



SOUTH DAKOTA
Science Standards Seventh Grade
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SEVENTH GRADE STANDARDS	REFERENCES
Goal 1 – NATURE OF SCIENCE Students will explore, evaluate, and communicate personal and scientific investigations to understand the nature of science.	
Indicator 1: Understand the nature and origin of scientific knowledge.	
✓ Describe societal response to major scientific findings or theories. Examples: cloning, stem cell research, biotechnology	SE: pages 657-658, 660 (Chapter 23, Section 2) <i>Time: Science and Society</i> page 294 (Chapter 10) TWE: TFYI page 21 (Chapter 1, Section 3) SJ page 101 (Chapter 4, Section 1) CDIV page 142 (Chapter 5, Section 3) CFU page 143 (Chapter 5, Section 3) DI page 294 (Chapter 10) ITI 294 (Chapter 10) <i>Reading Essentials</i> pages 320-322 <i>Reading and Writing Skill Activities</i> pages 51-52
✓ Investigate important contributions to the advancement of science from people of differing cultures, genders, and ethnicity. Example: Louis Pasteur-disease, Rachel Carson-ecology, Linnaeus-classification, Redi-biology, Darwin-evolution, Jane Goodall-zoology	SE: pages 19, 21 (Chapter 1, Section 3) pages 22-23 (Chapter 1, Section 4) page 51 (Chapter 2, Section 2) pages 110-111 (Chapter 4, Section 3) pages 127-130 (Chapter 5, Section 1) pages 155-157 (Chapter 6, Section 1) pages 657-658 (Chapter 23, Section 2) <i>National Geographic</i> page 20 (Chapter 1, Section 3) <i>National Geographic</i> page 659 (Chapter 23, Section 2) TWE: CC page 9 (Chapter 1, Section 1) CDIV page 10 (Chapter 1, Section 1) DIF page 114 (Chapter 4, Section 3) IC page 755 (Chapter 26, Section 3) <i>Chapter 1 (Exploring and Classifying Life) Fast File</i> pages 27, 31, 44 <i>Chapter 23 (Immunity and Disease) Fast File</i> page 43 <i>Content Outline for Teaching</i> pages 3, 17, 21 <i>Reading Essentials</i> pages 13, 15, 25, 26, 31, 63, 81-83, 320-322 <i>Study Guide and Reinforcement</i> pages 3, 6, 21

* available as a video lab

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Indicator 2: Apply the skills necessary to conduct scientific investigations.	
<p>1. (Ap) Conduct scientific investigations using given procedures.</p>	<p>SE: <i>Lab</i> page 80 (Chapter 3, Section 2) <i>Lab</i> pages 86-87 (Chapter 3) <i>Lab</i> page 310 (Chapter 11, Section 1) *<i>Lab</i> pages 318-319 (Chapter 11) *<i>Lab</i> pages 384-385 (Chapter 13) <i>Lab</i> pages 530-531 (Chapter 18) <i>Lab</i> pages 730-731 (Chapter 25) *<i>Lab</i> page 787 (Chapter 27, Section 2)</p> <p>TWE: LD page 76 (Chapter 3, Section 2) LD page 100 (Chapter 4, Section 1) AIL page 292 (Chapter 10)</p> <p><i>Chapter 1 (Exploring and Classifying Life) Fast File</i> pages 9-10 <i>Chapter 6 (Adaptations over Time) Fast File</i> pages 11-14 <i>Chapter 7 (Bacteria) Fast File</i> pages 11-12 <i>Chapter 10 (Plant Reproduction) Fast File</i> pages 9-12 <i>Chapter 16 (Animal Behavior) Fast File</i> pages 9-11 <i>Chapter 18 (Nutrients and Digestion) Fast File</i> pages 9-11 <i>Chapter 25 (The Nonliving Environment) Fast File</i> pages 13-16 <i>Chapter 26 (Ecosystems) Fast File</i> pages 9-10 <i>Chapter 27 (Conserving Resources) Fast File</i> pages 9-12 <i>Laboratory Activities Manual</i> pages 1-2, 17-20, 41-42, 51-54, 89-91, 95-97, 103-105 <i>Probeware Lab Manual</i> pages 1-4, 5-8, 9-11, 13-15, 17-20</p>
<ul style="list-style-type: none"> Use appropriate supportive technologies. 	<p>SE: *<i>Lab</i> page 46 (Chapter 2, Section 1) <i>Lab: Design Your Own</i> pages 56-57 (Chapter 2) <i>Lab</i> page 310 (Chapter 11, Section 1) <i>Lab: Design Your Own</i> pages 418-419 (Chapter 14) <i>Lab: Use the Internet</i> pages 446-447 (Chapter 15) <i>Lab: Use the Internet</i> pages 760-764 (Chapter 26) *<i>Lab</i> page 787 (Chapter 27, Section 2) <i>Technology Skills Handbook</i> 828-830 <i>Chapter 2 (Cells) Fast File</i> pages 9-12, 13-16 <i>Chapter 15 (Birds and Mammals) Fast File</i> pages 11-13 <i>Laboratory Activities Manual</i> pages 7-10, 11-14 <i>Probeware Lab Manual</i> pages 1-4, 5-8, 9-11, 13-15, 17-20 <i>Science Inquiry Lab Manual</i> pages 1-2</p>

SEVENTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Determine the limits of accuracy inherent in a particular measuring device or procedure. 	<p>SE: page 12 (Chapter 1, Section 1) <i>Lab: Design Your Own</i> pages 56-57 (Chapter 2) *<i>Lab</i> page 133 (Chapter 5, Section 1) *<i>Lab: Design Your Own</i> pages 174-175 (Chapter 6) <i>Lab</i> page 310 (Chapter 11, Section 1) *<i>Lab</i> page 501 (Chapter 17, Section 3) <i>Lab</i> pages 642-643 (Chapter 22) <i>Math Skills Handbook</i> 844</p> <p>TWE: AS page 51 (Chapter 2, Section 2) <i>Chapter 2 (Cells) Fast File</i> page 31 <i>Laboratory Activities Manual</i> pages 7-10 <i>Performance Assessment in the Science Classroom</i> pages 57-58 <i>Probeware Lab Manual</i> pages 1-4, 5-8, 9-11, 13-15, 17-20 <i>Science Inquiry Lab Manual</i> pages 33-34</p>
<ul style="list-style-type: none"> Control variables to test hypotheses by repeated trials. 	<p>SE: pages 8-9 (Chapter 1, Section 1) <i>Science Online</i> page 8 (Chapter 1, Section 1) <i>Lab: Design Your Own</i> pages 28-29 (Chapter 1) <i>Lab: Design Your Own</i> pages 292-293 (Chapter 10) <i>Lab: Design Your Own</i> pages 418-419 (Chapter 14)</p> <p>TWE: AIL page 28 (Chapter 1) AIL page 292 (Chapter 10) <i>Chapter 1 (Exploring and Classifying Life) Fast File</i> pages 9-10 <i>Chapter 8 (Protists and Fungi) Fast File</i> pages 9-10, 11-13 <i>Chapter 11 (Plant Reproduction) Fast File</i> pages 9-12 <i>Chapter 16 (Animal Behavior) Fast File</i> pages 9-11 <i>Chapter 18 (Nutrients and Digestion) Fast File</i> pages 9-11 <i>Chapter 27 (Conserving Resources) Fast File</i> pages 9-12 <i>Laboratory Activities Manual</i> pages 1-2, 51-55 <i>Science Inquiry Lab Manual</i> pages 5-6, 9-10</p>

SEVENTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Identify sources of experimental error. 	SE: * <i>Lab: Design Your Own</i> pages 174-175 (Chapter 6) <i>Lab</i> pages 530-531 (Chapter 18) <i>Lab</i> pages 642-643 (Chapter 22) TWE: EA page 175 (Chapter 6) EA page 531 (Chapter 18) EA page 643 (Chapter 22) The following activities are appropriate for a discussion of error analysis. <i>Chapter 25 (The Nonliving Environment) Fast File</i> pages 13-16 <i>Chapter 26 (Ecosystems) Fast File</i> pages 9-10 <i>Performance Assessment in the Science Classroom</i> pages 57-58 <i>Probeware Lab Manual</i> pages 1-4, 5-8, 9-11, 13-15, 17-20 <i>Science Inquiry Lab Manual</i> pages 33-34
<ul style="list-style-type: none"> Interpret to make predictions and/or justify conclusions. 	SE: <i>Lab</i> pages 86-87 (Chapter 3) * <i>Lab</i> pages 318-319 (Chapter 11) <i>Lab: Design Your Own</i> pages 418-419 (Chapter 14) <i>Lab</i> pages 730-731 (Chapter 25) <i>Chapter 6 (Adaptations over Time) Fast File</i> pages 11-14 <i>Chapter 11 (Plant Processes) Fast File</i> pages 11-14 <i>Chapter 25 (The Nonliving Environment) Fast File</i> pages 13-16 <i>Chapter 26 (Ecosystems) Fast File</i> pages 9-10 <i>Chapter 27 (Conserving Resources) Fast File</i> pages 9-12 <i>Laboratory Activities Manual</i> pages 17-20, 51-54 <i>Probeware Lab Manual</i> pages 1-4, 5-8, 9-11, 13-15, 17-20

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<ul style="list-style-type: none"> Use research methods to investigate practical and/or personal scientific problems and questions. 	<p>SE: pages 7-10 (Chapter 1, Section 1) <i>Lab: Design Your Own</i> pages 144-145 (Chapter 4) <i>MiniLab</i> page 498 (Chapter 17, Section 3) <i>MiniLab</i> page 515 (Chapter 18, Section 1) *<i>Lab</i> page 522 (Chapter 18, Section 1) <i>Lab: Model and Invent</i> pages 584-585 (Chapter 20) <i>MiniLab</i> page 660 (Chapter 22, Section 2) <i>Lab: Model and Invent</i> pages 792-793 (Chapter 27) <i>Chapter 20 (Respiration and Excretion) Fast File</i> pages 13-14 <i>Chapter 21 (Control and Coordination) Fast File</i> pages 9-12 <i>Chapter 27 (Conserving Resources) Fast File</i> pages 9-12 <i>Laboratory Activities Manual</i> pages 103-105 <i>Probeware Lab Manual</i> pages 5-8, 13-15 <i>Science Inquiry Lab Manual</i> pages 33-34</p>
<ul style="list-style-type: none"> Describe and demonstrate various safety factors associated with different types of scientific activity. 	<p>SE: page 13 (Chapter 1, Section 1) <i>Lab</i> pages 86-87 (Chapter 3) *<i>Lab: Design Your Own</i> pages 558-559 (Chapter 19) *<i>Lab</i> page 665 (Chapter 23, Section 2) <i>Science Skill Handbook</i> pages 811-813</p> <p>TWE: page 19T AS page 13 (Chapter 1, Section 1) <i>Chapter 1 (Exploring and Classifying Life) Fast File</i> pages 9-10 <i>Chapter 10 (Plant Reproduction) Fast File</i> pages 9-12 <i>Chapter 15 (Birds and Mammals) Fast File</i> pages 11-13 <i>Chapter 16 (Animal Behavior) Fast File</i> pages 9-11 <i>Chapter 18 (Nutrients and Digestion) Fast File</i> pages 9-11 <i>Laboratory Activities Manual</i> pages xv-xvii, 1, 7, 39-40, 41-42, 51-54, 89-90, 95-96, 103-104 <i>Probeware Lab Manual</i> pages 1-4, 9-11, 13-15, 17-20 <i>Reading Essentials</i> page 6 <i>Science Inquiry Lab Manual</i> pages iv-v <i>Study Guide and Reinforcement</i> page 1</p>

SEVENTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Demonstrate appropriate use of apparatus and technologies for investigations. 	<p>SE: *Lab page 46 (Chapter 2, Section 1) <i>MiniLab</i> page 50 (Chapter 2, Section 1) <i>Lab: Design Your Own</i> pages 56-57 (Chapter 2) <i>Lab: Design Your Own</i> pages 418-419 (Chapter 14) <i>Lab: Use the Internet</i> pages 446-447 (Chapter 15) <i>Lab: Model and Invent</i> pages 792-793 (Chapter 27) <i>Reference Handbook</i> page 847</p> <p>TWE: AIL page 56 (Chapter 2) AS page 57 (Chapter 2) <i>Chapter 2 (Cells) Fast File</i> pages 9-12, 13-16 <i>Chapter 8 (Protists and Fungi) Fast File</i> pages 11-13 <i>Chapter 15 (Birds and Mammals) Fast File</i> pages 11-13 <i>Chapter 25 (The Nonliving Environment) Fast File</i> pages 13-16 <i>Laboratory Activities Manual</i> pages vii-xi, 7-10, 11-14, 41-42 <i>Probeware Lab Manual</i> pages 1-4, 5-8, 9-11, 13-15, 17-20 <i>Science Inquiry Lab Manual</i> pages viii-ix, 1-2, 31-32</p>
<ul style="list-style-type: none"> Use proper safety procedures in all investigations. 	<p>SE: page 13 (Chapter 1, Section 1) <i>Lab</i> pages 86-87 (Chapter 3) *<i>Lab: Design Your Own</i> pages 558-559 (Chapter 19) *<i>Lab</i> page 665 (Chapter 23, Section 2) <i>Science Skill Handbook</i> pages 811-813</p> <p>TWE: page 19T AS page 13 (Chapter 1, Section 1) <i>Chapter 1 (Exploring and Classifying Life) Fast File</i> pages 9-10 <i>Chapter 10 (Plant Reproduction) Fast File</i> pages 9-12 <i>Chapter 15 (Birds and Mammals) Fast File</i> pages 11-13 <i>Chapter 16 (Animal Behavior) Fast File</i> pages Activity 9-11 <i>Chapter 18 (Nutrients and Digestion) Fast File</i> pages 9-11 <i>Laboratory Activities Manual</i> pages xv-xvii, 1, 7, 39-40, 41-42, 51, 89-90, 95-96, 103-104 <i>Probeware Lab Manual</i> pages 1-4, 9-11 <i>Reading Essentials</i> page 6 <i>Science Inquiry Lab Manual</i> pages iv-v <i>Study Guide and Reinforcement</i> page 1</p>

SEVENTH GRADE STANDARDS	REFERENCES
<ul style="list-style-type: none"> Wear appropriate attire. 	SE: page 13 (Chapter 1, Section 1) <i>Lab</i> pages 86-87 (Chapter 3) <i>*Lab: Design Your Own</i> pages 558-559 (Chapter 19) <i>*MiniLab</i> page 579 (Chapter 20, Section 2) <i>MiniLab</i> page 660 (Chapter 23, Section 2) <i>Science Skill Handbook</i> pages 811, 812 <i>Chapter 1 (Exploring and Classifying Life) Fast File</i> pages 9-10 <i>Laboratory Activities Manual</i> pages xv-xvi, 1, 41-42 <i>Probeware Lab Manual</i> pages 1-4, 9-11, 13-15 <i>Reading Essentials</i> page 6 <i>Science Inquiry Lab Manual</i> pages iv-v, 9-10, 11-12
<ul style="list-style-type: none"> Analyze the benefits and potential of scientific investigations. 	SE: <i>Lab: Design Your Own</i> pages 144-145 (Chapter 5) <i>Lab: Design Your Own</i> pages 200-201 (Chapter 7) <i>Lab: Use the Internet</i> pages 262-263 (Chapter 9) <i>Lab: Design Your Own</i> pages 672-673 (Chapter 23) <i>Lab: Use the Internet</i> pages 760-761 (Chapter 26) <i>Lab: Model and Invent</i> pages 792-793 (Chapter 27)
Goal 3 – LIFE SCIENCE	
Students will describe structures and attributes of living things, processes of life, and interaction with each other and the environment.	
Indicator 1: Understand the fundamental structures, functions, classifications, and mechanisms found in living things.	
<ul style="list-style-type: none"> (K) Identify basic cell organelles and their functions. 	SE: pages 39-44 (Chapter 2, Section 1) <i>*Lab</i> page 46 (Chapter 2, Section 1) <i>Visualizing Main Ideas</i> page 59 (Chapter 2, Chapter Study Guide) TWE: DIF page 42 (Chapter 2, Section 1) MAM page 43 (Chapter 2, Section 1) CFU page 45 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16, 19, 22, 27 <i>Content Outline for Teaching</i> page 5 <i>Reading Essentials</i> pages 19, 20-24 <i>Study Guide and Reinforcement</i> page 5 <i>Virtual Labs CD-ROM (Cells lab)</i>
<ul style="list-style-type: none"> Observe cells with a compound microscope. Example: cell membranes, cell wall, cytoplasm, vacuoles, nucleus 	SE: <i>*Lab</i> page 46 (Chapter 2, Section 1) <i>Lab: Design Your Own</i> pages 56-57 (Chapter 2) TWE: AC page 43 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Laboratory Activities Manual</i> pages 11-14

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<ul style="list-style-type: none"> Describe the function of the cell membrane to include active transport, passive transport, (diffusion, osmosis). 	SE: page 40 (Chapter 2, Section 1) pages 74-78 (Chapter 3, Section 2) *MiniLab page 75 (Chapter 3, Section 2) <i>National Geographic</i> page 79 (Chapter 3, Section 2) TWE: IL page 76 (Chapter 3, Section 2) LD page 76 (Chapter 3, Section 2) UAA page 77 (Chapter 3, Section 2) VL page 79 (Chapter 3, Section 2) <i>Chapter 3 (Cell Processes) Fast File</i> pages 9-10, 17, 18, 29, 47 <i>Content Outline for Teaching</i> pages 5, 11 <i>Laboratory Activities Manual</i> pages 15-16 <i>Probeware Lab Manual</i> pages 1-4 <i>Reading Essentials</i> pages 19, 21, 24, 40-44 <i>Study Guide and Reinforcement</i> page 10 <i>Virtual Labs CD-ROM (Cells lab)</i> <i>Virtual Labs CD-ROM (Cell Processes lab)</i>
<ul style="list-style-type: none"> Describe cell walls as providing support and shape. 	SE: page 39 (Chapter 2, Section 1) page 241 (Chapter 9, Section 1) TWE: UAA page 39 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Content Outline for Teaching</i> pages 5, 32 <i>Reading Essentials</i> pages 20, 24, 121 <i>Study Guide and Reinforcement</i> page 5 <i>Virtual Labs CD-ROM (Cells lab)</i>
<ul style="list-style-type: none"> Describe cytoplasm. 	SE: page 40 (Chapter 2, Section 1) MiniLab page 40 (Chapter 2, Section 1) *Lab page 46 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Content Outline for Teaching</i> page 5 <i>Reading Essentials</i> pages 19, 21, 24 <i>Study Guide and Reinforcement</i> page 5 <i>Virtual Labs CD-ROM (Cells lab)</i>
<ul style="list-style-type: none"> Describe vacuoles. 	SE: page 43 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Content Outline for Teaching</i> page 5 <i>Reading Essentials</i> pages 23, 122 <i>Virtual Labs CD-ROM (Cells lab)</i>
<ul style="list-style-type: none"> Describe the function of the nucleus. 	SE: page 40 (Chapter 2, Section 1) TWE: DI page 40 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Content Outline for Teaching</i> page 5 <i>Reading Essentials</i> pages 21, 24 <i>Study Guide and Reinforcement</i> page 5 <i>Virtual Labs CD-ROM (Cells lab)</i>

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√ DNA replication	SE: pages 111-112 (Chapter 4, Section 3) <i>MiniLab</i> page 111 (Chapter 4, Section 3) TWE: AS page 111 (Chapter 4, Section 3) DI page 112 (Chapter 4, Section 3) QD page 113 (Chapter 4, Section 3) RT page 115 (Chapter 4, Section 3) <i>Content Outline for Teaching</i> page 16 <i>Reading Essentials</i> page 63
√ protein synthesis (ribosomes)	SE: page 42 (Chapter 2, Section 1) pages 112-113 (Chapter 4, Section 3) TWE: MAM page 113 (Chapter 4, Section 3) VL page 113 (Chapter 4, Section 3) RT page 115 (Chapter 4, Section 3) <i>Content Outline for Teaching</i> pages 5, 16 <i>Reading Essentials</i> pages 22, 24, 64-65 <i>Study Guide and Reinforcement</i> page 15 <i>Virtual Labs CD-ROM (Cells lab)</i> <i>Virtual Labs CD-ROM (Cell Reproduction lab)</i>
√ transcription/translation	SE: pages 112-113 (Chapter 4, Section 3) TWE: MAM page 113 (Chapter 4, Section 3) VL page 113 (Chapter 4, Section 3) <i>Chapter 4 (Cell Reproduction) Fast File</i> pages 19, 27 <i>Content Outline for Teaching</i> page 16 <i>Reading Essentials</i> pages 64-65 <i>Study Guide and Reinforcement</i> page 15 <i>Virtual Labs CD-ROM (Cell Reproduction lab)</i>
√ endoplasmic reticulum	SE: page 43 (Chapter 2, Section 1) TWE: RC page 43 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Content Outline for Teaching</i> page 5 <i>Reading Essentials</i> pages 23, 24 <i>Study Guide and Reinforcement</i> page 5 <i>Virtual Labs CD-ROM (Cells lab)</i>
√ lysosomes	SE: page 44 (Chapter 2, Section 1) TWE: RC page 44 (Chapter 2, Section 1) <i>Content Outline for Teaching</i> page 5 <i>Study Guide and Reinforcement</i> page 5 <i>Reading Essentials</i> page 23
√ chloroplasts role in photosynthesis	SE: page 42 (Chapter 2, Section 1) page 82 (Chapter 3, Section 3) <i>Chapter 2 (Cells) Fast File</i> pages 13-1 <i>Chapter 11 (Plant Processes) Fast File</i> page 15 <i>Content Outline for Teaching</i> pages 5, 32, 39 <i>Reading Essentials</i> pages 21, 24, 121, 148-150, 151 <i>Study Guide and Reinforcement</i> page 11 <i>Virtual Labs CD-ROM (Cells lab)</i>

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√ mitochondria role in respiration	SE: page 42 (Chapter 2, Section 1) page 83 (Chapter 3, Section 3) TWE: TQA page 42 (Chapter 2, Section 1) <i>Chapter 2 (Cells) Fast File</i> pages 13-16 <i>Chapter 11 (Plant Processes) Fast File</i> page 15 <i>Content Outline for Teaching</i> pages 5, 12, 40 <i>Reading Essentials</i> pages 21, 24, 150, 151 <i>Study Guide and Reinforcement</i> pages 5, 11, 37 <i>Virtual Labs CD-ROM (Cells lab)</i>
2. (C) Identify and explain the function of the human systems and the organs within each system.	SE: pages 482-509 (Chapter 17) pages 523-529 (Chapter 18, Section 2) pages 538-565 (Chapter 19) pages 566-591 (Chapter 20) pages 592-619 (Chapter 21) pages 620-631 (Chapter 22, Sections 2 & 3) pages 652-656 (Chapter 23, Section 1) <i>Chapter 17 (Structure and Movement) Fast File</i> pages 9-11, 13-16, 21, 27, 28, 29, 30, 31, 49 <i>Chapter 18 (Nutrients and Digestion) Fast File</i> pages 21, 28, 45-46 <i>Chapter 19 (Circulation) Fast File</i> pages 9-12, 27, 49-50 <i>Chapter 20 (Respiration and Excretion) Fast File</i> pages 17, 19, 25, 26, 43-44 <i>Chapter 21 (Control and Coordination) Fast File</i> pages 9-12, 19, 27, 45-46 <i>Chapter 22 (Regulation and Reproduction) Fast File</i> pages 17, 18, 25, 26, 45 <i>Chapter 23 (Immunity and Disease) Fast File</i> pages 9-12, 18, 25, 45-46 <i>Content Outline for Teaching</i> pages 63-64, 65, 66-67, 70, 71-72, 77, 79, 80-81, 84, 85, 88 <i>Reading Essentials</i> pages 235-239, 240-243, 244-248, 256-260, 261-266, 272-274, 275-281, 282-286, 287-293, 301-303, 304-308, 315-319 <i>Study Guide and Reinforcement</i> pages 55, 56, 57, 60, 61, 65, 66, 67, 69, 70, 73

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<ul style="list-style-type: none"> • skeletal/support 	SE: pages 484-489 (Chapter 17, Section 1) <i>Applying Math</i> page 487 (Chapter 17, Section 1) <i>Lab: Use the Internet</i> pages 502-503 (Chapter 17) TWE: TTPK page 484 (Chapter 17, Section 1) QD page 485 (Chapter 17, Section 1) RT page 489 (Chapter 17, Section 1) <i>Chapter 17 (Structure and Movement) Fast File</i> pages 9-11, 27, 30, 49-50 <i>Content Outline for Teaching</i> pages 63-64 <i>Laboratory Activities Manual</i> pages 95-97 <i>Reading Essentials</i> pages 235-239 <i>Study Guide and Reinforcement</i> page 55 <i>Virtual Labs CD-ROM</i> (Structure and Movement lab)
<ul style="list-style-type: none"> • muscular 	SE: pages 490-491, 493-495 (Chapter 17, Section 2) <i>Launch Lab</i> page 483 (Chapter 17, Opener) <i>MiniLab</i> page 494 (Chapter 17, Section 2) TWE: DI page 491 (Chapter 17, Section 2) LD page 493 (Chapter 17, Section 2) TFYI page 493 (Chapter 17, Section 2) VL page 493 (Chapter 17, Section 2) <i>Chapter 17 (Structure and Movement) Fast File</i> pages 13-16, 28, 31 <i>Content Outline for Teaching</i> page 65 <i>Laboratory Activities Manual</i> pages 99-102 <i>Reading Essentials</i> pages 240-243 <i>Study Guide and Reinforcement</i> page 56
<ul style="list-style-type: none"> • digestive 	SE: pages 523-529 (Chapter 18, Section 2) <i>Launch Lab</i> page 511 (Chapter 18, Opener) <i>MiniLab</i> page 528 (Chapter 18, Section 2) TWE: TFYI page 527 (Chapter 18, Section 2) CFU page 529 (Chapter 18, Section 2) <i>Chapter 18 (Nutrients and Digestion) Fast File</i> pages 21, 45-46 <i>Content Outline for Teaching</i> page 70 <i>Reading Essentials</i> pages 256-260 <i>Study Guide and Reinforcement</i> page 60

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<ul style="list-style-type: none"> respiratory 	SE: pages 568-572 (Chapter 20, Section 1) <i>MiniLab</i> page 572 (Chapter 20, Section 1) TWE: TTPK page 568 (Chapter 20, Section 1) QD page 569 (Chapter 20, Section 1) <i>Chapter 20 (Respiration and Excretion) Fast File</i> pages 9-11, 13-14, 17, 18, 25, 27 <i>Content Outline for Teaching</i> page 77 <i>Laboratory Activities Manual</i> pages 119-122, 123-124 <i>Reading Essentials</i> pages 275-281 <i>Study Guide and Reinforcement</i> page 65 <i>Virtual Labs CD-ROM (Respiration and Excretion lab)</i>
<ul style="list-style-type: none"> circulatory 	SE: pages 540-545 (Chapter 19, Section 1) <i>MiniLab</i> page 541 (Chapter 19, Section 1) <i>Lab</i> page 549 (Chapter 19, Section 1) TWE: AR page 542 (Chapter 19, Section 1) QD page 542 (Chapter 19, Section 1) VL page 542 (Chapter 19, Section 1) DIF page 543 (Chapter 19, Section 1) <i>Chapter 19 (Circulation) Fast File</i> pages 9-12, 13-16, 19, 20, 22, 27, 49-50 <i>Content Outline for Teaching</i> pages 71-72 <i>Laboratory Activities Manual</i> pages 111-114 <i>Reading Essentials</i> pages 261-266 <i>Study Guide and Reinforcement</i> page 61
<ul style="list-style-type: none"> reproductive 	SE: pages 627-631 (Chapter 22, Section 2) <i>Lab</i> page 632 (Chapter 22, Section 2) TWE: DIF page 628 (Chapter 22, Section 2) VL page 629 (Chapter 22, Section 2) <i>Chapter 22 (Regulation and Reproduction) Fast File</i> pages 17, 18, 26 <i>Content Outline for Teaching</i> page 85 <i>Reading Essentials</i> pages 304-308 <i>Study Guide and Reinforcement</i> page 70
<ul style="list-style-type: none"> √ endocrine 	SE: pages 622-623, 626 (Chapter 22, Section 1) <i>National Geographic</i> pages 624-625 (Chapter 22, Section 1) TWE: DIF page 623 (Chapter 22, Section 1) VL page 625 (Chapter 22, Section 1) AS page 626 (Chapter 22, Section 1) <i>Chapter 22 (Regulation and Reproduction) Fast File</i> pages 18, 25, 45 <i>Content Outline for Teaching</i> page 84 <i>Study Guide and Reinforcement</i> page 69 <i>Laboratory Activities Manual</i> pages 133-135 <i>Reading Essentials</i> pages 301-303

SEVENTH GRADE STANDARDS	REFERENCES
√ immune	SE: pages 652-656 (Chapter 23, Section 1) <i>Lab: Design Your Own</i> pages 672-673 (Chapter 23) TWE: TFYI page 654 (Chapter 23, Section 1) AS page 656 (Chapter 23, Section 1) CFU page 656 (Chapter 23, Section 1) <i>Chapter 23 (Immunity and Disease) Fast File</i> pages 9-12, 18, 25, 45-46 <i>Content Outline for Teaching</i> page 88 <i>Laboratory Activities Manual</i> pages 139-142 <i>Reading Essentials</i> pages 315-319 <i>Study Guide and Reinforcement</i> page 73 <i>Virtual Labs CD-ROM (Immunity and Disease lab)</i>
√ nervous	SE: pages 594-595, 597-599 (Chapter 21, Section 1) <i>Launch Lab</i> page 593 (Chapter 21, Opener) <i>Science Online</i> page 599 (Chapter 21, Section 1) <i>Lab: Design Your Own</i> pages 612-613 (Chapter 21) TWE: SJ page 595 (Chapter 21, Section 1) IL page 597 (Chapter 21, Section 1) <i>Chapter 21 (Control and Coordination) Fast File</i> pages 9-12, 19, 27, 45-46 <i>Content Outline for Teaching</i> pages 80-81 <i>Critical Thinking/Problem Solving</i> page 2 <i>Laboratory Activities Manual</i> pages 125-128 <i>Reading Essentials</i> pages 287-293 <i>Study Guide and Reinforcement</i> page 67
√ excretory	SE: pages 577-580 (Chapter 20, Section 2) * <i>MiniLab</i> page 579 (Chapter 20, Section 2) <i>Lab</i> page 583 (Chapter 20, Section 2) TWE: VL page 578 (Chapter 20, Section 2) RT page 582 (Chapter 20, Section 2) <i>Chapter 20 (Respiration and Excretion) Fast File</i> pages 19, 26, 28, 43-44 <i>Content Outline for Teaching</i> page 79 <i>Reading Essentials</i> pages 282-286 <i>Study Guide and Reinforcement</i> page 66 <i>Virtual Labs CD-ROM (Respiration and Excretion lab)</i>

SEVENTH GRADE STANDARDS	REFERENCES
<p>√ integumentary</p>	<p>SE: pages 496-500 (Chapter 17, Section 1) <i>MiniLab</i> page 498 (Chapter 17, Section 1) *<i>Lab</i> page 501 (Chapter 17, Section 1) TWE: QD page 497 (Chapter 17, Section 1) RT page 500 (Chapter 17, Section 1) <i>Chapter 17 (Structure and Movement) Fast File</i> pages 21, 29 <i>Content Outline for Teaching</i> pages 66-67 <i>Probeware Lab Manual</i> pages 13-15 <i>Reading Essentials</i> pages 244-248 <i>Study Guide and Reinforcement</i> page 57</p>
<p>3. (Ap) Classify organisms by using the currently recognized kingdoms. Examples: monera, protista, plantae, fungi, animalia</p>	<p>SE: page 23 (Chapter 1, Section 4) page 186 (Chapter 7, Section 1) page 210 (Chapter 8, Section 1) page 222 (Chapter 8, Section 2) page 240 (Chapter 9, Section 1) page 330 (Chapter 12, Section 1) <i>Science Online</i> page 23 (Chapter 1, Section 4) <i>Reference Handbook</i> pages 848-851 (Student Resources) TWE: TTPK page 210 (Chapter 8, Section 1) TTPK page 222 (Chapter 8, Section 2) TTPK page 330 (Chapter 12, Section 1) <i>Chapter 7 (Bacteria) Fast File</i> page 13 <i>Chapter 12 (Introduction to Animals) Fast File</i> page 45 <i>Critical Thinking/Problem Solving</i> page 1 <i>Reading Essentials</i> page 16, 160-161 <i>Virtual Labs CD-ROM (Exploring and Classifying Life lab)</i></p>

SEVENTH GRADE STANDARDS	REFERENCES
<p>√ Identify and compare the basic structure and function of major taxa.</p>	<p>SE: pages 186-191 (Chapter 7, Section 1) pages 210-219 (Chapter 8, Section 1) pages 222-226 (Chapter 8, Section 2) pages 240-241 (Chapter 9, Section 1) pages 330-335 (Chapter 12, Section 1) pages 336-342 (Chapter 12, Section 2) pages 344-349 (Chapter 12, Section 3) pages 360-364 (Chapter 13, Section 1) pages 365-369 (Chapter 13, Section 2) pages 370-377 (Chapter 13, Section 3) pages 380-383 (Chapter 13, Section 4) pages 399-406 (Chapter 14, Section 2) pages 407-411 (Chapter 14, Section 3) pages 412-415 (Chapter 14, Section 4) pages 428-432 (Chapter 15, Section 1) pages 436-444 (Chapter 15, Section 2) <i>Lab</i> page 221 (Chapter 8, Section 1) *<i>Lab</i> page 343 (Chapter 12, Section 2) <i>Lab: Design Your Own</i> 350-351 (Chapter 12) <i>Lab</i> page 379 (Chapter 13, Section 3) <i>Reference Handbook</i> pages 848-851 (Student Resources) <i>Chapter 1 (Exploring and Classifying Life) Fast File</i> page 49 <i>Chapter 7 (Bacteria) Fast File</i> page 9, 16, 41 <i>Chapter 8 (Protists and Fungi) Fast File</i> pages 17, 18, 19 <i>Chapter 12 (Introduction to Animals) Fast File</i> pages 17, 42 <i>Chapter 13 (Mollusks, Worms, Arthropods, Echinoderms) Fast File</i> pages 9-12, 13-14, 17, 18, 19, 25, 26, 27, 28, 51-52 <i>Chapter 14 (Fish, Amphibians, and Reptiles) Fast File</i> pages 11-15, 19, 20, 21, 22, 28, 29, 30 <i>Chapter 15 (Birds and Mammals) Fast File</i> pages 11-13, 17, 18, 19, 20, 25, 26 <i>Content Outline for Teaching</i> pages 24-25, 28-29, 30-31, 32, 42-43, 44-45, 46, 47, 48, 49-50, 51, 52, 53, 54, 55, 56-57, 58-59 <i>Laboratory Activity Manual</i> pages 37-38, 69-72, 73-74, 75-76, 77-81 <i>Reading Essentials</i> pages 95-100, 105-113, 114-117, 121-122, 157 <i>Study Guide and Reinforcement</i> pages 25, 27, 28, 29, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49, 50, 51 <i>Virtual Labs CD-ROM (Exploring and Classifying Life lab)</i> <i>Virtual Labs CD-ROM (Mollusks, Worms, Arthropods, Echinoderms lab)</i> <i>Virtual Labs CD-ROM (Protists and Fungi lab)</i></p>

SEVENTH GRADE STANDARDS	REFERENCES
✓ Describe the levels of organization within organisms. Example: cells to tissues to organs to systems to organisms	SE: page 14 (Chapter 1, Section 2) page 45 (Chapter 2, Section 1) page 330 (Chapter 12, Section 1) TWE: RC page 45 (Chapter 2, Section 1) <i>Content Outline for Teaching</i> page 6 <i>Reading Essentials</i> page 23
4. (C) Describe and identify the structure of vascular and non-vascular plants. Example: structures of root stems, leaves and flowers	SE: pages 240-241 (Chapter 9, Section 1) pages 246-251 (Chapter 9, Section 2) pages 252-255 (Chapter 9, Section 3) <i>MiniLab</i> page 253 (Chapter 9, Section 3) TWE: TTPK page 240 (Chapter 9, Section 1) AC page 254 (Chapter 9, Section 3) <i>Chapter 9 (Plants) Fast File</i> pages 9-10, 15, 17 <i>Content Outline for Teaching</i> pages 32, 34 <i>Laboratory Activities Manual</i> pages 47-48 <i>Performance Assessment in the Science Classroom</i> pages 61-62 <i>Reading Essentials</i> pages 123, 124, 130-132 <i>Study Guide and Reinforcement</i> pages 30, 31
Indicator 2: Analyze various patterns and products of natural and induced biological change.	
1. (C) Distinguish between processes involved in sexual and asexual reproduction.	SE: pages 96-102 (Chapter 4, Section 1) pages 104-107 (Chapter 4, Section 2) page 273 (Chapter 10, Section 1) <i>MiniLab</i> page 101 (Chapter 4, Section 1) <i>MiniLab</i> page 273 (Chapter 10, Section 1) TWE: LD page 100 (Chapter 4, Section 1) IL page 102 (Chapter 4, Section 1) AS page 109 (Chapter 4, Section 2) <i>Chapter 4 (Cell Reproduction) Fast File</i> pages 17, 18, 25, 26 <i>Chapter 10 (Plant Reproduction) Fast File</i> page 15 <i>Content Outline for Teaching</i> pages 13-14, 15 <i>Reading Essentials</i> pages 51-57, 58-61, 135-136, 137 <i>Study Guide and Reinforcement</i> pages 13, 14
<ul style="list-style-type: none"> Model the process of cell division. Example: mitosis and meiosis 	SE: <i>MiniLab</i> page 101 (Chapter 4, Section 1) TWE: DIF pages 98, 99 (Chapter 4, Section 1) MAM page 107 (Chapter 4, Section 2) <i>Laboratory Activities Manual</i> pages 23-25

SEVENTH GRADE STANDARDS	REFERENCES
<p>√ Identify the role of genetics in the transmission of traits and characteristics in organisms. Example: Punnett Square, selective breeding, adaptations, natural selection, multiple traits, pedigree</p>	<p>SE: pages 126-128, 130-132 (Chapter 5, Section 1) pages 134-140 (Chapter 5, Section 2) pages 156-159 (Chapter 6, Section 1) <i>Launch Lab</i> page 125 (Chapter 5, Opener) <i>Science Online</i> page 127 (Chapter 5, Section 1) <i>Applying Math</i> page 131 (Chapter 5, Section 1) <i>*Lab</i> page 133 (Chapter 5, Section 1) <i>Applying Science</i> page 157 (Chapter 6, Section 1)</p> <p>TWE: TTPK page 126 (Chapter 5, Section 1) IL page 127 (Chapter 5, Section 1) QD page 139 (Chapter 5, Section 2) <i>Chapter 5 (Heredity) Fast File</i> pages 9-10, 15, 16, 24, 26, 27, 43-44, 45 <i>Chapter 6 (Adaptations Over Time) Fast File</i> pages 11-14, 25 <i>Content Outline for Teaching</i> pages 17, 18-19, 20 <i>Laboratory Activities Manual</i> pages 27-28 <i>Reading Essentials</i> pages 67-72, 73-77, 83-84 <i>Study Guide and Reinforcement</i> pages 17, 18, 19 <i>Virtual Labs CD-ROM (Heredity lab)</i> <i>Virtual Labs CD-ROM (Adaptations Over Time lab)</i></p>

SEVENTH GRADE STANDARDS	REFERENCES
Indicator 3: Analyze how organisms are linked to one another and the environment.	
<p>1. (Ap) Predict the effects of biotic and abiotic factors on a species survival. Example: adaptations, genetic defects, population disturbances, over-reproduction, animal behavior, flooding, global warming, oil spills, human activity</p>	<p>SE: pages 114-115 (Chapter 4, Section 3) pages 158-159 (Chapter 6, Section 1) pages 688, 690-694, 685 (Chapter 24, Section 2) page 712 (Chapter 25, Section 1) pages 778-786 (Chapter 27, Section 2) <i>Lab: Use the Internet</i> pages 116-117 (Chapter 6) <i>Lab: Design Your Own</i> pages 702-704 (Chapter 24) <i>Science Online</i> page 780 (Chapter 27, Section 2) *<i>Lab</i> page 787 (Chapter 27, Section 2)</p> <p>TWE: IM page 114 (Chapter 4, Section 3) DIF page 692 (Chapter 24, Section 2)</p> <p><i>Chapter 4 (Cell Reproduction) Fast File</i> page 30 <i>Chapter 6 (Adaptations Over Time) Fast File</i> pages 9-10, 11-14, 47 <i>Chapter 12 (Introduction to Animals) Fast File</i> pages 11-14 <i>Chapter 24 (Interactions of Life) Fast File</i> pages 13-16, 28, 49 <i>Chapter 26 (Ecosystems) Fast File</i> pages 9-10, 18, 25 <i>Chapter 27 (Conserving Resources) Fast File</i> pages 9-12 <i>Content Outline for Teaching</i> page 103 <i>Critical Thinking/Problem Solving</i> pages 12, 13, 21 <i>Laboratory Activities Manual</i> pages 65-68, 149-152, 157-159 <i>Probeware Lab Manual</i> pages 17-20 <i>Reading Essentials</i> pages 334-338, 343, 376-382 <i>Study Guide and Reinforcement</i> page 90 <i>Virtual Labs CD-ROM (The Nonliving Environment lab)</i></p>

SEVENTH GRADE STANDARDS	REFERENCES
<p>√ Describe processes by which matter and energy flow through an ecosystem. Example: photosynthesis, respiration, nitrogen cycle.</p>	<p>SE: pages 82-83 (Chapter 3, Section 3) pages 696-697 (Chapter 24, Section 3) pages 720-723, 725 (Chapter 25, Section 2) pages 726-729 (Chapter 25, Section 3) <i>National Geographic</i> page 724 (Chapter 25, Section 2) <i>Lab</i> pages 730-731 (Chapter 25)</p> <p>TWE: AS page 725 (Chapter 25, Section 2) DI page 727 (Chapter 25, Section 3) DIF page 727 (Chapter 25, Section 3)</p> <p><i>Chapter 3 (Cell Processes) Fast File</i> pages 19, 27, 44 <i>Chapter 24 (Interactions of Life) Fast File</i> pages 19, 28 <i>Chapter 25 (The Nonliving Environment) Fast File</i> pages 21, 28, 29, 46, 47-48 <i>Content Outline for Teaching</i> pages 93, 96, 97 <i>Critical Thinking/Problem Solving</i> page 22 <i>Reading Essentials</i> pages 46-47, 49, 339-342, 348-352, 353-356 <i>Study Guide and Reinforcement</i> pages 82, 83 <i>Virtual Labs CD-ROM (Interactions of Life lab)</i></p>
<p>√ Use geospatial technologies to investigate natural phenomena. Example: GPS, GIS, remote sensing</p>	<p>The following activities can be used when discussing the technology listed in the objective.</p> <p>SE: <i>Launch Lab</i> page 711 (Chapter 25, Opener) <i>Lab</i> page 752 (Chapter 26, Section 2) <i>Lab: Use the Internet</i> pages 760-761 (Chapter 26)</p> <p>TWE: QD page 685 (Chapter 24, Section 1) <i>Chapter 9 (Plants) Fast File</i> page 28</p>

SEVENTH GRADE STANDARDS	REFERENCES
Goal 5 – SCIENCE, TECHNOLOGY, ENVIRONMENT AND SOCIETY	
Students will identify and evaluate the relationships and ethical implications of science, upon technology, environment, and society.	
Indicator 1: Analyze various implications/effects of scientific advancement within the environment and society.	
<p>1. (C) Describe how science and technology are used to solve problems in different professions and businesses. Examples: GPS/GIS, agriculture and genetics, medical and biotechnology (EKG), food industry and chemistry</p>	<p>SE: page 50 (Chapter 2, Section 2) pages 141-143 (Chapter 5, Section 3) pages 788-791 (Chapter 27, Section 3) <i>National Geographic</i> pages 48-49 (Chapter 2, Section 2) <i>Oops! Accidents in Science</i> page 264 (Chapter 9) <i>Time: Science and Society</i> page 294 (Chapter 10) <i>Time: Science and Society</i> page 762 (Chapter 26)</p> <p>TWE: IC page 50 (Chapter 2, Section 2) VL page 142 (Chapter 5, Section 3) CDIV page 142 (Chapter 5, Section 3) CFU page 143 (Chapter 5, Section 3) <i>Chapter 5 (Heredity) Fast File</i> pages 25, 28 <i>Chapter 22 (Regulation and Reproduction) Fast File</i> pages 28, 29 <i>Chapter 23 (Immunity and Disease) Fast File</i> page 28 <i>Chapter 24 (Interactions of Life) Fast File</i> page 31 <i>Content Outline for Teaching</i> page 20 <i>Critical Thinking/Problem Solving</i> pages 3, 4, 8, 9, 18 <i>Reading Essentials</i> pages 31, 78-80 <i>Reading and Writing Skill Activities</i> pages 51-52 <i>Study Guide and Reinforcement</i> page 19</p>
Indicator 2: Analyze relationships/interactions among science, technology, environment, and society.	
<p>1. (Ap) Given a scenario, predict the consequence(s) of human activity on the local, regional, or global environment. Example: Missouri River dams and water needs</p>	<p>SE: <i>Lab</i> page 752 (Chapter 26, Section 2) <i>Launch Lab</i> page 769 (Chapter 27, Opener) <i>MiniLab</i> page 772 (Chapter 27, Section 1)</p> <p>TWE: AS page 752 (Chapter 26, Section 2) SJ page 774 (Chapter 27, Section 1) DI page 779 (Chapter 27, Section 2) SJ page 784 (Chapter 27, Section 2) <i>Chapter 25 (The Nonliving Environment) Fast File</i> pages 13-16 <i>Chapter 26 (Ecosystems) Fast File</i> page 30 <i>Chapter 27 (Conserving Resources) Fast File</i> pages 9-12 <i>Critical Thinking/Problem Solving</i> pages 5, 9, 10, 12, 13, 23 <i>Reading and Writing Skill Activities</i> pages 15-16</p>

Codes Used for TWE Pages

AC	Activity
AIL	Alternative Inquiry Lab
AR	Active Reading
AS	Assessment
CC	Curriculum Connection
CDIV	Cultural Diversity
CFU	Check for Understanding
DI	Discussion
DIF	Differentiated Instruction
EA	Error Analysis
IC	Integrate Career
IL	Inquiry Lab
IM	Identifying Misconceptions
ITI	Investigating the Issue
LD	Lab Demonstration
MAM	Make a Model
QD	Quick Demo
RC	Reading Check
RT	Reteach
SJ	Science Journal
TFYI	Teacher FYI
TQA	Text Question Answer
TTPK	Tying to Prior Knowledge
UAA	Using an Analogy
VL	Visual Learning