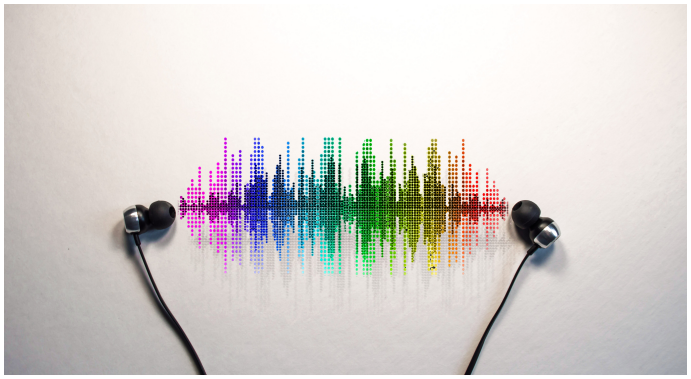
GRADE 1 SCIENCE

Exploring Light & Sound

FEEL THE VIBES!

In Unit One, we learn about the properties of light and sound. Did you know that not only are the characters in an animated movie created by artists, but so are all the sounds! There's such a thing as "sound effect artists." These artists make use of many different objects in order to make sounds such as rain, wind, thunder, robot voices, and more. Often they do this by creating vibrations, a back-and-forth movement. (There's a scientific idea we're laying the groundwork for: that vibrations and sounds are fundamentally connected.)

You can continue to foster your child's curiosity by sitting down together and watching this short video about some of the famous sound effects artists.



CAN YOU SEE THROUGH IT?

We will also explore one of the properties of how light interacts with materials: some materials allow light to pass through them ("transparent," or see-through), others do not ("opaque"), while others are only "kind of" see-through (translucent). Glass is an especially important material which enables us to have windows in our homes, windshields on our cars, eyeglasses, and more.

One thing you can do to further encourage your child's curiosity about this topic is to look together to find examples of translucent and transparent materials in your home. In addition to any objects made of glass, one example that might be unfamiliar and interesting to your child is any kind of *film*, if you happen to have photographs and video from before there were digital cameras (for example, the print negatives of film photographs, photographic slides, or the film from an old 8mm home movie).

Traffic lights are one way we use light to communicate so that we can drive and walk safely.

COMMUNICATING WITH LIGHT

Patterns of light can also be used to communicate complex messages. Later in this unit, your child will create their own codes, using different colors and patterns of light, to send secret instructions to a partner across the room.

They will become familiar with the idea that light can be used to send messages, as long as the receiver knows what the code means! One important code to introduce to your child is the 'SOS' Morse code – a series of three short, three long, and three short lights (or sounds) used to signal for help. Describe this simple code to your child, and see if they can identify the code in this video of a stranded boat. (It's best to watch with the sound off because the lights and sounds are not timed together!)

READERS' CORNER

Here are some book suggestions to learn more about light and sound:

Sounds All Around by Wendy Pfeffer, *Sonidos por todos partes* by Tish Rabe

Drum Dream Girl / *Una niña, un tambo y un sueño* by Margarita Engle

Flashlight / *Linterna mágica* by Lizi Boyd

Playing with Light and Shadows by Jennifer Boothroyd

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