SRA Life, Earth, and Physical Science Laboratories
correlation to
Nebraska Science Standards
Grades 6-8

SRA Life, Earth, and Physical Science Laboratories provide core science content in an alternate reading format. Each *SRA Science Lab* contains 180 Science Cards covering key science concepts and vocabulary. Each lab covers 90 different science topics presented at two different reading levels to meet varied student abilities. The *Teacher's Handbook* includes hands-on inquiry activities as well as vocabulary building exercises. The *Classroom Resource CD-ROM* includes Writing Strategies in Science along with tests and vocabulary games.

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.

- **Recognize and describe key parts and functions of any system.**

Life Science Lab, Level A: Cards 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Life Science Lab, Level B: Cards 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab, Level A: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Earth Science Lab, Level B: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

Physical Science Lab, Level A: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Physical Science Lab, Level B: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87; Hands-On Activity 4, *Reducing Friction,* pages 89-91; Hands-On Activity 5, *Making a Potato Battery,* pages 93-95; Hands-On Activity 6, *Making Sound,* pages 97-99

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.

- **Analyze and predict the interactions within a system and between systems.**

Life Science Lab, Level A: Cards 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Life Science Lab, Level B: Cards 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

Earth Science Lab, Level A: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Earth Science Lab, Level B: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

Physical Science Lab, Level A: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Physical Science Lab, Level B: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.

- **Create and use classification schemes.**

Life Science Lab, Level A: Cards 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 73, 74, 75
Life Science Lab, Level B: Cards 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 73, 74, 75
Life Science Lab Teacher's Handbook: Hands-On Activity 3, *Investigating Arthropods*, pages 85-87

Earth Science Lab, Level A: Cards 4, 5, 6, 7, 8, 48, 75
Earth Science Lab, Level B: Cards 4, 5, 6, 7, 8, 48, 75
Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75

Physical Science Lab, Level A: Cards 5, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
Physical Science Lab, Level B: Cards 5, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.

- **Interpret cause and effect relationships within and between systems.**

Life Science Lab, Level A: Cards 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Life Science Lab, Level B: Cards 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

Earth Science Lab, Level A: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Earth Science Lab, Level B: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; Hands-On Activity 4, *Using Sound Waves*, pages 85-87; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

Physical Science Lab, Level A: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Physical Science Lab, Level B: Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.

- **Collect, manipulate, and analyze data from an experiment.**

Life Science Lab Teacher's Handbook: Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75; Hands-On Activity 3, *Interpreting a Topographic Map*, pages 81-83; Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 6, *Making Sound*, pages 97-99

Classroom Resource CD-ROM: Writing Strategy 22, 24

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.

- **Observe and develop models (e.g., physical, mathematical, mental, and computer simulations).**

Life Science Lab Teacher's Handbook: Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

Earth Science Lab Teacher's Handbook: Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99

Physical Science Lab Teacher's Handbook: Hands-On Activity 5, *Making a Potato Battery,* pages 93-95; Hands-On Activity 6, *Making Sound,* pages 97-99

Classroom Resource CD-ROM: Writing Strategy 20

8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.

- **Interpret and explain results of experimentation.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

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8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.

- **Analyze whether or not investigative procedures and conclusions are reasonable.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

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8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.

- **Select and use appropriate measurement units.**

Life Science Lab Teacher's Handbook: Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99

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8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.

- **Quantify changes in systems (e.g., magnitude, direction, and rate).**

Life Science Lab Teacher's Handbook: Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

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8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.

- **Apply English and metric systems of measurements.**

Life Science Lab Teacher's Handbook: Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99

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8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.

- **Investigate and describe changes in terms of scale, rate, and pattern.**

Life Science Lab Teacher's Handbook: Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

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8.1 UNIFYING CONCEPTS AND PROCESSES

8.1.4 By the end of eighth grade, students will develop an understanding of form and function.

- **Demonstrate how the design of an object makes it possible for that object to perform a specialized task (e.g., a bicycle or an artificial heart.**

Life Science Lab, Level A: Cards 5, 59
Life Science Lab, Level B: Cards 5, 59

Earth Science Lab, Level A: Card 81
Earth Science Lab, Level B: Card 81

Physical Science Lab, Level A: Cards 35, 63, 64, 76, 87, 90
Physical Science Lab, Level B: Cards 35, 63, 64, 76, 87, 90

8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Identify questions and form hypotheses that can be examined through scientific investigations.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87; Hands-On Activity 4, *Reducing Friction,* pages 89-91; Hands-On Activity 5, *Making a Potato Battery,* pages 93-95; Hands-On Activity 6, *Making Sound,* pages 97-99

Classroom Resource CD-ROM: Writing Strategy 8, 15

8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Design and conduct a scientific investigation.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

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Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

Classroom Resource CD-ROM: Writing Strategy 8, 15

8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Use appropriate tools and techniques to gather, analyze, and interpret data.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91; Hands-On Activity 5, *Making Fossils*, pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

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Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83; Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95; Hands-On Activity 6, *Making Sound*, pages 97-99

Classroom Resource CD-ROM: Writing Strategy 15, 22, 24

8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Given evidence, develop descriptions, explanations, predictions, and models.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

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8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Show the relationship between evidence and explanations.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

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8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Recognize and analyze alternative explanations and predictions.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

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8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Communicate scientific procedures and explanations**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

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Classroom Resource CD-ROM: Writing Strategy 1-30

8.2 SCIENCE AS INQUIRY

8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.

- **Use mathematics in scientific inquiry.**

Life Science Lab Teacher's Handbook: Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87; Hands-On Activity 4, *Reducing Friction,* pages 89-91; Hands-On Activity 6, *Making Sound,* pages 97-99

Classroom Resource CD-ROM: Writing Strategy 22, 24

8.3 PHYSICAL SCIENCE

8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.

- **Investigate and demonstrate that characteristic properties of a substance (e.g., density, boiling point, and solubility) do not depend on the amount of the substance.**

Physical Science Lab, Level A: Cards 1, 2, 5, 6, 7, 8, 14, 15, 16, 42
Physical Science Lab, Level B: Cards 1, 2, 5, 6, 7, 8, 14, 15, 16, 42

8.3 PHYSICAL SCIENCE

8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.

- **Observe, describe, and measure physical and chemical properties of matter.**

Physical Science Lab, Level A: Cards 1, 2, 5, 6, 7, 8, 14, 15, 16, 42
Physical Science Lab, Level B: Cards 1, 2, 5, 6, 7, 8, 14, 15, 16, 42
Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79

8.3 PHYSICAL SCIENCE
8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.
• **Explain that all matter is composed of elements which may combine in a variety of ways to form compounds.**
Physical Science Lab, Level A: Cards 10, 11, 21, 22, 23, 24, 25, 26, 31, 32 **Physical Science Lab, Level B:** Cards 10, 11, 21, 22, 23, 24, 25, 26, 31, 32

8.3 PHYSICAL SCIENCE
8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.
• **Investigate and explain that in chemical reactions new properties are created and total mass is conserved.**
Physical Science Lab, Level A: Cards 9, 27, 28, 29, 30 **Physical Science Lab, Level B:** Cards 9, 27, 28, 29, 30 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates*, pages 81-83

8.3 PHYSICAL SCIENCE
8.3.2 By the end of eighth grade, students will develop an understanding of motion and forces.
• **Investigate and describe the motion of an object by its position, direction of motion, and speed.**
Physical Science Lab, Level A: Cards 50, 51, 52, 53 **Physical Science Lab, Level B:** Cards 50, 51, 52, 53

8.3 PHYSICAL SCIENCE
8.3.2 By the end of eighth grade, students will develop an understanding of motion and forces.
• **Investigate and demonstrate that the speed and/or direction of an object changes when a force is applied to that object.**
Physical Science Lab, Level A: Cards 54, 55, 56, 58, 59 **Physical Science Lab, Level B:** Cards 54, 55, 56, 58, 59 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• **Investigate and describe the transfer of light energy.**
Physical Science Lab, Level A: Cards 82, 83, 84, 85, 86, 87, 88, 89, 90 **Physical Science Lab, Level B:** Cards 82, 83, 84, 85, 86, 87, 88, 89, 90

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• **Investigate and demonstrate how energy is transferred using simple machines.**
Physical Science Lab, Level A: Cards 63, 64 **Physical Science Lab, Level B:** Cards 63, 64

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• **Investigate and describe how heat is transferred from a warmer object to a cooler object until both reach the same temperature.**
Physical Science Lab, Level A: Cards 42, 43 **Physical Science Lab, Level B:** Cards 42, 43

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• **Investigate and describe the properties and transfer of sound energy.**
Physical Science Lab, Level A: Cards 77, 78, 79, 80, 81 **Physical Science Lab, Level B:** Cards 77, 78, 79, 80, 81 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 6, *Making Sound*, pages 97-99

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• **Investigate and describe the transfer of energy from electrical and magnetic sources to different energy forms (e.g., heat, light, sound and chemical).**
Physical Science Lab, Level A: Cards 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76 **Physical Science Lab, Level B:** Cards 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 5, *Making a Potato Battery*, pages 93-95

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• **Investigate and describe the levels of organizations: Cells, tissues, organs, organ systems, whole organisms, and ecosystems.**
Life Science Lab, Level A: Cards 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 2, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 44, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 70, 71, 72 **Life Science Lab, Level B:** Cards 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 2, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 44, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 70, 71, 72 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79; Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87; Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• **Investigate and demonstrate that all living things are composed of cells.**
Life Science Lab, Level A: Cards 1, 5, 6, 7, 8, 9, 10 **Life Science Lab, Level B:** Cards 1, 5, 6, 7, 8, 9, 10 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• **Investigate and explain how cells sustain life through functions (e.g., growth and nutrition).**
Life Science Lab, Level A: Cards 9, 10 **Life Science Lab, Level B:** Cards 9, 10

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• **Investigate and describe the specialized function performed by specialized cells (e.g., muscular and skeletal) in multicellular organisms.**
Life Science Lab, Level A: Cards 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab, Level B:** Cards 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab Teacher's Handbook:** Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91

8.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• **Investigate and describe the human body systems and how they interact.**
Life Science Lab, Level A: Cards 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab, Level B:** Cards 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab Teacher's Handbook:** Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91

8.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• **Investigate and explain how disease affects the structure and/or function of an organism.**
Life Science Lab, Level A: Cards 47, 48, 49, 51, 53, 55, 57 **Life Science Lab, Level B:** Cards 47, 48, 49, 51, 53, 55, 57

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• **Investigate and describe how all organisms reproduce through sexual or asexual reproduction.**
Life Science Lab, Level A: Cards 58, 60, 61 **Life Science Lab, Level B:** Cards 58, 60, 61

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• **Investigate and describe that in many species, offspring receive hereditary information from the female (eggs) and male (sperm).**
Life Science Lab, Level A: Cards 58, 61, 62, 63, 64 **Life Science Lab, Level B:** Cards 58, 61, 62, 63, 64

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• **Investigate and explain that chromosomes contain genes which influence heredity.**
Life Science Lab, Level A: Cards 10, 61, 62, 63 **Life Science Lab, Level B:** Cards 10, 61, 62, 63

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• **Investigate and describe the effects of inherited traits and environmental influences on an organism's characteristics.**
Life Science Lab, Level A: Cards 23, 24, 41, 43, 62, 63, 64, 65, 66 **Life Science Lab, Level B:** Cards 23, 24, 41, 43, 62, 63, 64, 65, 66

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• **Investigate and explain how organisms' behaviors enhance their abilities to obtain and use resources, grow, and reproduce.**
Life Science Lab, Level A: Cards 24, 36, 43, 83 **Life Science Lab, Level B:** Cards 24, 36, 43, 82

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• **Investigate and examine how an organism senses a change in its internal or external environment and responds to keep conditions within a required range.**
Life Science Lab, Level A: Cards 8, 24, 43, 44, 47, 49, 51, 57, 83 **Life Science Lab, Level B:** Cards 8, 24, 43, 44, 47, 49, 51, 57, 83

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• **Investigate and explain how behavior is a response to internal and external stimuli determined by heredity and experience.**
Life Science Lab, Level A: Cards 8, 23, 24, 36, 41, 43, 44, 47, 49, 51, 57, 83 **Life Science Lab, Level B:** Cards 8, 23, 24, 36, 41, 43, 44, 47, 49, 51, 57, 83

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• **Investigate and explain how an organism's behavior evolves through environmental adaptation.**
Life Science Lab, Level A: Cards 23, 24, 36, 41, 43, 65, 66 **Life Science Lab, Level B:** Cards 23, 24, 36, 41, 43, 65, 66

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• **Investigate and describe that a population consists of all individuals of a species at a given place and time.**
Life Science Lab, Level A: Cards 71, 72 **Life Science Lab, Level B:** Cards 71, 72

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• **Investigate and analyze the living and nonliving factors that determine the number of organisms an ecosystem can support.**
Life Science Lab, Level A: Cards 70, 71, 72, 75, 84, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 70, 71, 72, 75, 84, 86, 87, 88, 89, 90

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• **Describe an organism by the function it serves in an ecosystem (e.g., producer, consumer, and decomposer).**
Life Science Lab, Level A: Cards 73, 74, 76, 77 **Life Science Lab, Level B:** Cards 73, 74, 76, 77

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• **Investigate and explain how energy entering ecosystems as sunlight in transferred by producers into chemical energy through photosynthesis, and that energy then passes from organisms to organism in food webs.**
Life Science Lab, Level A: Cards 7, 9, 16, 17, 76, 77 **Life Science Lab, Level B:** Cards 7, 9, 16, 17, 76, 77

8.5 LIFE SCIENCE
8.4.5 By the end of eighth grade, students will develop an understanding of diversity and adaptations of organisms.
• **Explain how internal structures, similarities of chemical processes (e.g., photosynthesis and respiration) and evidence of common ancestry demonstrate unity among organisms.**
Life Science Lab, Level A: Cards 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 68 **Life Science Lab, Level B:** Cards 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 68

8.5 LIFE SCIENCE
8.4.5 By the end of eighth grade, students will develop an understanding of diversity and adaptations of organisms.
• **Investigate and explain how organisms adapt to living and nonliving factors in a biome.**
Life Science Lab, Level A: Cards 23, 24, 36, 41, 43, 70, 71, 72, 75 **Life Science Lab, Level B:** Cards 23, 24, 36, 41, 43, 70, 71, 72, 75

8.5 LIFE SCIENCE
8.4.5 By the end of eighth grade, students will develop an understanding of diversity and adaptations of organisms.
• **Investigate and explain how environmental changes created by nature and by humans may cause species extinction.**
Life Science Lab, Level A: Cards 67,86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 67, 86, 87, 88, 89, 90 **Earth Science Lab, Level A:** Cards 37, 47, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 37, 42, 59, 60, 61, 86

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe the crust, mantle, and core of the earth.**
Earth Science Lab, Level A: Cards 1, 2 **Earth Science Lab, Level B:** Cards 1, 2

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe how a combination of constructive and destructive forces create land forms.**
Earth Science Lab, Level A: Cards 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 24, 25, 26, 27, 28, 88 **Earth Science Lab, Level B:** Cards 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 24, 25, 26, 27, 28, 88 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe the composition of soils.**
Earth Science Lab, Level A: Cards 23, 29 **Earth Science Lab, Level B:** Cards 23, 29

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe the water cycle.**
Earth Science Lab, Level A: Cards 47, 48, 49 **Earth Science Lab, Level B:** Cards 47, 48, 49

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe the composition of the atmosphere at different altitudes.**
Earth Science Lab, Level A: Cards 36, 37 **Earth Science Lab, Level B:** Cards 36, 37

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe the influence of topography, location, and oceans on climate.**
Earth Science Lab, Level A: Cards 40, 41, 55, 56, 57, 58, 60 **Earth Science Lab, Level B:** Cards 40, 41, 55, 56, 57, 58, 60

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• **Investigate and describe the effect of living organisms on weathering and the atmosphere.**
Life Science Lab, Level A: Cards 7, 9, 16, 17 **Life Science Lab, Level B:** Cards 7, 9, 16, 17 **Earth Science Lab, Level A:** Cards 25, 26, 27, 29 **Earth Science Lab, Level B:** Cards 25, 26, 27, 29

8.5 EARTH AND SPACE SCIENCE
8.5.2 By the end of eighth grade, students will develop an understanding of the earth's history.
• **Investigate and describe how earth processes that occur today (e.g., volcanism, weather, and erosion) are similar to those that occurred in the past.**
Earth Science Lab, Level A: Cards 9, 10, 11, 12, 13, 14, 15, 16, 17, 22, 24, 25, 26, 27, 28, 43, 47, 55, 88 **Earth Science Lab, Level B:** Cards 9, 10, 11, 12, 13, 14, 15, 16, 17, 22, 24, 25, 26, 27, 28, 43, 47, 55, 88 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79

8.5 EARTH AND SPACE SCIENCE
8.5.2 By the end of eighth grade, students will develop an understanding of the earth's history.
• **Investigate and use the fossil record to provide evidence and explain how environmental conditions have changed.**
Life Science Lab, Level A: Card 67 **Life Science Lab, Level B:** Card 67 **Earth Science Lab, Level A:** Cards 33, 34 **Earth Science Lab, Level B:** Cards 33, 34

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• **Investigate and list the components of the solar system.**
Earth Science Lab, Level A: Cards 63, 67, 68, 69, 70, 71, 72, 73 **Earth Science Lab, Level B:** Cards 63, 67, 68, 69, 70, 71, 72, 73 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 7, *Sizes in the Solar System*, pages 97-99

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• **Investigate and describe the motion of objects in the solar system that support concepts of day, year, eclipses, and phases of the moon.**
Earth Science Lab, Level A: Cards 62, 64, 65 **Earth Science Lab, Level B:** Cards 62, 64, 65

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• **Investigate and describe the influence of gravity on objects in the solar system.**
Earth Science Lab, Level A: Cards 66, 68 **Earth Science Lab, Level B:** Cards 66, 68 **Physical Science Lab, Level A:** Cards 57, 59 **Physical Science Lab, Level B:** Cards 57, 59

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• **Investigate and describe the sun as the major source of energy that influences the atmosphere and the earth's surface.**
Life Science Lab, Level A: Cards 7, 9, 16, 17 **Life Science Lab, Level B:** Cards 7, 9, 16, 17 **Earth Science Lab, Level A:** Cards 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 52, 53, 54, 57, 60, 67, 87 **Earth Science Lab, Level B:** Cards 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 52, 53, 54, 57, 60, 67, 87 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 6, *Modeling a Tornado*, pages 93-95

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• **Investigate and describe the effect of the tilt of the earth's axis on seasons.**
Earth Science Lab, Level A: Cards 55, 62 **Earth Science Lab, Level B:** Cards 55, 62

8.6 SCIENCE AND TECHNOLOGY
8.6.1 By the end of eighth grade, students will develop an understanding of technological design.
• **Identify problems for technological design.**
• **Design a solution or product.**
• **Implement a proposed design.**
• **Evaluate completed technological designs or product.**
• **Communicate the process of technological design.**
These concepts are not covered at this level.

8.6 SCIENCE AND TECHNOLOGY

8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.

- **Distinguish between scientific inquiry (asking questions about the natural world) and technological design (using science to solve practical problems).**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87; Hands-On Activity 4, *Reducing Friction,* pages 89-91; Hands-On Activity 5, *Making a Potato Battery,* pages 93-95; Hands-On Activity 6, *Making Sound,* pages 97-99

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8.6 SCIENCE AND TECHNOLOGY

8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.

- **Describe how science and technology are reciprocal.**

Life Science Lab, Level A: Cards 5, 49, 59, 64, 69, 83, 87, 88, 89, 90
Life Science Lab, Level B: Cards 5, 49, 59, 64, 69, 83, 87, 88, 89, 90

Earth Science Lab, Level A: Cards 16, 20, 31, 37, 51, 54, 70, 79, 80, 81, 88
Earth Science Lab, Level B: Cards 16, 20, 31, 37, 51, 54, 70, 79, 80, 81, 88

Physical Science Lab, Level A: Cards 33, 35, 76, 81, 84, 90
Physical Science Lab, Level B: Cards 33, 35, 76, 81, 84, 90

8.6 SCIENCE AND TECHNOLOGY

8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.

- **Assess the avoidable and unavoidable limits of a technological design.**

Life Science Lab, Level A: Cards 5, 49, 59, 64, 69, 83, 87, 88, 89, 90
Life Science Lab, Level B: Cards 5, 49, 59, 64, 69, 83, 87, 88, 89, 90

Earth Science Lab, Level A: Cards 16, 20, 31, 37, 51, 54, 70, 79, 80, 81, 88
Earth Science Lab, Level B: Cards 16, 20, 31, 37, 51, 54, 70, 79, 80, 81, 88

Physical Science Lab, Level A: Cards 33, 35, 76, 81, 84, 90
Physical Science Lab, Level B: Cards 33, 35, 76, 81, 84, 90

8.6 SCIENCE AND TECHNOLOGY
8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.
• **Recognize that solutions are intended and unintended consequences.**
Life Science Lab, Level A: Cards 83, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 83, 86, 87, 88, 89, 90 **Earth Science Lab, Level A:** Cards 20, 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 20, 37, 42, 59, 60, 61, 86 **Physical Science Lab, Level A:** Cards 33, 34, 35, 81, 84, 90 **Physical Science Lab, Level B:** Cards 33, 34, 35, 81, 84, 90

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.1 By the end of eighth grade, students will develop an understanding of personal health.
• **Identify and research substances harmful to human beings in the natural environment (e.g., radon, lead, and nitrates).**
This concept is not covered at this level.

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.1 By the end of eighth grade, students will develop an understanding of personal health.
• **Investigate and explain how personal choices can directly affect a person's health (e.g., exercise, nutrition, and use of drugs).**
Life Science Lab, Level A: Cards 45, 46, 47 **Life Science Lab, Level B:** Cards 45, 46, 47

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.2 By the end of eighth grade, students will develop an understanding of relationships among populations, resources, and environments.
• **Investigate and describe how population levels affect resources and the environment.**
Life Science Lab, Level A: Card 42 **Life Science Lab, Level B:** Card 42

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.2 By the end of eighth grade, students will develop an understanding of relationships among populations, resources, and environments.
• **Investigate and understand that the causes of environmental degradation and resource depletion vary locally and globally.**
Life Science Lab, Level A: Cards 84, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 84, 86, 87, 88, 89, 90 **Life Science Lab Teacher's Handbook:** Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103 **Earth Science Lab, Level A:** Cards 29, 35, 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 29, 35, 37, 42, 59, 60, 61, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91

8**4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES**
8.7.3 By the end of eighth grade, students will develop an understanding of natural hazards.
• **Investigate and describe the effect of natural hazards on the environment (e.g., earthquakes, landslides, wildfires, floods and storms).**
Earth Science Lab, Level A: Cards 15, 17, 24, 25, 26, 27, 28, 52, 53, 54, 60, 61 **Earth Science Lab, Level B:** Cards 15, 17, 24, 25, 26, 27, 28, 52, 53, 54, 60, 61 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 6, *Modeling a Tornado*, pages 93-95

84.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.3 By the end of eighth grade, students will develop an understanding of natural hazards.
• **Investigate and describe human activities (e.g., urban growth, land use, and waste disposal) which can accelerate many natural changes.**
Life Science Lab, Level A: Cards 84, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 84, 86, 87, 88, 89, 90 **Life Science Lab Teacher's Handbook:** Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103 **Earth Science Lab, Level A:** Cards 29, 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 29, 37, 42, 59, 60, 61, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.4 By the end of eighth grade, students will develop an understanding of risks and benefits.
• **Analyze a type of hazard (e.g., natural, chemical, or biological) to evaluate the options for reducing or eliminating human risk.**
Life Science Lab, Level A: Cards 84, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 84, 86, 87, 88, 89, 90 **Life Science Lab Teacher's Handbook:** Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103 **Earth Science Lab, Level A:** Cards 15, 16, 17, 29, 35, 37, 42, 59, 60, 61, 85, 86 **Earth Science Lab, Level B:** Cards 15, 16, 17, 29, 35, 37, 42, 59, 60, 61, 85, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.4 By the end of eighth grade, students will develop an understanding of risks and benefits.
• **Describe how perceptions of risks and benefits influence personal and social decisions (e.g., seat belt usage and waste disposal procedures).**
Life Science Lab, Level A: Cards 45, 46, 47, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 45, 46, 47, 87, 88, 89, 90 **Earth Science Lab, Level A:** Cards 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 37, 42, 59, 60, 61, 86

8.8 HISTORY AND NATURE OF SCIENCE
8.8.1 By the end of eighth grade, students will develop an understanding of science as a human endeavor.
• **Investigate and understand that women and men of various social and ethnic backgrounds, working alone or in teams, engage in the activities of science, engineering, and related fields.**
Life Science Lab, Level A: Cards 2, 5, 46, 59 **Life Science Lab, Level B:** Cards 2, 5, 46, 59 **Earth Science Lab, Level A:** Cards 10, 68, 72, 78 **Earth Science Lab, Level B:** Cards 10, 68, 72, 78 **Physical Science Lab, Level A:** Cards 3, 7, 17, 55 **Physical Science Lab, Level B:** Cards 3, 7, 17, 55

8.8 HISTORY AND NATURE OF SCIENCE
8.8.1 By the end of eighth grade, students will develop an understanding of science as a human endeavor.
• **Investigate and understand that science requires different abilities based on the type of inquiry and relies upon basic human qualities and scientific habits of mind.**
This concept is not covered at this level.

8.8 HISTORY AND NATURE OF SCIENCE

8.8.1 By the end of eighth grade, students will develop an understanding of science as a human endeavor.

- **Explain the need for ethical codes followed by scientists (e.g., humane treatment of animals and truth in reporting).**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

Physical Science Lab Teacher's Handbook: Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87; Hands-On Activity 4, *Reducing Friction,* pages 89-91; Hands-On Activity 5, *Making a Potato Battery,* pages 93-95; Hands-On Activity 6, *Making Sound,* pages 97-99

8.8 HISTORY AND NATURE OF SCIENCE

8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.

- **Formulate and test a hypothesis using observations, experiments, and models.**

Life Science Lab Teacher's Handbook: Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Earth Science Lab Teacher's Handbook: Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103

Physical Science Lab Teacher's Handbook: Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-

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8.8 HISTORY AND NATURE OF SCIENCE

8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.

- **Use questioning, response to criticism, and open communication when defending a conclusion.**

Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

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8.8 HISTORY AND NATURE OF SCIENCE
8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.
• **Evaluate the results of scientific investigations, experiments, observations, theoretical models, and the explanations proposed by other scientists.**
Life Science Lab Teacher's Handbook: Hands-On Activity 1, *Examining Cells,* pages 77-79; Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87; Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91; Hands-On Activity 5, *Making Fossils,* pages 93-95; Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale,* pages 73-75; Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; Hands-On Activity 3, *Interpreting a Topographic Map,* pages 81-83; Hands-On Activity 4, *Using Sound Waves,* pages 85-87; Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95; Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99; Hands-On Activity 8, *Temperature, Salinity, and Water Density,* pages 101-103 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79; Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87; Hands-On Activity 4, *Reducing Friction,* pages 89-91; Hands-On Activity 5, *Making a Potato Battery,* pages 93-95; Hands-On Activity 6, *Making Sound,* pages 97-99

8.8 HISTORY AND NATURE OF SCIENCE
8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.
• **Understand that scientific theories are based on observations, governed by rules of reasoning, and used to predict events.**
Life Science Lab, Level A: Cards 5, 65, 67 **Life Science Lab, Level B:** Cards 5, 65, 67 **Earth Science Lab, Level A:** Cards 10, 30, 68, 72, 78 **Earth Science Lab, Level B:** Cards 10, 30, 68, 72, 78 **Physical Science Lab, Level A:** Cards 3, 9, 37, 53, 59 **Physical Science Lab, Level B:** Cards 3, 9, 37, 53, 59

8.8 HISTORY AND NATURE OF SCIENCE
8.8.3 By the end of eighth grade, students will develop an understanding of the history of science.
• **Research and describe the difficulties experienced by scientific innovators who had to overcome commonly held beliefs of their times to reach conclusions that we now take for granted.**
This concept is not covered at this level.