



# Science

**LEVEL GREEN**

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STANDARDS	PAGE REFERENCES
<p><b>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.</b></p>	
<p>7.1P.1 Explain that all matter is made of atoms, elements are composed of a single kind of atom, and compounds are composed of two or more elements.</p>	<p><b>Student Edition:</b> 246-251 <i>MiniLab</i> 251 <b>Teacher Wraparound Edition:</b> D 248; QD 248, 249; TFYI 247, 249; TPK 246</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><b>Student Edition:</b> 281-282, 284-289 <i>Applying Science</i> 287 <i>Integrate Chemistry</i> 285 <i>MiniLab</i> 281 <i>National Geographic</i> 288 <b>Teacher Wraparound Edition:</b> A 288; CC 285; IL 282; TFYI 286; VPP 288</p>

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<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><b>Student Edition:</b>  306-312, 314-320, 321-323, 327, 328-328, 330-331  <i>Applying Math</i> 311  <i>Design Your Own Lab</i> 324-325  <i>Lab</i> 313  <i>Launch Lab</i> 305  <i>MiniLab</i> 308, 316  <i>National Geographic</i> 309  <i>Science Stats</i> 326</p> <p><b>Teacher Wraparound Edition:</b>  AIL 324; D 310; IL 307; MM 310; QD 311; TPK 306</p>
<p><b>7.2 <u>Interaction and Change:</u></b> The components and processes within a system interact.</p>	
<p>7.2P.1 Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.</p>	<p><b>Student Edition:</b>  684-689, 690-693, 694-700, 702-705, 709, 710-711, 712-713  <i>Applying Math</i> 686, 688, 695  <i>Design Your Own Lab</i> 706-707  <i>Lab</i> 701  <i>Launch Lab</i> 683  <i>National Geographic</i> 699  <i>MiniLab</i> 687, 704  <i>Science and Society</i> 708</p> <p><b>Teacher Wraparound Edition:</b>  A 693; D 708; IL 698; IM 691; LD 687; QD 688, 692, 696, 698; R 693; TFYI 696; TPK 694, 702</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><b>Student Edition:</b>  221-230, 254-258, 261-265  <i>Applying Math</i> 229  <i>Lab</i> 231, 260, 266-267  <i>Launch Lab</i> 245  <i>MiniLab</i> 225, 255  <i>National Geographic</i> 222-223, 259</p> <p><b>Teacher Wraparound Edition:</b>  A 224, 259; D 227; DI 226; IL 227, 256; LD 256; MM 228; TPK 221; VCMT 259</p>

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7.2L.2 Explain the processes by which plants and animals obtain energy and materials for growth and metabolism.	<p><b>Student Edition:</b> 261-265, 544-547 <i>Lab</i> 266-267 <i>National Geographic</i> 545</p> <p><b>Teacher Wraparound Edition:</b> A 262, 544, 545; CU 265; D 545; IL 546; LD 546; TPK 261, 544; QD 264; R 265; UA 262</p>
7.2E.1 Describe and evaluate the environmental and societal effects of obtaining, using, and managing waste of renewable and non-renewable resources.	<p><b>Student Edition:</b> 560-566, 568-576, 578-581, 585, 586-587, 588-589 <i>Applying Science</i> 580 <i>Lab</i> 577 <i>Launch Lab</i> 559 <i>MiniLab</i> 562, 569 <i>Model and Invent</i> 582-583 <i>National Geographic</i> 567 <i>Science Journal</i> 558</p> <p><b>Teacher Wraparound Edition:</b> A 561, 573; AP 558; D 563, 569; IL 574; QD 573, 575; R 566; SJ 564; TBI 558; TFYI 565; TPK 560; UA 561; VSE 567</p>
7.2E.2 Describe the composition of Earth's atmosphere, how it has changed over time, and implications for the future.	<p><b>Student Edition:</b> 90-97 <i>Applying Science</i> 94 <i>Foldables</i> 89 <i>Launch Lab</i> 89 <i>MiniLab</i> 95 <i>Reading Check</i> 93 <i>Science Online</i> 92</p> <p><b>Teacher Wraparound Edition:</b> CU 97; D 91, 92; DI 92; IL 94; IM 92; LD 94; MM 96; QD 93; R 97; TFYI 91, 93, 95; TPK 90</p>

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<p>7.2E.3 Evaluate natural processes and human activities that affect global environmental change and suggest and evaluate possible solutions to problems.</p>	<p><b>Student Edition:</b>  163-166; 560-566, 568-576, 578-581, 585, 586-587, 588-589  <i>Applying Science</i> 580  <i>Lab</i> 167, 577  <i>Launch Lab</i> 559  <i>MiniLab</i> 562, 569  <i>Model and Invent</i> 582-583  <i>National Geographic</i> 567  <b>Teacher Wraparound Edition:</b>  A 573; AP 558; D 563, 569; IL 574; QD 573, 575; R 566, 576; TFYI 565; UA 561; VSE 567</p>
<p>7.2E.4 Explain how landforms change over time at various rates in terms of constructive and destructive forces.</p>	<p>The rock cycle and erosion are discussed on the following pages:  <b>Student Edition:</b>  58-61, 575  <i>Launch Lab</i> 559  <i>MiniLab</i> 59  <i>National Geographic</i> 60  <b>Teacher Wraparound Edition:</b>  A 60; TFYI 61; TPK 58, 62; VRC 60</p>
<p><b>7.3 Scientific Inquiry: Scientific inquiry is the investigation of the natural world based on observation and science principles that includes proposing questions or hypotheses, designing procedures for questioning, collecting, analyzing, and interpreting multiple forms of accurate and relevant data to produce justifiable evidence-based explanations.</b></p>	
<p>7.3S.1 Based on observations and science principles propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools and techniques to collect relevant data.</p>	<p><b>Student Edition:</b>  12-18, 748-756  <i>Design Your Own Lab</i> 108-109, 324-325, 354-355, 390-391, 424-425, 550-551, 610-611, 674-675, 706-707  <i>MiniLab</i> 14  <i>National Geographic</i> 15  <b>Teacher Wraparound Edition:</b>  A 15; DI 15; IL 16; LD 14; TPK 12; VH 15</p>

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7.3S.2 Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions including possible sources of error.	<p><b>Student Edition:</b> 17-18, 748-756 <i>Communicating Your Own Data</i> 109, 355, 391, 675 <i>Design Your Own Lab</i> 108-109, 324-325, 354-355, 390-391, 424-425, 550-551, 610-611, 674-675, 706-707</p> <p><b>Teacher Wraparound Edition:</b> AIL 390, 675; EA 109, 325, 355, 391, 425, 675; QD 17</p>
7.3S.3 Evaluate the validity of scientific explanations and conclusions based on the amount and quality of the evidence cited.	<p><b>Student Edition:</b> 18, 755-756 <i>Design Your Own Lab</i> 108-109, 324-325, 354-355, 390-391, 424-425, 550-551, 610-611, 674-675, 706-707</p> <p><b>Teacher Wraparound Edition:</b> CYD 355</p>
	<p><b>7.4 Engineering Design: Engineering design is a process of identifying needs, defining problems, identifying constraints, developing solutions, and evaluating proposed solutions.</b></p>
7.4D.1 Define a problem that addresses a need and identify constraints that may be related to possible solutions.	<p><b>Student Edition:</b> <i>Science and Society</i> 80, 140, 204, 426, 708 <i>Science Online</i> 80, 140, 204, 426, 708</p> <p><b>Teacher Wraparound Edition:</b> CB 80, 140, 204, 426, 708; D 80, 140, 204, 426, 708; II 204, 426</p>
7.4D.2 Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.	<p><b>Student Edition:</b> <i>Model and Invent</i> 138-139, 202-203, 582-583 <i>Communicating Your Data</i> 583</p> <p><b>Teacher Wraparound Edition:</b> CYD 583; EO 139, 203, 583; PP 138</p>
7.4D.3 Explain how new scientific knowledge can be used to develop new technologies and how new technologies can be used to generate new scientific knowledge.	<p><b>Student Edition:</b> 321-323 <i>Integrate Science</i> 322 <i>National Geographic</i> 222-223 <i>Science and History</i> 238, 356, 392 <i>Science and Society</i> 140 <i>Science Stats</i> 326</p> <p><b>Teacher Wraparound Edition:</b> CB 140, 326, 392; D 140, 238, 356, 392; HS 238; TFYI 322; TPK 321</p>