

Light & Color: Discovery Theater Explorations

Topics covered: It reflects, it refracts, it colors our world! Join us for a fun-filled program all about the science of light. Students participate in hands-on activities and exciting demonstrations to learn about the electromagnetic spectrum, properties of light, how light bends through different media and ways mirrors can alter our perceptions.

Ages: 3-5

Purchase Details: Science Lab Explorations - \$5 per student

Programs can be reserved by phone: 901-636-2362
Wednesday - Saturday, 10:30 am - 5:30 pm

Objectives:

1. Recognize the basic parts of the electromagnetic spectrum: ultraviolet, visible and infrared.
2. Distinguish among objects that are transparent, translucent and opaque.
3. Recognize the parts of a wave--crest and trough--and demonstrate how to measure wavelength.
4. Explore how light interacts differently with different types of matter.

Vocabulary:

visible light	trough
ultraviolet light	polarizing filter
infrared light	prism
electromagnetic spectrum	diffraction grating
transparent	absorption
translucent	reflection
opaque	refraction
wavelength	focal point
crest	dispersion

Fun Facts:

- Insects can see UV light that humans cannot. This bee can see UV light reflecting off the thistle.
- It takes just eight minutes for light to travel 93 million miles from the Sun to Earth. It would take 31 years for sound to travel that distance!
- Light can penetrate 1000 meters into the ocean, but most light is absorbed in the first 200 meters.

Web Resources:

Choose My Plate--<https://www.choosemyplate.gov/>

<https://www.choosemyplate.gov/resources/toolkits/myplate-mystate-toolkit-teachers>

Center for Disease Control--<https://www.cdc.gov/nutrition/index.html>

Kids Health--<https://kidshealth.org/en/kids/stay-healthy/?WT.ac=k-nav-stay-healthy>

FDA Food Resources--<https://www.fda.gov/food/resources-you-food/students-teachers>

Museum Resources:

- **For Your Classroom:** Prepare for (or follow-up) your field trip by borrowing a Pink Palace suitcase Exhibit. Student scan explore the functions of different wire, batteries and bulbs to create light using materials from the Electricity and/or the Electric Circuits Suitcase Exhibits.
- **In the galleries:** Visit our Cultural History Exhibits to see and important use of electromagnetic energy. Examine an early x-ray machine in our Saddlebags to Science 1830-1930 Gallery. Pair your Light & Color program with a show in the AutoZone Dome at the Sharpe Planetarium about light in the universe. Titles available for every grade level.

Where: Pink Palace Discovery Lab or Theater (for 33-100 students) or Classroom (for 15-32 students)

When: August-May Tuesday-Friday at 9:30 & 11 am 45-60 Minutes

- **Standards:**
 - (Grade Level) 4-5 (Science)
- **Tennessee: (Science)**
 - GRADE 3:
 - GRADE 4: 4.PS4
 - GRADE 5:
- **Mississippi: (Science)**
 - GRADE 3:
 - GRADE 4: P.4.6B
 - GRADE 5:
- **Arkansas: (Science)**
 - GRADE 3:
 - GRADE 4: 4-PS3, 4-PS4
 - GRADE 5:
- **Catholic Diocese: (Science)**
 - GRADE 3:
 - GRADE 4:
 - GRADE 5: