

**Format:** Virtual Science Academy (VSA)

**Grades:** 3-5 & 6-8

**Length:** 45 minutes

### General Description

Take your students' breath away as they get to peer inside the respiratory system! Your class will participate in interactive experiments and discussion, as well as guide the dissection of real sheep lungs.

### Big Ideas:

- Explore the structure of the respiratory system as well as the functions of its individual parts
- Explain why the respiratory system is needed for the body to survive and how it responds to basic bodily function and change.

### Key Concepts

- The primary function of the respiratory system is to take in oxygen and remove carbon dioxide from the body.
- The respiratory and circulatory systems work together to keep us alive and respond to various changes in the environment or bodily activity.

### GRADES 3-5

#### Colorado Academic Standards

- **4-LS2-GLE1:** Organisms have both internal and external structures that serve various functions.

#### Next Generation Science Standards

- **4-LS1-1** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [*Clarification Statement:* Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, **lung**, brain, and skin.]

### GRADES 6-8

#### Colorado Academic Standards

- **MS-LS1-GLE1** All living things are made up of cells, which is the smallest unit that can be said to be alive.
  - c. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. [*Clarification Statement:* emphasis is on the conceptual understanding that **cells form tissues and tissues form organs specialized for particular body functions**. Examples could include the interaction of subsystems within a system and the normal function of those systems.] [*Boundary Statement:* Does

not include the mechanism of one body system independent of others. Limited to the circulatory, excretory, digestive, **respiratory**, muscular, and nervous systems.]

**Next Generation Science Standards**

- **MS-LS1-3** Students who demonstrate understanding can: Use arguments supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.  
[*Clarification Statement:* Emphasis is on the conceptual understanding that cells form tissues and **tissues form organs specialized for particular body functions**. Examples could include the **interaction of subsystems within a system** and the **normal functioning of those systems**.]