Target Strategies
1st Grade - Sound and Light

Investigation 1

I can discuss common animals, machines, and objects that make sound.

I can produce sound with a cup, rubber band and flat stick.

I can find out that the sound is coming from a vibration and that vibrating objects always make sound.

I can find out that sound can be stopped by stopping the object's vibration.

I can identify an object by the properties of their sound.

I can investigate sound by using a tuning fork and tone generator.

I can identify sounds in my environment as either human generated or from a natural source.

Investigation 2

I can investigate two sound producing systems: the one-string guitar and the xylophone.

I can observe that sound can differ in volume over a range from soft to loud.

I can find the relationship between the amount of energy used to produce a sound and the volume of the sound.

I can observe the volume and pitch of the table fiddle.

I can record my understanding of the relationship between length and pitch.

I can create a spoon-gong system to produce a simple model of how sound travels.

I can engineer a device to send whisper messages over a distance.

Investigation 3

I can use a flashlight to find out what happens when you block light with an object.

I can observe what happens to a shadow when I move my light source from my object.

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Investigation 3

I can investigate other sources that can make shadows.

I can determine what objects are creating shadows as the sun being the light source.

I can investigate with different materials when they are placed in front of the flashlight.

I can distinguish between opaque, transparent and translucent materials.

I can determine that the darkest shadows are made by opaque objects, whereas translucent objects create lighter shadows.

Investigation 4

I can use a mirror to redirect a light source.

I can use a mirror to see things behind me, to the side of me and to see my own face.

I can talk about photographs were images were reflected from other smooth surfaces such as mirrors, glass and water.

I can investigate shapes within a black box.

I can design a way to redirect light with two mirrors.

I can explore ways to communicate long distances, using light.