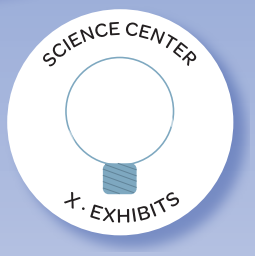


Science Center X: Light

Experimenting with light waves, and lack thereof, is a great addition to our Science Center.

NOTE: Only general ideas are given for this theme. Be sure to explore ideas online or at your local library.

Science Center X: Light

Steps

1. **Night sky.**
Many small centers focus on the night sky as their only exhibit. Painting a room dark and then using glow in the dark paint or items to show constellations from where you are can be educational. Throwing bean bag chairs or cushions around and sharing stories of how the constellations were formed can be an ongoing event as different cultures have their own stories. How might you incorporate astronomy into your Science Center?

2. **Shadows.**
Playing with shadows in a play or making silhouettes can be a more crafty activity, but it still involves light. This exhibit might be as simple as a blank wall with a bright light that the visitors walk between. You can do a smaller one with shadow puppets. How else might you "play" with shadows?

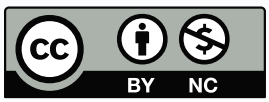
3. **Using light to tell time.**
You might make a sundial or shadow clock. You can go outside and show your visitors how to use their body and cardinal directions to tell time. Explore other ways to "tell time" in an exhibit or activity.

4. **Using light to measure distance.**
Have you noticed when lightning strikes, it takes a while for the sound to be heard? That's because light travels faster than sound. During a thunderstorm, count the seconds between the flash and the sound, then divide by 5 to determine how far away the lightning strike is in miles. You can also use lasers to measure distance. Explore this idea for possible inclusion in an exhibit.

5. **Lasers and more.**
Standard bulbs are not the only source of light. Lasers, pen lights, LEDs and more give you different kinds of light. Explore the different ways we create light. Perhaps make a timeline of the different types, do demonstrations of each, show what they're used for or even do experiments. What a bright exhibit! (Yes, pun intended.)

6. **Glow-in-the-dark and black light.**
Chemicals, paint, fake neon signs and more can all create a "glow-in-the-dark" effect. Of course, you also have black light which shows some things that are invisible in normal light. You can use these ideas as an exhibit or as an extra in other dark exhibits.

7. **Light and seek.**
Set up a play area for use of a regular or black flashlight. Put clues in that can only be found by the light. The clues can answer a question or lead the visitors out of the area. How else might you make this fun for your visitors?



8. **Reflections.**
We once visited a Science Center that built movable walls with mirrors on them so the kids could move them around and experiment with reflectivity. My daughter spent over half an hour moving around the mirrors to see what she could do. It looked completely homemade. The mirror frames were made with 1" wood and there were wheels that allowed the panels to move freely while still supporting the weight of the mirrors. How can you create something similar for your Science Center?

9. **Lens.**
A lens can be used to magnify items. You can purchase them or make them out of everyday items like a clear bowl with water. A comparison of different lenses might be an interesting exhibit. What else might you do?

10. **Bending light.**
Light can be bent when it travels through different substances like glass or water. It looks bent, but the scientific term is refraction. Experiment with ways to bend light. Show how convex and concave lenses work.

11. **Pinhole camera.**
Make a pinhole camera. Experiment with what you can see through a pinhole. Make a photo display of photos taken, describe how it works, etc. You can find images online that others have taken to see more about this process.

12. **Blindness.**
Give your visitors a taste of what it means not to see. Check out the "Science Center X: Senses" experiments for ideas to start.

13. **Explore more!**
Look for more ways to include light into your Science Center

Supplements

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SUPP_Exhibit Planner.pdf
Exhibit Planner — Pre-planning and testing questions
SUPP_Scientific Inquiry.pdf
Scientific Inquiry — Printables for use with any exhibit theme

Sites to Explore

www.exploratorium.edu/snacks/corner_reflector/index.html
www.exploratorium.edu/snacks/duck_into_kaleidoscope/index.html
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www.kidactivities.net/post/School-Age-Science-Center-Supply-List.aspx
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Check out larajla's Enrichment Project to start your own adventure.