



Life Science

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STANDARDS		PAGE REFERENCES
Grade 6		
It is essential that these standards be addressed in contexts that promote scientific inquiry, use of evidence, critical thinking, making connections, and communication.		
6.1 Structure and Function: Living and non-living systems are organized groups of related parts that function together and have characteristics and properties.		
6.1L.1 Compare and contrast the types and components of cells. Describe the functions and relative complexity of cells, tissues, organs, and organ systems.	Student Edition: 14, 38-45, 51 <i>Lab 46</i> <i>MiniLab 40</i> Teacher Wraparound Edition: CFU 45; MAM 43; QD 39; RT 45; VL 41	

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<p>6.2 Interaction and Change: The related parts within a system interact and change.</p>	
<p>6.2L.1 Describe the relationships and interactions between and among cells, tissues, organs, and organ systems.</p>	<p>Student Edition: 14, 45, 302-308, 330, 485-486, 493, 525-529, 540-545, 550, 568-571, 577-580, 594-595, 622-623, 652-655 <i>Reading Check</i> 45 <i>Section Review</i> 45 (#3) Teacher Wraparound Edition: TTPK 38</p>
<p>6.2L.2 Explain how individual organisms and populations in an ecosystem interact and how changes in populations are related to resources.</p>	<p>Student Edition: 686, 688, 690-693, 698, 700 <i>Applying Science</i> 691 <i>Lab: Design Your Own</i> 702-703 <i>MiniLab</i> 689 <i>National Geographic</i> 694 Teacher Wraparound Edition: AC 694; TBI 682</p>
<p>6.3 Scientific Inquiry: Scientific inquiry is the investigation of the natural world based on observation and science principles that includes proposing questions or hypotheses, and developing procedures for questioning, collecting, analyzing, and interpreting accurate and relevant data to produce justifiable evidence-based explanations.</p>	
<p>6.3S.1 Based on observation and science principles propose questions or hypotheses that can be examined through scientific investigation. Design and conduct an investigation that uses appropriate tools and techniques to collect relevant data.</p>	<p>Student Edition: 7-9 <i>Lab: Design Your Own</i> 28-29, 200-201, 292-293, 418-419, 702-703 Teacher Wraparound Edition: AIL 28, 200, 292; QD 8</p>
<p>6.3S.2 Organize and display relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions.</p>	<p>Student Edition: 9-10 <i>Lab: Design Your Own</i> 28-29, 200-201, 292-293, 418-419, 702-703 <i>Lab: Use the Internet</i> 446-447 <i>Math Skill Handbook</i> 845-846 Teacher Wraparound Edition: AIL 28, 200, 292; QD 8</p>

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<p>6.3S.3 Explain why if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one variable.</p>	<p>Student Edition: 9 <i>Applying Science</i> 11 <i>Lab: Design Your Own</i> 28-29, 200-201, 292-293, 418-419, 702-703</p> <p>Teacher Wraparound Edition: AIL 28, 200, 292</p>
<p>6.4 <u>Engineering Design:</u> Engineering design is a process of identifying needs, defining problems, developing solutions, and evaluating proposed solutions.</p>	
<p>6.4D.1 Define a problem that addresses a need and identify science principles that may be related to possible solutions.</p>	<p>The following page references can be used to meet this standard.</p> <p>Student Edition: <i>Lab: Design Your Own</i> 56-57, 200-201 <i>Lab: Model and Invent</i> 230-231, 792-793 <i>Oops! Accident in Science</i> 504</p> <p>Teacher Wraparound Edition: AIL 56, 200; IN 504</p>
<p>6.4D.2 Design, construct, and test a possible solution to a defined problem using appropriate tools and materials. Evaluate proposed engineering design solutions to the defined problem.</p>	<p>The following page references can be used to meet this standard.</p> <p>Student Edition: <i>Lab: Design Your Own</i> 56-57, 200-201 <i>Lab: Model and Invent</i> 230-231, 792-793 <i>Oops! Accidents in Science</i> 504</p> <p>Teacher Wraparound Edition: AIL 56, 200</p>
<p>6.4D.3 Describe examples of how engineers have created inventions that address human needs and aspirations.</p>	<p>The following page references can be used to meet this standard.</p> <p>Student Edition: 47, 141-143, 582, 655 <i>Lab: Design Your Own</i> 56-57 <i>National Geographic</i> 48-49 <i>National Geographic: Unit Opener</i> 3 <i>Oops! Accidents in Science</i> 264, 504 <i>Time: Science and Society</i> 294, 762</p> <p>Teacher Wraparound Edition: ITI 762; TFYI 142; VL 49</p>

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<p>Grade 7</p> <p>It is essential that these standards be addressed in contexts that promote scientific inquiry, use of evidence, critical thinking, making connections, and communication.</p>	
<p>7.1 <u>Structure and Function</u>: Living and non-living systems are composed of components which affect the characteristics and properties of the system.</p>	
<p>7.1L.1 Compare and contrast sexual and asexual reproduction. Explain why reproduction is essential to the continuation of every species.</p>	<p>Student Edition: 17, 101-102, 104-105, 188, 210, 272-274 <i>MiniLab</i> 273 Teacher Wraparound Edition: AC 274; DIF 273; LD 100; TFYI 17; TTPK 272</p>
<p>7.1L.2 Distinguish between inherited and learned traits, explain how inherited traits are passed from generation to generation, and describe the relationships among phenotype, genotype, chromosomes, and genes.</p>	<p>Student Edition: 104-107, 110, 112, 126-128, 130-132 <i>National Geographic</i> 129 Teacher Wraparound Edition: IL 127; QD 131; TTPK 126; VL 127</p>
<p>7.2 <u>Interaction and Change</u>: The components and processes within a system interact.</p>	
<p>7.2L.1 Explain how organelles within a cell perform cellular processes and how cells obtain the raw materials for those processes.</p>	<p>Student Edition: 40-44, 74-78, 96-100 <i>Lab</i> 80 <i>MiniLab</i> 75, 101 <i>National Geographic</i> 79 Teacher Wraparound Edition: LD 76; TFYI 75; UAA 77</p>
<p>7.2L.2 Explain the processes by which plants and animals obtain energy and materials for growth and metabolism.</p>	<p>Student Edition: 42, 81-85, 303-309 <i>Lab</i> 86-87 <i>MiniLab</i> 305 Teacher Wraparound Edition: QD 306; SJ 82; TTPK 81; VL 85</p>

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<p>Grade 8</p> <p>It is essential that these standards be addressed in contexts that promote scientific inquiry, use of evidence, critical thinking, making connections, and communication.</p>	
<p>8.1 <u>Structure and Function</u>: Systems and their components function at various levels of complexity.</p>	
<p>8.1L.1 Explain how genetics and anatomical characteristics are used to classify organisms and infer evolutionary relationships.</p>	<p>Student Edition: 23, 25-26, 167-169, 170-173, 211, 241, 245, 334-335 <i>Lab 27</i> <i>National Geographic 244</i></p> <p>Teacher Wraparound Edition: AS 335; IL 23; TFYI 167</p>
<p>8.2 <u>Interaction and Change</u>: Systems interact with other systems.</p>	
<p>8.2L.1 Explain how species change through the process of natural selection. Describe evidence for evolution.</p>	<p>Student Edition: 154-161, 163-165, 167-169 <i>Applying Science 157</i> <i>Integrate Earth Science 167</i> <i>Lab 162</i> <i>Lab: Design Your Own 174-175</i> <i>Science Online 156, 165</i></p> <p>Teacher Wraparound Edition: DI 156; IL 160; TFYI 168</p>