



Content Area: Science

Grade Level: 1

Course Name: Science 1

**Course Description:** Students explore three non-sequential modules throughout the course of the year. The skills and concepts embedded into these units are tied to the New York State 5th Grade Science Assessment, however there is no state assessment at the end of this grade level.

Units Length of Time	Description
How Can We Light Our Way in the Dark? (8 weeks)	<p>Students gather evidence to help them explain how light can help animals, including humans, survive. Throughout portions of this unit, students will:</p> <ul style="list-style-type: none"><li>- use a computer simulation to investigate whether or not certain objects are light sources.</li><li>- plan and carry out a series of investigations about how a beam of light interacts with transparent, translucent, and opaque materials.</li><li>- describe the formation of shadows and reflection of light as effects of light shining on specific materials.</li><li>- read about the structures of some animals that take advantage of light to help them survive.</li><li>- read about the structures that make up lighthouses and the engineering problems that lighthouses are designed to solve.</li><li>- design a solution to the problem of student visibility on the way to and from school.</li><li>- investigate new materials to identify the effects of light hitting these materials and they explain how one material could help people find an exit door in an emergency.</li></ul>

Units Length of Time	Description
How Can We Send a Message Using Sound? (8 weeks)	<p>Students explore different ways of sending a message and organize them by how the message is sent (light or sound) and by distance. Throughout portions of this unit, students will:</p> <ul style="list-style-type: none"> <li>- use a drum to send a simple message using a pattern of sounds.</li> <li>- collect evidence through hands-on activities and text to build a claim that sound is caused by something vibrating.</li> <li>- build a model of a kazoo and use this to demonstrate that sound also causes vibration.</li> <li>- use a model of an eardrum to collect more evidence that sound causes vibration.</li> <li>- use a text to construct an explanation for how we hear.</li> <li>- make a simple musical instrument that can send a message a short distance.</li> </ul>
Learning to Think Like a Scientist Through the Study of Birds (8 weeks)	<p>Students will explore what scientists do and how they learn to think by studying various nonfiction texts, living and nonliving things, and characteristics of birds. Throughout portions of this unit, students will:</p> <ul style="list-style-type: none"> <li>- learn the differences between fiction and nonfiction books.</li> <li>- observe and model living and nonliving things.</li> <li>- observe and model characteristics of plants and what resources they need to survive.</li> <li>- collect evidence that all birds have four distinguishing characteristics.</li> <li>- design and engineer an eagle's nest which can withstand wind, movement, or water.</li> </ul>

NYS Standard	Links
	<p>Click <a href="#">here</a> to learn more about the New York State Science Learning Standards!</p>