

Unifying Theme: Sound

Essential Standard and Clarifying Objectives

2.P.1 Understand the relationship between sound and vibrating objects.

2.P.1.1 Illustrate how sound is produced by vibrating objects and columns of air.

2.P.1.2 Summarize the relationship between sound and objects of the body that vibrate – eardrums and vocal cords.

Unpacking

What does this clarifying objective mean a child will know, understand and be able to do?

2.P.1.1 Students know that vibrating objects produce sound. Students know that sound can be described in terms of pitch, which may be higher or lower. Students know that the length of an air column determines if its pitch is high or low. Students know that the shorter the air column is, the higher the pitch is. Students also know that the longer the air column is, the lower the pitch.

2.P.1.2 Students know parts of the vibrate in order to produce and receive sound. Our voices produce sound when air from the lungs passes over our vocal cords and makes them vibrate. The pitch and volume of the sounds humans can produce are changed by changing the properties of the vocal cords. Students know that sound waves are collected by the outer ear, which helps funnel sound to the eardrum. The eardrum vibrates when sound waves hit it, and causes the tiny bones in the middle ear to vibrate as well. The vibrations move through the bones to the inner ear where the sounds are changed into a form that is understood by the brain.