Virtual Heart

Reviewed 2022

Format: Virtual Science Academy (VSA)
Grades: 3-5 & 6-8
Length: 45 minutes

General Description
Get your students’ pulse going with this live dissection experience! Your class will participate in interactive experiments and discussion, as well as guide the dissection of a real sheep heart.

Big Ideas:
- Explore the structure of the circulatory system as well as the functions of its individual parts
- Explain why the circulatory 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 circulatory system is to deliver oxygen and nutrient-blood throughout the body, while carrying away wastes for recycling.
- The circulatory system works in tandem with the respiratory system to circulate and exchange gases, and in tandem with the digestive system to circulate nutrients.
- The circulatory system responds to various changes in 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.]