

SCIMON'S LAB REPORT



LIGHT REFLECTION, TRANSMISSION, AND ABSORPTION

This week, students studied the nature of light. First, we explored reflection, transmission, and absorption of light. We talked about the differences between transparent, translucent, and opaque objects, and what happens to light as it hits each type of object. We examined the spectrum produced by white light and realized that white light is made of all the different colors of light mixed together. Students then saw colors which seemed to disappear when viewed through a color filter. Ask them how!



AFTER OUR VISIT

Students may extend this activity at home by experimenting with light filters: Learning about Light Away from the Classroom!

“Away from the Classroom” provides simple lesson plans, experiments, and projects that can be done at home using household items. It is available to teachers, students, and parents via <https://sciencefromscientists.org/sfsathome>.

WHAT WOULD HAPPEN IF YOU USE A BLUE FILTER TO LOOK AT A RED CIRCLE PAINTED ON BLACK PAPER?

The red circle only reflects red light. The blue filter only transmits blue light. So a red circle would look black if you view it through a blue filter. Therefore it would seem to “disappear” into the black paper, which also looks black.

DOES A TRANSLUCENT OBJECT (AN OBJECT THAT LETS SOME LIGHT THROUGH) CAST A SHADOW?

Yes, because a translucent object blocks some of the light. But because it also lets some light through, the shadow is lighter than the shadow cast by an opaque object (an object that blocks all of the light).

WHY DOES A BLACK T-SHIRT MAKE YOU WARMER THAN A WHITE T-SHIRT WHEN YOU WEAR IT ON A HOT, SUNNY DAY?

Black absorbs all light and white reflects all light. So all of the light energy of the sun is absorbed into a black t-shirt, and is converted into heat. This makes the black t-shirt warm up faster than a white t-shirt, which reflects the light energy.



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MASSACHUSETTS
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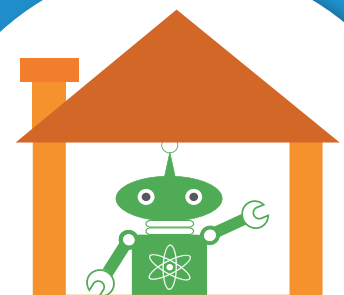


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