SRA Life, Earth, and Physical Science Laboratories
correlation to
Texas Assessment of Knowledge and Skills (TAKS) Middle School Science
Grade 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.

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.1, 7.1, 8.1) Scientific processes. The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:
(A) demonstrate safe practices during field and laboratory 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

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.2, 7.2, 8.2) Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:
(A) plan and implement investigative procedures including asking, formulating testable hypotheses, and selecting and using equipment and technology.
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

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.2, 7.2, 8.2) Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:
(B) collect information by observing and measuring.
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 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 11

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.2, 7.2, 8.2) Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:
(C) organize, analyze, evaluate, make inferences, and predict trends from direct and indirect evidence. (7.2, 8.2)
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

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.2, 7.2, 8.2) Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:
(D) communicate valid conclusions.
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 18

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.2, 7.2, 8.2) Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:
(E) construct graphs, tables, maps, and charts using tools [including computers] to organize, examine, and evaluate data.
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 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 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 5, 16, 22, 24

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.3, 7.3, 8.3) Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:
(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information.
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, 53, 59 **Physical Science Lab, Level B:** Cards 3, 53, 59 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83; Hands-On Activity 3, *Energy Conversion,* pages 85-87

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.3, 7.3, 8.3) Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:
(B) draw inferences based on data [related to promotional materials] for products and services.
This concept is not covered at this level.

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.3, 7.3, 8.3) Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:
(C) represent the natural world using models and identify their limitations.
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

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.4, 7.4, 8.4) Scientific processes. The student knows how to use a variety of tools and methods to conduct scientific inquiry. The student is expected to:
(A) collect, record, and analyze information using tools including beakers, Petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculator, field equipment, computers, computer probes, water test kits, and timing devices. (8.4)
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

Objective 1: The student will demonstrate an understanding of the nature of science.
(6.4, 7.4, 8.4) Scientific processes. The student knows how to use a variety of tools and methods to conduct scientific inquiry. The student is expected to:
(B) extrapolate from collected information to make predictions. (8.4)
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 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 7, *Sizes in the Solar System,* pages 97-99 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 3, *Energy Conversion,* pages 85-87

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.5) Science concepts. The student knows that systems may combine with other systems to form a larger system. The student is expected to:
(B) describe how the properties of a system are different from the properties of its parts.
Life Science Lab, Level A: Cards 1, 6, 7, 9, 10, 17, 23, 24, 25, 41, 42, 43, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 1, 6, 7, 9, 10, 17, 23, 24, 25, 41, 42, 43, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 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, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 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, 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, 89, 90 **Earth Science Lab, Level B:** Cards 1, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 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, 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, 89, 90 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action,* pages 77-79; 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, Level A:** Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 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, 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, 89, 90 **Physical Science Lab, Level B:** Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 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, 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, 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 **Classroom Resource CD-ROM:** Writing Strategy

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.10, 7.9) Science concepts. The student knows the relationship between structure and function in living systems. The student is expected to:
(B) determine that all organisms are composed of cells that carry on functions to sustain life. (6.10)
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

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.10, 7.9) Science concepts. The student knows the relationship between structure and function in living systems. The student is expected to:
(C) identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations. (6.10)
Life Science Lab, Level A: Cards 6, 7, 8, 9, 10, 44, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 73, 74, 75 **Life Science Lab, Level B:** Cards 6, 7, 8, 9, 10, 44, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 73, 74, 75 **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

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.8, 7.8, 8.10) Science concepts. The student knows that complex interactions occur between matter and energy. The student is expected to:
(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources.
Life Science Lab, Level A: Cards 73, 74, 75, 76, 77 **Life Science Lab, Level B:** Cards 73, 74, 75, 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.8, 7.8, 8.10) Science concepts. The student knows that complex interactions occur between matter and energy. The student is expected to:
(C) describe how different environments support different varieties of organisms.
Life Science Lab, Level A: Cards 81, 82, 86 **Life Science Lab, Level B:** Cards 81, 82, 86 **Earth Science Lab, Level A:** Cards 83, 89 **Earth Science Lab, Level B:** Cards 83, 89

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.8, 7.8, 8.10) Science concepts. The student knows that complex interactions occur between matter and energy. The student is expected to:
(D) observe and describe the role of ecological succession in ecosystems.
Life Science Lab, Level A: Cards 67, 80, 84, 85, 86, 87, 88 **Life Science Lab, Level B:** Cards 67, 80, 84, 85, 86, 87, 88

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(8.6) Science concepts. The student knows that interdependence occurs among living systems. The student is expected to:
(A) describe interactions among systems in the human organisms.
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

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(8.6) Science concepts. The student knows that interdependence occurs among living systems. The student is expected to:
(B) identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions.
Life Science Lab, Level A: Cards 34, 47, 49, 57 **Life Science Lab, Level B:** Cards 34, 47, 49, 57 **Life Science Lab Teacher's Handbook:** Hands-On Activity 4, *Your Cardiovascular System,* pages 89-91 **Physical Science Lab, Level A:** Cards 27, 28, 29, 37 **Physical Science Lab, Level B:** Cards 27, 28, 29, 37 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(8.6) Science concepts. The student knows that interdependence occurs among living systems. The student is expected to:
(C) describe interactions within ecosystems.
Life Science Lab, Level A: Cards 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 86, 87, 88, 89, 90 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99; Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.11, 7.10, 8.11) Science concepts. The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:
(A) identify that change in the environmental conditions can affect the survival of individuals and of species. (8.11)
Life Science Lab, Level A: Cards 84, 85, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 84, 85, 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, 17, 37, 42, 52, 53, 54, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 15, 17, 37, 42, 52, 53, 54, 59, 60, 61, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?,* pages 89-91; Hands-On Activity 6, *Modeling a Tornado,* pages 93-95

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.11, 7.10, 8.11) Science concepts. The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:
(B) distinguish between inherited traits and other characteristics that result from interactions with the environment. (8.11)
Life Science Lab, Level A: Cards 23, 24, 41, 43, 65, 66 **Life Science Lab, Level B:** Cards 23, 24, 41, 43, 65, 66

Objective 2: The student will demonstrate an understanding of living systems and the environment.
(6.11, 7.10, 8.11) Science concepts. The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:
(C) make predictions about possible outcomes of various genetic combinations of inherited characteristics. (8.11)
Life Science Lab, Level A: Cards 62, 63 **Life Science Lab, Level B:** Cards 62, 63

Objective 3: The student will demonstrate an understanding of the physical sciences.
(6.6) Science concepts. The student knows that forces cause change. The student is expected to:
(A) measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied.
Physical Science Lab, Level A: Cards 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 63, 64 **Physical Science Lab, Level B:** Cards 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 63, 64 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction,* pages 89-91

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(6.7, 7.7, 8.9) Science concepts. The student knows that substances have physical and chemical properties. The student is expected to:
(B) classify substances by their physical and chemical properties. (6.7)
Physical Science Lab, Level A: Cards 1, 2, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 31, 32 **Physical Science Lab, Level B:** Cards 1, 2, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 31, 32

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(6.7, 7.7, 8.9) Science concepts. The student knows that substances have physical and chemical properties. The student is expected to:
(C) recognize that compounds are composed of elements. (7.7)
Physical Science Lab, Level A: Cards 10, 11, 12 **Physical Science Lab, Level B:** Cards 10, 11, 12

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(6.7, 7.7, 8.9) Science concepts. The student knows that substances have physical and chemical properties. The student is expected to:
(A) demonstrate that substances may react chemically to form new substances. (8.9)
Physical Science Lab, Level A: Cards 9, 11, 27, 28, 29, 30, 31, 32 **Physical Science Lab, Level B:** Cards 9, 11, 27, 28, 29, 30, 31, 32 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(6.7, 7.7, 8.9) Science concepts. The student knows that substances have physical and chemical properties. The student is expected to:
(B) interpret information on the periodic table to understand that [physical] properties are used to group elements. (8.9)
Physical Science Lab, Level A: Cards 17, 18, 19, 20 **Physical Science Lab, Level B:** Cards 17, 18, 19, 20

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(6.7, 7.7, 8.9) Science concepts. The student knows that substances have physical and chemical properties. The student is expected to:
(C) recognize the importance of formulas and equations to express what happens in a chemical reaction. (8.9)
Physical Science Lab, Level A: Cards 27, 28, 29 **Physical Science Lab, Level B:** Cards 27, 28, 29 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(8.8) The student knows that matter is composed of atoms. The student is expected to:
(A) describe the structure and parts of an atom.
Physical Science Lab, Level A: Cards 3, 4, 21, 22, 23, 24, 25, 26 **Physical Science Lab, Level B:** Cards 3, 4, 21, 22, 23, 24, 25, 26

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(8.8) The student knows that matter is composed of atoms. The student is expected to:
(B) identify the properties of an atom including mass and electrical charge.
Physical Science Lab, Level A: Cards 3, 21, 22, 23, 24, 25, 26 **Physical Science Lab, Level B:** Cards 3, 21, 22, 23, 24, 25, 26

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.
(6.8, 7.8, 8.10) The student knows that complex interactions occur between matter and energy. The student is expected to:
(A) illustrate interactions between matter and energy including specific heat. (8.10)
Physical Science Lab, Level A: Cards 36, 37, 38, 39, 40, 41, 42, 43, 45, 46, 47, 48, 49 **Physical Science Lab, Level B:** Cards 36, 37, 38, 39, 40, 41, 42, 43, 45, 46, 47, 48, 49 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 3, *Energy Conversion*, pages 85-87

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.9) The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:
(A) identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy.
Physical Science Lab, Level A: Cards 37, 38, 41, 43, 46, 47, 48, 49, 70, 71, 72, 73, 76, 81, 84, 90 **Physical Science Lab, Level B:** Cards 37, 38, 41, 43, 46, 47, 48, 49, 70, 71, 72, 73, 76, 81, 84, 90 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 3, *Energy Conversion*, pages 85-87; Hands-On Activity 5, *Making a Potato Battery*, pages 93-95

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.8, 7.8, 8.10) The student knows that complex interactions occur between matter and energy. The student is expected to:
(A) illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movement of geologic faults, and falling water. (7.8)
Physical Science Lab, Level A: Cards 26, 37, 39, 40, 41, 42 **Physical Science Lab, Level B:** Cards 26, 37, 39, 40, 41, 42 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 3, *Energy Conversion*, pages 85-87

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.6, 7.6, 8.7) The student knows that there is a relationship between force and motion. The student is expected to:
(B) demonstrate that changes in motion can be measured and graphically represented. (6.6)
Physical Science Lab, Level A: Cards 50, 51, 52, 53 **Physical Science Lab, Level B:** Cards 50, 51, 52, 53 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91; Hands-On Activity 6, *Making Sound*, pages 97-99

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.6, 7.6, 8.7) The student knows that there is a relationship between force and motion. The student is expected to:
(A) demonstrate basic relationships between force and motion using simple machines including pulleys and levers. (7.6)
Physical Science Lab, Level A: Cards 63, 64 **Physical Science Lab, Level B:** Cards 63, 64

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.6, 7.6, 8.7) The student knows that there is a relationship between force and motion. The student is expected to:
(C) relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings. (7.6)
Life Science Lab, Level A: Cards 24, 47, 51, 55 **Life Science Lab, Level B:** Cards 24, 47, 51, 55 **Life Science Lab Teacher's Handbook:** Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.6, 7.6, 8.7) The student knows that there is a relationship between force and motion. The student is expected to:
(A) demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion. (8.7)
Physical Science Lab, Level A: Cards 50, 54, 55, 56, 57, 63, 64 **Physical Science Lab, Level B:** Cards 50, 54, 55, 56, 57, 63, 64 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.
(6.6, 7.6, 8.7) The student knows that there is a relationship between force and motion. The student is expected to:
(B) recognize that waves are generated and can travel through different media. (8.7)
Physical Science Lab, Level A: Cards 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90 **Physical Science Lab, Level B:** Cards 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 6, *Making Sound*, pages 97-99

Objective 5: The student will demonstrate an understanding of earth and space science.
(6.14) Science concepts. The student knows that structures and functions of Earth systems. The student is expected to:
(B) identify relationship between groundwater and surface water in a watershed.
Earth Science Lab, Level A: Cards 82, 83, 84 **Earth Science Lab, Level B:** Cards 82, 83, 84

Objective 5: The student will demonstrate an understanding of earth and space science.
(6.13, 7.13) Science concepts. The student knows components of our solar system. The student is expected to:
(A) identify and illustrate how the tilt of the Earth on its axis as it rotates and revolves around the Sun causes changes in seasons and the length of a day. (7.13)
Earth Science Lab, Level A: Card 62 **Earth Science Lab, Level B:** Card 62

Objective 5: The student will demonstrate an understanding of earth and space science.
(6.13, 7.13) Science concepts. The student knows components of our solar system. The student is expected to:
(B) relate the Earth's movement and the moon's orbit to the observed cyclical phases of the moon. (7.13)
Earth Science Lab, Level A: Cards 63, 64, 65 **Earth Science Lab, Level B:** Cards 63, 64, 65

Objective 5: The student will demonstrate an understanding of earth and space science.
(6.7, 7.8, 8.10) Science concepts. The student knows that complex interactions occur between matter and energy. The student is expected to:
(B) explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin. (6.8)
Life Science Lab, Level A: Cards 76, 77 **Life Science Lab, Level B:** Cards 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?*, pages 97-99 **Earth Science Lab, Level A:** Cards47, 48, 49 **Earth Science Lab, Level B:** Cards 47, 48, 49

Objective 5: The student will demonstrate an understanding of earth and space science.
(6.7, 7.8, 8.10) Science concepts. The student knows that complex interactions occur between matter and energy. The student is expected to:
(B) describe interactions among solar, weather, and ocean systems. (8.10)
Earth Science Lab, Level A: Cards 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53, 54, 58, 59, 60, 61, 87 **Earth Science Lab, Level B:** Cards 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53, 54, 58, 59, 60, 61, 87 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91; Hands-On Activity 6, *Modeling a Tornado*, pages 93-95

Objective 5: The student will demonstrate an understanding of earth and space science.
(8.12) Science concepts. The student knows that cycles exist in Earth systems. The student is expected to:
(A) analyze and predict the sequence of events in the lunar and rock cycles.
Earth Science Lab, Level A: Cards 9, 64 **Earth Science Lab, Level B:** Cards 9, 64

Objective 5: The student will demonstrate an understanding of earth and space science.
(8.12) Science concepts. The student knows that cycles exist in Earth systems. The student is expected to:
(C) predict the results of modifying the Earth's nitrogen, water, and carbon cycles.
Life Science Lab, Level A: Cards 78, 79 **Life Science Lab, Level B:** Cards 78, 79 **Earth Science Lab, Level A:** Card 47 **Earth Science Lab, Level B:** Card 47

Objective 5: The student will demonstrate an understanding of earth and space science.
(8.13) Science concepts. The student knows characteristics of the universe. The student is expected to:
(A) describe characteristics of the universe such as stars and galaxies.
Earth Science Lab, Level A: Cards 74, 75, 76, 77, 78 **Earth Science Lab, Level B:** Cards 74, 75, 76, 77, 78

Objective 5: The student will demonstrate an understanding of earth and space science.
(7.14, 8.14) Science concepts. The student knows that natural events and human activity can alter Earth systems. The student is expected to:
(A) describe and predict the impact of different catastrophic events on the Earth. (7.14)
Earth Science Lab, Level A: Cards 14, 15, 16, 17, 24, 25, 26, 27, 28, 52, 53, 54 **Earth Science Lab, Level B:** Cards 14, 15, 16, 17, 24, 25, 26, 27, 28, 52, 53, 54 **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

Objective 5: The student will demonstrate an understanding of earth and space science.
(7.14, 8.14) Science concepts. The student knows that natural events and human activity can alter Earth systems. The student is expected to:
(B) analyze effects of regional erosional deposition and weathering. (7.14)
Earth Science Lab, Level A: Cards 22, 24, 25, 26, 27, 28, 29 **Earth Science Lab, Level B:** Cards 22, 24, 25, 26, 27, 28, 29

Objective 5: The student will demonstrate an understanding of earth and space science.
(7.14, 8.14) Science concepts. The student knows that natural events and human activity can alter Earth systems. The student is expected to:
(C) make inferences and draw conclusions about effects of human activity on Earth's renewable, non-renewable, and inexhaustible resources. (7.14)
Life Science Lab, Level A: Cards 84, 85, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 84, 85, 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, 61, 85, 86, 90 **Earth Science Lab, Level B:** Cards 29, 35, 37, 42, 59, 61, 85, 86, 90 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91 **Physical Science Lab, Level A:** Cards 38, 46, 47, 48, 49 **Physical Science Lab, Level B:** Cards 38, 46, 47, 48, 49

Objective 5: The student will demonstrate an understanding of earth and space science.
(7.14, 8.14) Science concepts. The student knows that natural events and human activity can alter Earth systems. The student is expected to:
(A) predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, [and continent drift]. (8.14) {TAKS will assess students' understanding of plate tectonics. The theory of plate tectonics is the most current and accepted theory of plate movement.]
Earth Science Lab, Level A: Cards 11, 12, 13, 14, 15, 16, 17, 24, 25, 26, 27, 28 **Earth Science Lab, Level B:** Cards 11, 12, 13, 14, 15, 16, 17, 24, 25, 26, 27, 28 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79

Objective 5: The student will demonstrate an understanding of earth and space science.
(7.14, 8.14) Science concepts. The student knows that natural events and human activity can alter Earth systems. The student is expected to:
(B) analyze how natural or human events may have contributed to the extinction of some species. (8.14)
Life Science Lab, Level A: Cards 67, 86 **Life Science Lab, Level B:** Cards 67, 86

Objective 5: The student will demonstrate an understanding of earth and space science.
(7.14, 8.14) Science concepts. The student knows that natural events and human activity can alter Earth systems. The student is expected to:
(C) describe how human activities have modified soil, water, and air quality. (8.14)
Life Science Lab, Level A: Cards 84, 87, 89, 90 **Life Science Lab, Level B:** Cards 84, 87, 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 37, 42, 59, 61, 85, 86, 90 **Earth Science Lab, Level B:** Cards 37, 42, 59, 61, 85, 86, 90 **Earth Science Lab Teacher's Handbook:** Hands-On Activity5, *What is in the Air?*, pages 89-91 **Physical Science Lab, Level A;** Card 49 **Physical Science Lab, Level B:** Card 49