

Investigate how **light** travels in **waves**. The color of an object is determined by the **wavelengths**\* of light it reflects. Experiment with changing the color of an object by exposing it to, or introducing, different wavelengths of light.

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### TRY THIS

#### **Exhibits: Colored Windows, Comic Chameleon**

Compare what happens when you look through colored window panes. How do some objects change in appearance when you view them through different color filters? Does something similar or different happen when you change the light color at Comic Chameleon?

\* Find a diagram of wavelengths next to the Comic Chameleon.

Explore **reflection**, bouncing light off an object, and **refraction**, passing light through an object and changing its direction.

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### TRY THIS

#### **Exhibit: Light Rays**

Use the mirrors, prisms, and colored films to conduct an experiment that demonstrates how light passes through or bounces off different objects. How does the light change when there is a mirror, prism, or colored film (or nothing!) in front of it? Can you notice similarities and differences between the materials?

Discover how **white light** is made up of, and can be separated into, other colors of light.

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### TRY THIS

#### **Exhibit: Colored Shadows**

What colors are represented in the three buttons? What happens when you press one of the buttons? How does the color on the table change?

Repeat the experiment above, this time placing your hand or another object in the path of the light. What do you notice?

## **Dig Deeper**

### **Reflect and communicate**

Did you discover something new in this exhibit? Talk about what you discovered.

### **Make connections**

Visit the *Sound Gallery* to explore how sound, like light, travels in waves and the *Water Gallery* to create and observe waves. Look through the teleidoscope on the *Math Balcony* (on the 2nd floor). How does this device use mirrors to change your view of the sky?

### **Explore more at home**

Investigate together beyond the Discovery Museum. Continue asking questions and predicting outcomes: Did light shine through a window on your way home and if so, were you able to reflect or refract the light? How do different objects look when you observe them through mirrors, fabric, plastic, or other materials that you have at home?

*As you and your child engaged with the exhibits in the Light and Color Gallery you may have explored concepts that are connected to the Massachusetts Science and Technology/Engineering Curriculum Frameworks and specifically taught in Pre-Kindergarten, and Grades 1, 4, and 6.*