

BODY WORKS

*This workshop targets learning outcomes for Essential Standards **5.L.1: Understand how structures and systems of organisms (to include the human body) perform functions necessary for life.***

SUMMARY:

In this class, children learn about the major body systems in the human body. They will simulate human digestion, see how a lung works, and look at blood typing while exploring the circulatory system. Students will identify the different systems in the body including the skeletal, muscular, nervous and digestive systems. They will also look at the different bones in the skeletal system. Finally, students will create model single cell organisms to see how these are able to function.

EDUCATIONAL VALUE:

Students know that unicellular organisms consist of a single cell and perform all life processes within a single cell. Students know that multicellular organisms and organisms that consist of more than one cell and have differentiated cells that perform specialized functions in the organism. Students know that many organisms - including humans - are multicellular. Students know that in complex multicellular organisms, only the surface cells that are in contact with the external environment are able to exchange substances with it. Cells within the organism are too far away from the environment for direct exchange. This is the reason multicellular organisms have developed transport systems. Students know that there are many systems in the human body. Students know that each system performs a special life process function and that the systems work together to maintain health and fitness.

TAKE-HOME MESSAGE:

- 1 There are many systems in the human body including circulatory, respiratory, skeletal, muscular, digestive, and nervous systems.
- 2 Each system performs a special life process function.
- 3 Unicellular organisms perform all life processes within a single cell.

TAKE-HOME PRODUCT:

Unicellular cell model



NORTH CAROLINA ESSENTIAL STANDARDS:

- 5.L.1.1 Explain why some organisms are capable of surviving as a single cell while others require many cells that are specialized to survive.
- 5.L.1.2 Compare the major systems of the human body (digestive, respiratory, circulatory, muscular, skeletal, and cardiovascular) in terms of their functions necessary for life.