3 The only way to see fluorescence in an object is to shine a black light on it.

TAKE-HOME PRODUCT:

Currently in development, ask for details

NORTH CAROLINA ESSENTIAL STANDARDS:

- 4.P.3.2 Recognize that light travels in a straight line until it strikes an object or travels from one medium to another, and that light can be reflected, refracted, and absorbed.
- 5.P.2.3 Summarize properties of original materials, and the new material(s) formed, to demonstrate that a change has occurred.