



NC 8th Grade Life Science

The activities in this teacher’s guide were created by the Center for Inquiry-Based Learning (CIBL) to accompany the materials in the NC 8th Grade Life Science kit. The NC 8th Grade Life Science kit was specifically designed to meet the North Carolina Essential Science Standards for grade 8 life science. These materials and activities are available only with prior professional development. The goal is to help students deepen their understanding of underlying concepts through concrete experiences.

This pilot version is under development, and CIBL welcomes any feedback you are willing to provide. Contact CIBL using the “contact us” tab at <http://ciblearning.org>. If you have questions, feel free to call 919 294-9881.

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Correlation to the NC Essential Science Standard

- 8.L.1 Understand the structure and hazards caused by agents of disease that effect living organisms.
 - 8.L.1.1 Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
 - 8.L.1.2 Explain the difference between epidemic and pandemic as it relates to the spread, treatment and prevention of disease.
- 8.L.2 Understand how biotechnology is used to affect living organisms.
 - 8.L.2.1 Summarize aspects of biotechnology including:
 - Specific genetic information available
 - Careers
 - Economic benefits to North Carolina
 - Ethical issues
 - Implications for agriculture

**8.L.3 Understand how organisms interact with and respond to the biotic and abiotic components of their environment.**

8.L.3.1 Explain how factors such as food, water, shelter, and space affect populations in an ecosystem.

8.L.3.2 Summarize the relationships among producers, consumers, and decomposers including the positive and negative consequences of such interactions including:

- coexistence and cooperation
- competition (predator/prey)
- parasitism
- mutualism

8.L.3.3 Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide, and oxygen).

8.L.4 Understand the evolution of organisms and landforms based on evidence, theories and processes that impact the Earth over time.

8.L.4.1 Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.

8.L.4.2 Explain the relationship between genetic variation and an organism's ability to adapt to its environment.

8.L.5 Understand the composition of various substances as it relates to their ability to serve as a source of energy and building materials for growth and repair of organisms.

8.L.5.1 Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).

8.L.5.2 Explain the relationship among a healthy diet, exercise, and the general health of the body (emphasis on the relationship between respiration and digestion).

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