Fernbank Science Center

Title: **D4402** See the Light
Level: 4th Grade – Discovery Only
Location: Local School
Type: Outreach
Length: 55 minutes
Limit: 30

Program Description

How does light behave when it passes through different objects or as it bounces off of an object? Why do we see objects in a particular color? What is the Electromagnetic Spectrum? Students will work in small groups using various color light sources to discover how light reacts with different objects, how color works, and how its reflectance can be important to science.

Georgia Standards of Excellence

S4P1. Obtain, evaluate, and communicate information about the nature of light and how light interacts with objects.

a. Plan and carry out investigations to observe and record how light interacts with various materials to classify them as opaque, transparent, or translucent.

b. Plan and carry out investigations to describe the path light travels from a light source to a mirror and how it is reflected by the mirror using different angles.

c. Plan and carry out an investigation utilizing everyday materials to explore examples of when light is refracted. (Clarification statement: Everyday materials could include prisms, eyeglasses, and a glass of water.)

Vocabulary

Color Absorption Opaque Translucent Reflection
Diffraction Transparent Angle of Reflection

Pre-Visit Activity

Students should have a basic understanding of the Electromagnetic Spectrum and that it includes all forms of energy given off by the Sun. Understand that visible light is a small part of the ES, and that white light is actually a combination of all colors in the visible spectrum. You may want them to view this video: https://www.youtube.com/watch?v=9Vsl0Iom3S0

Post-Visit Activity

Students can visit ExploreLearining.com and launch the Gizmos on Light and Color, then answer the assessment questions.

Resources

http://sciencenetlinks.com/lessons/light-1-making-light-of-science/

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