



## Grades 6–8

### 3.1.6-8.C Life Science: Structure, Function, and Information Processing

**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.

**Clarifying 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.

**Assessment Boundary:** Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<b>Engaging in Argument From Evidence</b> Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world(s). <ul style="list-style-type: none"> <li>Construct and present oral and written arguments supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem.</li> </ul>	<b>Structure and Function</b> <ul style="list-style-type: none"> <li>In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions.</li> </ul>	<b>Systems and System Models</b> <ul style="list-style-type: none"> <li>Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems.</li> </ul> <hr/> <b>Connections to Nature of Science</b> <b>Science is a Human Endeavor</b> <ul style="list-style-type: none"> <li>Scientists and engineers are guided by habits of mind such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.</li> </ul>

**Pennsylvania Context:** N/A

**PA Career Ready Skills:** Explain how expressive communication strategies can affect others.

### Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<b>Agriculture (AFNR)</b>	CS.02.02.01.a: Identify and summarize the components within AFNR systems (e.g., Animal Systems: health, nutrition, genetics, etc.; Natural Resources Systems: soil, water, etc.).
<b>Science, Environmental Literacy and Sustainability (NAAEE)</b>	5-8 Strand 2.1.B. Earth's living systems: Learners identify basic similarities and differences among a wide variety of living organisms. They explain ways that living organisms, including humans, affect the environment in which they live, and how their environment affects them.



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	CC.3.5.6-8.A: Cite specific textual evidence to support analysis of science and technical texts. CC.3.6.6-8.A: Write arguments focused on discipline-specific content. CC.1.4.7.S: Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade-level reading standards for literature and literary nonfiction.
PA Core Standards and Practices: Math	CC.2.4.6.B.1: Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions. CC.2.4.7.B.3: Investigate chance processes and develop, use, and evaluate probability models.
PA Standards: Social Studies	N/A
Educational Technology (ISTE)	1.3. Knowledge Constructor: Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.
Technology and Engineering (ITEEA)	STEL-2N: Illustrate how systems thinking involves considering relationships between every part, as well as how the system interacts with the environment in which it is used.