SRA Life, Earth, and Physical Science Laboratories
correlation to
2001 Mississippi Science Framework
Grade 6

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.

1. Investigate structure and functions in living systems. (L, E)
a. Identify, compare, and contrast levels of organization including cells, tissues, organs, organ systems, and organisms.
Life Science Lab, Level A: Cards 44, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab, Level B:** Cards 44, 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

1. Investigate structure and functions in living systems. (L, E)
b. Compare and contrast patterns and interactions of ecosystems and biomes.
Life Science Lab, Level A: Cards 72, 73, 74, 75, 76, 77, 81, 82 **Life Science Lab, Level B:** Cards 72, 73, 74, 75, 76, 77, 81, 82 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

2. Compare and classify the reproduction and heredity of organisms. (L)
a. Differentiate between sexual and asexual reproduction.
Life Science Lab, Level A: Cards 60, 61 **Life Science Lab, Level B:** Cards 60, 61

2. Compare and classify the reproduction and heredity of organisms. (L)
b. Determine how traits are used to classify individual inherited patterns.
Life Science Lab, Level A: Cards 62, 63, 64 **Life Science Lab, Level B:** Cards 62, 63, 64

3. Explore how changing resources will influence the regulation and behavior of organisms. (L, E)
a. Evaluate the significance of resources required by organisms.
Life Science Lab, Level A: Cards 17, 46, 74, 75, 76, 77 **Life Science Lab, Level B:** Cards 17, 46, 74, 75, 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

3. Explore how changing resources will influence the regulation and behavior of organisms. (L, E)
b. Investigate, compare/contrast, ways organisms adapt to their environment.
Life Science Lab, Level A: Cards 23, 24, 41, 43, 73 **Life Science Lab, Level B:** Cards 23, 24, 41, 43, 73 **Life Science Lab Teacher's Handbook:** Hands-On Activity 3, *Investigating Arthropods,* pages 85-87

4. Explore how different populations determine the formation of an ecosystem. (L, E)
a. Compare/contrast the roles among producers, consumers, and decomposers in a food web.
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

4. Explore how different populations determine the formation of an ecosystem. (L, E)
b. Manipulate resources and other factors (living and nonliving) that promote and limit growth of populations in an ecosystem.
Life Science Lab, Level A: Cards 70, 71, 72, 73, 74, 75 **Life Science Lab, Level B:** Cards 70, 71, 72, 73, 74, 75

5. Explore the unique characteristics and adaptations of organisms. (L, E)
a. Evaluate and chart the similarities of organisms.
Life Science Lab, Level A: Cards 2, 3, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab, Level B:** Cards 2, 3, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab Teacher's Handbook:** Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87

5. Explore the unique characteristics and adaptations of organisms. (L, E)
b. Propose and relate environmental changes and the adaptive characteristics that influence the extinction of a species.
Life Science Lab, Level A: Cards 65, 66, 67, 68 **Life Science Lab, Level B:** Cards 65, 66, 67, 68

6. Model the structure of the Earth system past and present. (E)
a. Construct and explain the structure of the atmosphere (gas-air), hydrosphere (liquid-water), lithosphere (solid-land), and changes that occur within.
Earth Science Lab, Level A: Cards 1, 2, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 36, 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49, 52, 53, 54, 55, 56, 57, 59, 60, 61, 82, 83, 84, 85, 87, 88, 89, 90 **Earth Science Lab, Level B:** Cards 1, 2, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 36, 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49, 52, 53, 54, 55, 56, 57, 59, 60, 61, 82, 83, 84, 85, 87, 88, 89, 90 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79; 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 8, *Temperature, Salinity, and Water Density*, pages 101-103

6. Model the structure of the Earth system past and present. (E)
b. Examine the changes and processes that alter the Earth's system.
Earth Science Lab, Level A: Cards 10, 11, 12, 13, 14, 15, 16, 17, 22, 24, 25, 26, 27, 28 **Earth Science Lab, Level B:** Cards 10, 11, 12, 13, 14, 15, 16, 17, 22, 24, 25, 26, 27, 28 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79

6. Model the structure of the Earth system past and present. (E)
c. Analyze fossils as indicators of how life and environmental conditions have changed.
Life Science Lab, Level A: Card 67 **Life Science Lab, Level B:** Card 67 **Life Science Lab Teacher's Handbook:** Hands-On Activity 5, *Making Fossils*, pages 93-95 **Earth Science Lab, Level A:** Cards 33, 34 **Earth Science Lab, Level B:** Cards 33, 34

7. Investigate the Earth in relation to the solar system. (E, P)
a. Demonstrate how the Earth's motion influences the day, year, phases of the moon, and eclipses.
Earth Science Lab, Level A: Cards 62, 64, 65 **Earth Science Lab, Level B:** Cards 62, 64, 65

7. Investigate the Earth in relation to the solar system. (E, P)
b. Explore how gravity influences the motion of all celestial bodies.
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

7. Investigate the Earth in relation to the solar system. (E, P)
c. Demonstrate how the tilt of the Earth's axis and Earth's revolution around the sun create the seasons.
Earth Science Lab, Level A: Card 62 **Earth Science Lab, Level B:** Card 62

8. Investigate structure, properties, and changes of matter. (E, P)
a. Analyze properties such as density, boiling point, and solubility of a substance.
Physical Science Lab, Level A: Cards 1, 2, 5, 6, 7, 13 **Physical Science Lab, Level B:** Cards 1, 2, 5, 6, 7, 13

8. Investigate structure, properties, and changes of matter. (E, P)
b. Record and interpret physical and chemical changes using everyday substances.
Physical Science Lab, Level A: Cards 8, 9, 12, 13, 27, 28, 29 **Physical Science Lab, Level B:** Cards 8, 9, 12, 13, 27, 28, 29 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

8. Investigate structure, properties, and changes of matter. (E, P)
c. Differentiate between common elements that combine chemically to produce compounds.
Physical Science Lab, Level A: Cards 10, 11, 31, 32 **Physical Science Lab, Level B:** Cards 10, 11, 31, 32

8. Investigate structure, properties, and changes of matter. (E, P)
d. Demonstrate the ability to use simple measuring devices using metric and English 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; 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

9. Evaluate the effect of force on the motion of an object. (E, L, P)
a. Analyze, measure, and graph the motion of an object.
Physical Science Lab, Level A: Cards 51, 52, 53, 58, 59 **Physical Science Lab, Level B:** Cards 51, 52, 53, 58, 59 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction,* pages 89-91

9. Evaluate the effect of force on the motion of an object. (E, L, P)
b. Experiment and measure the effect of force on an object.
Physical Science Lab, Level A: Cards 54, 55, 56, 62, 63, 64, 65 **Physical Science Lab, Level B:** Cards 54, 55, 56, 62, 63, 64, 65 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction,* pages 89-91

10. Examine the transfer of energy in many different forms. (E, L, P)
a. Observe and manipulate energy as potential or kinetic.
Physical Science Lab, Level A: Cards 36, 37, 39, 40, 41, 42 **Physical Science Lab, Level B:** Cards 36, 37, 39, 40, 41, 42 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 3, *Energy Conversion,* pages 85-87

10. Examine the transfer of energy in many different forms. (E, L, P)
b. Investigate forms of energy such as heat, sound, light, or electricity.
Physical Science Lab, Level A: Cards 36, 42, 43, 45, 46, 47, 48, 66, 67, 74, 76, 77, 79, 80, 82, 83 **Physical Science Lab, Level B:** Cards 36, 42, 43, 45, 46, 47, 48, 66, 67, 74, 76, 77, 79, 80, 82, 83 **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

10. Examine the transfer of energy in many different forms. (E, L, P)
c. Recognize the sun as a major source of energy.
Life Science Lab, Level A: Cards 17, 76 **Life Science Lab, Level B:** Cards 17, 76 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99 **Earth Science Lab, Level A:** Cards 38, 39, 40, 41, 43, 47, 57, 67 **Earth Science Lab, Level B:** Cards 38, 39, 40, 41, 43, 47, 57, 67 **Physical Science Lab, Level A:** Cards 44, 46 **Physical Science Lab, Level B:** Cards 44, 46

SRA Life, Earth, and Physical Science Laboratories
correlation to
2001 Mississippi Science Framework
Grade 7

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1. Compare and contrast structure and function in living systems. (L)
a. Compare and contrast plant and animal cells through investigations.
Life Science Lab, Level A: Cards 6, 7, 8, 9 **Life Science Lab, Level B:** Cards 6, 7, 8, 9 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79

1. Compare and contrast structure and function in living systems. (L)
b. Describe the process of respiration and the use of its products.
Life Science Lab, Level A: Cards 9, 51 **Life Science Lab, Level B:** Cards 9, 51

1. Compare and contrast structure and function in living systems. (L)
c. Illustrate the parts of the digestive system and the interaction of each part.
Life Science Lab, Level A: Card 50 **Life Science Lab, Level B:** Card 50

1. Compare and contrast structure and function in living systems. (L)
d. Illustrate the parts of and interaction between the respiratory and circulatory system.
Life Science Lab, Level A: Cards 47, 48, 51 **Life Science Lab, Level B:** Cards 47, 48, 51 **Life Science Lab Teacher's Handbook:** Hands-On Activity 4, *Your Cardiovascular System*, pages 89-91

1. Compare and contrast structure and function in living systems. (L)
e. Illustrate the parts of the excretory system and the interaction of each part.
Life Science Lab, Level A: Card 52 **Life Science Lab, Level B:** Card 52

2. Explore the processes of the reproduction and heredity or organisms. (L)
a. Distinguish genes as sections of DNA molecules that carry the genetic code for inherited traits.
Life Science Lab, Level A: Cards 62, 63, 64 **Life Science Lab, Level B:** Cards 62, 63, 64

2. Explore the processes of the reproduction and heredity or organisms. (L)
b. Examine the concepts of homozygous and heterozygous traits.
Life Science Lab, Level A: Card 63 **Life Science Lab, Level B:** Card 63

2. Explore the processes of the reproduction and heredity or organisms. (L)
c. Explain mitosis and relate it to an organism's growth and repair process.
Life Science Lab, Level A: Cards 10, 60 **Life Science Lab, Level B:** Cards 10, 60

3. Determine how organisms co-exist in their environment. (L)
a. Demonstrate that cells interact with their environment.
Life Science Lab, Level A: Cards 5, 6, 7, 8, 9, 10 **Life Science Lab, Level B:** Cards 5, 6, 7, 8, 9, 10 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells*, pages 77-79

3. Determine how organisms co-exist in their environment. (L)
b. Investigate homeostasis as it relates to plants and animals.
Life Science Lab, Level A: Card 44 **Life Science Lab, Level B:** Card 44

4. Explore how environmental factors of population influence the formation of an ecosystem. (L, E)
a. Describe the process of photosynthesis and the use of its products.
Life Science Lab, Level A: Cards 9, 16, 17, 76 **Life Science Lab, Level B:** Cards 9, 16, 17, 76

4. Explore how environmental factors of population influence the formation of an ecosystem. (L, E)
b. Design an experiment in plant behavior to include responses to water, gravity, and light.
Life Science Lab, Level A: Card 24 **Life Science Lab, Level B:** Card 24

4. Explore how environmental factors of population influence the formation of an ecosystem. (L, E)
c. Investigate and research environmental concerns of the land, water, and air.
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 **Earth Science Lab, Level B:** Cards 29, 35, 37, 42, 59, 61, 85, 86 **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, 49 **Physical Science Lab, Level B:** Cards 38, 49

4. Explore how environmental factors of population influence the formation of an ecosystem. (L, E)
d. Analyze the importance of biological diversity in communities and ecosystems.
Life Science Lab, Level A: Cards 71, 72, 73, 74, 75, 76, 77, 81, 82 **Life Science Lab, Level B:** Cards 71, 72, 73, 74, 75, 76, 77, 81, 82 **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

5. Examine survival strategies of organisms over many generations. (L)
a. Apply concepts of adaptations by analyzing how organisms are classified into groups and subgroups.
Life Science Lab, Level A: Cards 2, 3, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab, Level B:** Cards 2, 3, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab Teacher's Handbook:** Hands-On Activity 2, *Culturing Bacteria*, pages 81-83; Hands-On Activity 3, *Investigating Arthropods*, pages 85-87

5. Examine survival strategies of organisms over many generations. (L)
b. Research animal adaptations and behaviors as related to survival strategies.
Life Science Lab, Level A: Cards 23, 24, 41, 42, 43, 66, 74, 83 **Life Science Lab, Level B:** Cards 23, 24, 41, 42, 43, 66, 74, 83 **Life Science Lab Teacher's Handbook:** Hands-On Activity 3, *Investigating Arthropods*, pages 85-87

5. Examine survival strategies of organisms over many generations. (L)
c. Explain how natural and man-made pressures cause extinction.
Life Science Lab, Level A: Cards 66, 67, 84, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 66, 67, 84, 86, 87, 88, 89, 90

6. Explore the composition and changes of the Earth System. (E, P)
a. Identify minerals by using any or all of the following tests: streak, cleavage, fracture, hardness, specific gravity, and special properties.
Earth Science Lab, Level A: Cards 3, 4, 5 **Earth Science Lab, Level B:** Cards 3, 4, 5 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 1, *Identifying Minerals with the Mohs Scale*, pages 73-75

6. Explore the composition and changes of the Earth System. (E, P)
b. Research and explain how crustal movements result in earthquakes, volcanoes, mountain formation, etc.
Earth Science Lab, Level A: Cards 10, 11, 12, 13, 14, 15, 16, 17, 88 **Earth Science Lab, Level B:** Cards 10, 11, 12, 13, 14, 15, 16, 17, 88 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 2, *Plate Boundaries in Action*, pages 77-79

6. Explore the composition and changes of the Earth System. (E, P)
c. Distinguish between chemical and physical weathering.
Earth Science Lab, Level A: Card 22 **Earth Science Lab, Level B:** Card 22

6. Explore the composition and changes of the Earth System. (E, P)
d. Identify how forces such as erosion and deposition create landforms.
Earth Science Lab, Level A: Cards 24, 28 **Earth Science Lab, Level B:** Cards 24, 28

6. Explore the composition and changes of the Earth System. (E, P)
e. Research landforms and fossils specific to Mississippi.
Life Science Lab, Level A: Cards 67, 68 **Life Science Lab, Level B:** Cards 67, 68 **Earth Science Lab, Level A:** Cards 21, 34 **Earth Science Lab, Level B:** Cards 21, 34

6. Explore the composition and changes of the Earth System. (E, P)
f. Compare properties and composition of salt water, fresh water, and brackish water.
Earth Science Lab, Level A: Cards 82, 83, 84, 87, 90 **Earth Science Lab, Level B:** Cards 82, 83, 84, 87, 90 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 8, *Temperature, Salinity, and Water Density*, pages 101-103

6. Explore the composition and changes of the Earth System. (E, P)
g. Investigate the interactive forces that produce weather to include moisture, temperature, fronts, air masses, and cloud formations.
Earth Science Lab, Level A: Cards 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49 **Earth Science Lab, Level B:** Cards 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49

7. Explain the causes of lunar phases, eclipses, and Earth's seasons. (E)
a. Distinguish between radiating objects (the sun and stars) and reflecting objects (the planets and their moons).
Earth Science Lab, Level A: Cards 63, 64, 65, 67, 75, 76 **Earth Science Lab, Level B:** Cards 63, 64, 65, 67, 75, 76

7. Explain the causes of lunar phases, eclipses, and Earth's seasons. (E)
b. Characterize lunar phases in terms of their appearance, their visibility at a given time of day or night, and their progression through time.
Earth Science Lab, Level A: Card 64 **Earth Science Lab, Level B:** Card 64

7. Explain the causes of lunar phases, eclipses, and Earth's seasons. (E)
c. Illustrate the relationship between lunar phases and the phase angle between the sun and moon as seen from Earth.
Earth Science Lab, Level A: Card 64 **Earth Science Lab, Level B:** Card 64

7. Explain the causes of lunar phases, eclipses, and Earth's seasons. (E)
d. Illustrate the alignments of the Earth, the moon, and the sun, which give rise to solar and lunar eclipses and explain why these eclipses do not occur every month.
Earth Science Lab, Level A: Card 65 **Earth Science Lab, Level B:** Card 65

7. Explain the causes of lunar phases, eclipses, and Earth's seasons. (E)
e. Explain how the position of the earth in relation to the sun has an effect on seasonal weather changes.
Earth Science Lab, Level A: Card 62 **Earth Science Lab, Level B:** Card 62

8. Investigate chemical and physical properties of matter. (P)
a. Determine and measure experimentally: boiling point, melting point, density, and solubility.
Physical Science Lab, Level A: Cards 1, 2, 13 **Physical Science Lab, Level B:** Cards 1, 2, 13

8. Investigate chemical and physical properties of matter. (P)
b. Demonstrate understanding that chemical and physical properties determine a substance's identify.
Earth Science Lab, Level A: Cards 1, 2, 5, 6, 7, 10, 11 **Earth Science Lab, Level B:** Cards 1, 2, 5, 6, 7, 10, 11

8. Investigate chemical and physical properties of matter. (P)
c. Compare common metals, nonmetals, and metalloids by name, symbol, and characteristics.
Physical Science Lab, Level A: Cards 18, 19, 20 **Physical Science Lab, Level B:** Cards 18, 19, 20

8. Investigate chemical and physical properties of matter. (P)
d. Recognize elements that will combine to form compounds.
Physical Science Lab, Level A: Cards 10, 11 **Physical Science Lab, Level B:** Cards 10, 11

8. Investigate chemical and physical properties of matter. (P)
e. Relate density to mass and volume.
Earth Science Lab, Level A: Card 2 **Earth Science Lab, Level B:** Card 2

9. Investigate motions and forces. (P)
a. Using SI units, measure and graph the motion of an object by its position.
Physical Science Lab, Level A: Cards 50, 51, 52, 53, 54, 56 **Physical Science Lab, Level B:** Cards 50, 51, 52, 53, 54, 56 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91

9. Investigate motions and forces. (P)
b. Investigate Newton's Laws of Motion.
Earth Science Lab, Level A: Card 55 **Earth Science Lab, Level B:** Card 55

9. Investigate motions and forces. (P)
c. Using the scientific method, design an experiment to test how different types of surfaces affect friction.
Earth Science Lab, Level A: Card 58 **Earth Science Lab, Level B:** Card 58 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91

10. Investigate the sources of energy. (P, E)
a. Investigate the sun as a major source of energy.
Life Science Lab, Level A: Cards 17, 76 **Life Science Lab, Level B:** Cards 17, 76 **Earth Science Lab, Level A:** Cards 37, 38, 47, 57, 58, 67 **Earth Science Lab, Level B:** Cards 37, 38, 47, 57, 58, 67 **Physical Science Lab, Level A:** Cards 38, 44, 46 **Physical Science Lab, Level B:** Cards 38, 44, 46

10. Investigate the sources of energy. (P, E)
b. Compare and contrast how the three forms of thermal energy flow.
Earth Science Lab, Level A: Card 43 **Earth Science Lab, Level B:** Card 43

10. Investigate the sources of energy. (P, E)
c. Research one or more of the sources of energy (nuclear, solar, wind, geothermal, hydro).
Life Science Lab, Level A: Card 84 **Life Science Lab, Level B:** Card 84 **Earth Science Lab, Level A:** Card 35 **Earth Science Lab, Level B:** Card 35 **Physical Science Lab, Level A:** Cards 34, 38, 42, 45, 46, 47, 48, 49, 74 **Physical Science Lab, Level B:** Cards 34, 38, 42, 45, 46, 47, 48, 49, 74

SRA Life, Earth, and Physical Science Laboratories
correlation to
2001 Mississippi Science Framework
Grade 8

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1. Analyze and relate structure and function in living systems. (L)
a. Analyze body systems and their functions.
Life Science Lab, Level A: Cards 44, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab, Level B:** Cards 44, 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

1. Analyze and relate structure and function in living systems. (L)
b. Relate interactions among body systems.
Life Science Lab, Level A: Cards 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 **Life Science Lab, Level B:** Cards 44, 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

1. Analyze and relate structure and function in living systems. (L)
c. Identify the parts of and show the interaction between the reproductive and endocrine systems.
Life Science Lab, Level A: Cards 57, 58 **Life Science Lab, Level B:** Cards 57, 58

1. Analyze and relate structure and function in living systems. (L)
d. Examine diseases that are the result of body system failures or infection by other organisms.
Life Science Lab, Level A: Cards 47, 48, 49 **Life Science Lab, Level B:** Cards 47, 48, 49

2. Analyze genetic continuity of organisms. (L)
a. Define meiosis by relating the process to genetic continuity.
Life Science Lab, Level A: Card 61 **Life Science Lab, Level B:** Card 61

2. Analyze genetic continuity of organisms. (L)
b. Compare and contrast genotype and phenotype.
Life Science Lab, Level A: Card 63 **Life Science Lab, Level B:** Card 63

2. Analyze genetic continuity of organisms. (L)
c. Explain the advantages and disadvantages of both hybrid and purebred species of plants and animals.
Life Science Lab, Level A: Cards 60, 61, 62, 65 **Life Science Lab, Level B:** Cards 60, 61, 62, 65

2. Analyze genetic continuity of organisms. (L)
d. Examine genes as a section of a DNA molecule that carries the genetic code for inherited traits.
Life Science Lab, Level A: Cards 62, 63, 64 **Life Science Lab, Level B:** Cards 62, 63, 64

3. Determine the economic factors that influence the regulation and behavior of organisms. (L, E)
a. Appraise the economic factors associated with regulations and protection of the environment.
Life Science Lab, Level A: Cards 14, 85, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 14, 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 42, 59, 61, 85, 86 **Earth Science Lab, Level B:** Cards 42, 59, 62, 85, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91

3. Determine the economic factors that influence the regulation and behavior of organisms. (L, E)
b. Explain environmental degradation to include overpopulation, biodiversity, sea-level rise, and enhanced greenhouse effect.
Life Science Lab, Level A: Cards 72, 75, 76, 80 **Life Science Lab, Level B:** Cards 72, 75, 76, 80 **Life Science Lab Teacher's Handbook:** Hands-On Activity 7, *The Effects of Acid Rain*, pages 101-103 **Earth Science Lab, Level A:** Cards 42, 59, 62, 86 **Earth Science Lab, Level B:** Cards 42, 59, 62, 89 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?*, pages 89-91

4. Examine the physical factors of populations as they relate to the formation of ecosystems. (L, E)
a. Analyze the adaptation of representative organisms to aquatic or terrestrial environments.
Life Science Lab, Level A: Cards 23, 24, 41, 43, 81, 82 **Life Science Lab, Level B:** Cards 23, 24, 41, 43, 81, 82

4. Examine the physical factors of populations as they relate to the formation of ecosystems. (L, E)
b. Evaluate the effects of urbanization on aquatic or terrestrial ecosystems.
Life Science Lab, Level A: Cards 81, 82, 84, 85, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 81, 82, 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 59, 61 **Earth Science Lab, Level B:** Cards 59, 61

4. Examine the physical factors of populations as they relate to the formation of ecosystems. (L, E)
c. Analyze how predation and food webs help structure communities.
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

5. Investigate atmospheric movements that affect the Earth's system. (E, P)
a. Analyze the cycles including nitrogen, water, carbon dioxide, and oxygen cycle.
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

5. Investigate atmospheric movements that affect the Earth's system. (E, P)
b. Use weather maps for analyzing and predicting weather.
Earth Science Lab, Level A: Cards 50, 51 **Earth Science Lab, Level B:** Cards 50, 51

5. Investigate atmospheric movements that affect the Earth's system. (E, P)
c. Construct a weather map to forecast the weather over a region, giving temperature in degrees Celsius.
Earth Science Lab, Level A: Cards 50, 51 **Earth Science Lab, Level B:** Cards 50, 51

6. Investigate the Earth's geological past. (E, L)
a. Identify the components/stages of a geological timetable and discuss how the environment (including animals and landforms) has changed in each period.
Life Science Lab, Level A: Cards 66, 67 **Life Science Lab, Level B:** Cards 66, 67 **Life Science Lab Teacher's Handbook:** Hands-On Activity 5, *Making Fossils*, pages 93-95 **Earth Science Lab, Level A:** Cards 32, 33, 34 **Earth Science Lab, Level B:** Cards 32, 33, 34

6. Investigate the Earth's geological past. (E, L)
b. Describe methods and tools used in dating rocks and fossils.
Life Science Lab, Level A: Cards 66, 67 **Life Science Lab, Level B:** Cards 66, 67 **Earth Science Lab, Level A:** Cards 6, 7, 8, 9, 30, 31, 32, 33, 34 **Earth Science Lab, Level B:** Cards 6, 7, 8, 9, 30, 31, 32, 33, 34

6. Investigate the Earth's geological past. (E, L)
c. Discuss Mississippi's geological areas.
Earth Science Lab, Level A: Card 21 **Earth Science Lab, Level B:** Card 21

7. Describe the appearance and nature of our galaxy and the universe. (E)
a. Explain the relationship between the distance and light-travel time (light year).
Earth Science Lab, Level A: Card 74 **Earth Science Lab, Level B:** Card 74

7. Describe the appearance and nature of our galaxy and the universe. (E)
b. Identify and describe deep-sky objects visible from Earth (diffuse nebulae, galactic and globular clusters, planetary nebulae, supernova remnants, "spiral nebulae").
Earth Science Lab, Level A: Cards 75, 76, 77 **Earth Science Lab, Level B:** Cards 75, 76, 77

7. Describe the appearance and nature of our galaxy and the universe. (E)
c. Identify and describe the Milky Way as the galaxy to which we belong.
Earth Science Lab, Level A: Cards 68, 74, 77 **Earth Science Lab, Level B:** Cards 68, 74, 77

7. Describe the appearance and nature of our galaxy and the universe. (E)
d. Identify and describe our galaxy in terms of its components (core of older star, spiral arms of gas and dust with younger stars, halo, "dark matter") and out location within it.
Earth Science Lab, Level A: Cards 74, 77 **Earth Science Lab, Level B:** Cards 74, 77

7. Describe the appearance and nature of our galaxy and the universe. (E)
e. Identify and describe "spiral nebulae" as distant galaxies.
Earth Science Lab, Level A: Cards 76, 77 **Earth Science Lab, Level B:** Cards 76, 77

7. Describe the appearance and nature of our galaxy and the universe. (E)
f. Identify and describe different types of galaxies in terms of their shape (spiral, barred spiral, elliptical, irregular) and level of activity.
Earth Science Lab, Level A: Card 77 **Earth Science Lab, Level B:** Card 77

8. Analyze the properties of matter. (P)
a. Determine experimentally physical and chemical properties including density, conductivity, and reactions with water, acids, and bases.
Physical Science Lab, Level A: Cards 1, 2, 13, 14, 15, 16 **Physical Science Lab, Level B:** Cards 1, 2, 13, 14, 15, 16 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases,* pages 77-79

8. Analyze the properties of matter. (P)
b. Interpret information given on the periodic table to predict reactions between elements.
Physical Science Lab, Level A: Cards 17, 18, 19, 20, 27, 28, 29 **Physical Science Lab, Level B:** Cards 17, 18, 19, 20, 27, 28, 29 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

8. Analyze the properties of matter. (P)
c. Write simple formulas for compounds.
Physical Science Lab, Level A: Cards 9, 11, 27, 28, 29 **Physical Science Lab, Level B:** Cards 9, 11, 27, 28, 29 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

8. Analyze the properties of matter. (P)
d. Distinguish among atoms, ions, and molecules.
Physical Science Lab, Level A: Cards 3, 4, 21, 22, 23 **Physical Science Lab, Level B:** Cards 3, 4, 21, 22, 23

8. Analyze the properties of matter. (P)
e. Determine the density of regular and irregular objects.
Physical Science Lab, Level A: Card 2 **Physical Science Lab, Level B:** Card 2

8. Analyze the properties of matter. (P)
f. Determine experimentally how acidic or basic a substance is using a pH scale indicator.
Physical Science Lab, Level A: Cards 14, 15, 16 **Physical Science Lab, Level B:** Cards 14, 15, 16 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 1, *Measuring pH of Acids and Bases*, pages 77-79

8. Analyze the properties of matter. (P)
g. Introduce the factor label method for unit conversions in the metric system.
Physical Science Lab, Level A: Cards 42, 65 **Physical Science Lab, Level B:** Cards 42, 65

9. Explore the application of simple and complex machines. (P)
a. Apply and demonstrate Newton's Three Laws of Motion using simple machines.
Physical Science Lab, Level A: Card 55 **Physical Science Lab, Level B:** Card 55 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91

9. Explore the application of simple and complex machines. (P)
b. Design and construct simple and complex machines.
Physical Science Lab, Level A: Cards 63, 64 **Physical Science Lab, Level B:** Cards 63, 64

10. Investigate the transfer of energy. (P)
a. Measure the transfer of heat between two objects using the Celsius scale.
Physical Science Lab, Level A: Cards 42, 43 **Physical Science Lab, Level B:** Cards 42, 43

10. Investigate the transfer of energy. (P)
b. Illustrate wave motion in different media.
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

10. Investigate the transfer of energy. (P)
c. Research and discuss energy transformation.
Physical Science Lab, Level A: Cards 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 66, 67, 68, 69, 70, 76, 80 **Physical Science Lab, Level B:** Cards 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 66, 67, 68, 69, 70, 76, 80 **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; Hands-On Activity 6, *Making Sound,* pages 97-99

10. Investigate the transfer of energy. (P)
d. Convert one energy form to another.
Physical Science Lab, Level A: Cards 37, 39, 40, 41, 45, 46, 47, 48, 76, 80 **Physical Science Lab, Level B:** Cards 37, 39, 40, 41, 45, 46, 47, 48, 76, 80 **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; Hands-On Activity 6, *Making Sound,* pages 97-99

10. Investigate the transfer of energy. (P)
e. Analyze mechanical waves (sound waves, water waves, earthquake waves, etc.) and electromagnetic waves (light, infrared, x-rays, etc.).
Earth Science Lab, Level A: Card 16 **Earth Science Lab, Level B:** Card 16 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 4, *Using Sound Waves,* pages 85-87 **Physical Science Lab, Level A:** Cards 82, 83, 84, 85 **Physical Science Lab, Level B:** Cards 82, 83, 84, 85