



# LASER CLASSROOM

Bringing STEM to light®

## BIG IDEAS

- Light does different things when it hits different kinds of materials - light can be absorbed (blocked) or transmitted (passed through).

## WHAT YOU'LL NEED

- Activity sheets
  - A clear plastic bag or transparency
  - A piece of cardboard
  - A piece of waxed paper
  - A set of Light Blox (one each red, green, blue)
- Waxed paper will allow some light to pass through, but it will also block some light.
  - Students may notice that light is also reflected by some of these materials as well. We will explore reflection in another activity.

## LET THE LIGHT SHINE!

Light travels until it encounters something. The following activity will allow students to explore some things that can happen to light when it encounters matter: it can be absorbed (blocked) by a material or it can be transmitted (allowed to pass through) the material.

Set up each group of students with one Light Blox with the slit caps removed, and Activity Sheet 4: Let the Light Shine. Have students complete their investigations, fill out their worksheets and then hold a classroom conversation that incorporates students' findings and covers the main discussion points.

## MAIN DISCUSSION POINTS

- Light that is absorbed loses light as it passes through a material, generally due to its conversion to other forms of energy such as heat. Students at this stage will experience absorption of light as light being blocked/stopped.
- A material that absorbs (blocks) light is called OPAQUE.

# ACTIVITY SHEET 4: LET THE LIGHT SHINE

**REMOVE the line cap from the front of the Light Blox.**

1. Turn on ONE Light Blox. Place the clear plastic bag in front of the light and point it towards the table or the wall. What happens to the light when it hits the bag?

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2. Turn on ONE Light Blox. Place the piece of waxed paper in front of the light and point it towards the table or the wall. What happens to the light?

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3. Turn on ONE Light Blox. Place the piece of cardboard in front of the light and point it towards the table or the wall. What happens to the light?

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