

SRA Life, Earth, and Physical Science Laboratories
correlation to
Hawaii Science Content Standards
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.

The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Inquiry
SC.6.1.1
Formulate a testable hypothesis that can be answered through a controlled experiment.
Physical Science Lab Teacher's Handbook: Hands-On Activity 3

The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Inquiry
SC.6.1.2
Use appropriate tools, equipment, and techniques safely to collect, display, and analyze data
Earth Science Lab Teacher's Handbook: Hands-On Activities 1-8
Life Science Lab Teacher's Handbook: Hands-On Activities 1-7
Physical Science Lab Teacher's Handbook: Hands-On Activities 1-6

The Scientific Process
Standard 2: Understand that science, technology, and society are interrelated.
Science, Technology, and Society
SC.6.2.1
Explain how technology has an impact on society and science
This concept is not covered at this level.

The Scientific Process
Standard 2: Understand that science, technology, and society are interrelated.
Science, Technology, and Society
SC.6.2.2
Explain how the needs of society have influenced the development and use of technologies
This concept is not covered at this level.

Life and Environmental Issues
Standard 3: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment
Cycles of Matter and Energy
SC.6.3.1
Describe how matter and energy are transferred within and among living systems and their physical environment
Life Science Lab, Level A: Cards 76, 77, 78, 79
Life Science Lab, Level B: Cards 76, 77, 78, 79

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Energy and its Transformation
SC.6.6.1
Compare how heat energy can be transferred through conduction, convection, and radiation
Physical Science Lab, Level A: Cards 43, 44
Physical Science Lab, Level B: Cards 43, 44

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Energy and its Transformation
SC.6.6.2
Describe the different types of energy transformations
Physical Science Lab, Level A: Cards 36, 39, 40, 41
Physical Science Lab, Level B: Cards 36, 39, 40, 41

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Energy and its Transformation
SC.6.6.3
Explain how energy can change forms and is conserved
Physical Science Lab, Level A: Card 37
Physical Science Lab, Level B: Card 37

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Energy and its Transformation
SC.6.6.4
Describe and give examples of different types of energy waves
Physical Science Lab, Level A: Card 43
Physical Science Lab, Level B: Card 43

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
The Nature of Matter
SC.6.6.5
Explain how matter can change physical or chemical forms, but the total amount of matter remains constant
Physical Science Lab, Level A: Cards 5, 6, 8, 9 Physical Science Lab, Level B: Cards 5, 6, 8, 9

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
The Nature of Matter
SC.6.6.6
Describe and compare the physical and chemical properties of different substances
Physical Science Lab, Level A: Cards 18, 19, 20, 26 Physical Science Lab, Level B: Cards 18, 19, 20, 26

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
The Nature of Matter
SC.6.6.7
Describe the organization of the periodic table
Physical Science Lab, Level A: Card 17 Physical Science Lab, Level B: Card 17

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
The Nature of Matter
SC.6.6.8
Recognize changes that indicate that a chemical reaction has taken place
Physical Science Lab, Level A: Cards 27, 28, 29, 30 Physical Science Lab, Level B: Cards 27, 28, 29, 30

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
The Nature of Matter
SC.6.6.9
Describe matter using the atomic model
Physical Science Lab, Level A: Card 3 Physical Science Lab, Level B: Card 3

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Waves
SC.6.6.10
Explain how vibrations in materials set up wavelike disturbances that spread away from the source
Physical Science Lab, Level A: Cards 77, 78 Physical Science Lab, Level B: Cards 77, 78

Physical, Earth, and Space Sciences
Standard 7: Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic
Force and Motion
SC.6.7.1
Describe examples of how forces affect an object's motion
Physical Science Lab, Level A: Cards 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61 Physical Science Lab, Level B: Cards 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61

Physical, Earth, and Space Sciences
Standard 7: Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic
Forces in the Universe
SC.6.7.2
Explain that electric currents can produce magnetic effects and that magnets can cause electric currents
Physical Science Lab, Level A: Cards 66, 74, 76 Physical Science Lab, Level B: Cards 66, 74, 76

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Grade 7

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The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Inquiry
SC.7.1.1
Design and safely conduct a scientific investigation to answer a question or test a hypothesis
Earth Science Lab Teacher's Handbook: Hands-On Activities 1-8 Life Science Lab Teacher's Handbook: Hands-On Activities 1-7 Physical Science Lab Teacher's Handbook: Hands-On Activities 1-6

The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Inquiry
SC.7.1.2
Explain the importance of replicable trials
Life Science Lab, Level A: Card 5 Life Science Lab, Level B: Card 5
Life Science Lab Teacher's Handbook: Hands-On Activities 1, 2, 4 Physical Science Lab Teacher's Handbook: Hands-On Activities 2, 3, 4, 6

The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Knowledge
SC.7.1.3
Explain the need to revise conclusions and explanations based on new scientific evidence
This concept is not covered at this level.

The Scientific Process
Standard 2: Understand that science, technology, and society are interrelated.
Science, Technology, and Society
SC.7.2.1
Explain the use of reliable print and electronic sources to provide scientific information and evidence
This concept is not covered at this level.

Life and Environmental Sciences
Standard 3: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment
Cycles of Matter and Energy
SC.7.3.1
Explain how energy moves through food webs, including the roles of photosynthesis and cellular respiration
Life Science Lab, Level A: Cards 9, 17, 76, 77
Life Science Lab, Level B: Cards 9, 17, 76, 77

Life and Environmental Sciences
Standard 3: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment
Interdependence
SC.7.3.2
Explain the interaction and dependence of organisms on one another
Life Science Lab, Level A: Cards 71, 72, 73, 74, 75
Life Science Lab, Level B: Cards 71, 72, 73, 74, 75

Life and Environmental Sciences
Standard 3: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment
Interdependence
SC.7.3.3
Explain how biotic and abiotic factors affect the carrying capacity and sustainability of an ecosystem
Life Science Lab, Level A: Card 70
Life Science Lab, Level B: Card 70

Life and Environmental Sciences
Standard 4: Understand the structures and functions of living organisms and how organisms can be compared scientifically
Cells, Tissues, Organs, and Organ Systems
SC.7.4.1
Describe the cell theory
Life Science Lab, Level A: Card 5
Life Science Lab, Level B: Card 5

Life and Environmental Sciences
Standard 4: Understand the structures and functions of living organisms and how organisms can be compared scientifically
Cells, Tissues, Organs, and Organ Systems
SC.7.4.2
Describe the basic structure and function of various types of cells
Life Science Lab, Level A: Cards 6, 7, 8, 9, 10
Life Science Lab, Level B: Cards 6, 7, 8, 9, 10

Life and Environmental Sciences
Standard 4: Understand the structures and functions of living organisms and how organisms can be compared scientifically
Cells, Tissues, Organs, and Organ Systems
SC.7.4.3
Describe the levels of organization in organisms
Life Science Lab, Level A: Cards 16, 44
Life Science Lab, Level B: Cards 16, 44

Life and Environmental Sciences
Standard 4: Understand the structures and functions of living organisms and how organisms can be compared scientifically
Classification
SC.7.4.4
Classify organisms according to their degree of relatedness
Life Science Lab, Level A: Cards 1, 2, 3, 25
Life Science Lab, Level B: Cards 1, 2, 3, 25

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Heredity
SC.7.5.1
Differentiate between sexual and asexual reproduction
Life Science Lab, Level A: Cards 60, 61
Life Science Lab, Level B: Cards 60, 61

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Heredity
SC.7.5.2
Describe how an inherited trait can be determined by one or more genes which are found on chromosomes
Life Science Lab, Level A: Cards 62, 63
Life Science Lab, Level B: Cards 62, 63

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Heredity
SC.7.5.3
Explain that small differences between parents and offspring could produce descendants that look very different from their ancestors
Life Science Lab, Level A: Card 66
Life Science Lab, Level B: Card 66

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Unity and Diversity
SC.7.5.4
Analyze how organisms' body structures contribute to their ability to survive and reproduce
Life Science Lab, Level A: Card 41 Life Science Lab, Level B: Card 41

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Biological Evolution
SC.7.5.5
Explain how fossils provide evidence that life and environmental conditions have changed over time
Life Science Lab, Level A: Card 67 Life Science Lab, Level B: Card 67

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Unity and Diversity
SC.7.5.6
Explain why variation(s) in a species' gene pool contributes to its survival in a constantly changing environment
Life Science Lab, Level A: Cards 64, 65 Life Science Lab, Level B: Cards 64, 65

SRA Life, Earth, and Physical Science Laboratories
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Grade 8

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The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Inquiry
SC.8.1.1
Determine the link(s) between evidence and the conclusion(s) of an investigation
Earth Science Lab Teacher's Handbook: Hands-On Activities 1-8 Life Science Lab Teacher's Handbook: Hands-On Activities 1-7 Physical Science Lab Teacher's Handbook: Hands-On Activities 1-6

The Scientific Process
Standard 1: Discover, invent, and investigate using the skills necessary to engage in the scientific process.
Scientific Inquiry
SC.8.1.2
Communicate the significant components of the experimental design and results of a scientific investigation
Earth Science Lab Teacher's Handbook: Hands-On Activities 1-8 Life Science Lab Teacher's Handbook: Hands-On Activities 1-7 Physical Science Lab Teacher's Handbook: Hands-On Activities 1-6

The Scientific Process
Standard 2: Understand that science, technology, and society are interrelated.
Science, Technology, and Society
SC.8.2.1
Describe significant relationships among society, science, and technology and how one impacts the other
This concept is not covered at this level.

The Scientific Process
Standard 2: Understand that science, technology, and society are interrelated.
Unifying Concepts and Themes
SC.8.2.2
Describe how scale and mathematical models can be used to support and explain scientific data
This concept is not covered at this level.

Life and Environmental Sciences
Standard 5: Understand genetics and biological evolution and their impact on the unity and diversity of organisms
Biological Evolution
SC.8.5.1
Describe how changes in the physical environment affect the survival of organisms
Life Science Lab, Level A: Card 70 Life Science Lab, Level B: Card 70

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Waves
SC.8.6.1
Explain the relationship between the color of light and wavelength within the electromagnetic spectrum
Physical Science Lab, Level A: Cards 77, 78, 82, 85 Physical Science Lab, Level B: Cards 77, 78, 82, 85

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Waves
SC.8.6.2
Explain how seismic waves provide scientists with information about the structure of Earth's interior
Earth Science Lab, Level A: Card 1 Earth Science Lab, Level B: Card 1

Physical, Earth, and Space Sciences
Standard 6: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe
Waves
SC.8.6.3
Identify the characteristics and properties of mechanical and electromagnetic waves
Physical Science Lab, Level A: Cards 77, 78, 79, 80, 83 Physical Science Lab, Level B: Cards 77, 78, 79, 80, 83

Physical, Earth, and Space Sciences
Standard 7: Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic
Forces in the Universe
SC.8.7.1
Explain that every object has mass and therefore exerts a gravitational force on other objects
Physical Science Lab, Level A: Cards 54, 59 Physical Science Lab, Level B: Cards 54, 59
Earth Science Lab, Level A: Cards 62, 66 Earth Science Lab, Level B: Cards 62, 66

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Earth Materials
SC.8.8.1
Compare the characteristics of the three main types of rocks
Earth Science Lab, Level A: Cards 6, 7, 8
Earth Science Lab, Level B: Cards 6, 7, 8

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Earth Materials
SC.8.8.2
Illustrate the rock cycle and explain how igneous, metamorphic, and sedimentary rocks are formed
Earth Science Lab, Level A: Card 9
Earth Science Lab, Level B: Card 9

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Earth in the Solar System
SC.8.8.3
Describe how the Earth's motions and tilt on its axis affect the seasons and weather patterns
Earth Science Lab, Level A: Card 62
Earth Science Lab, Level B: Card 62

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Forces that shape the Earth
SC.8.8.4
Explain how the sun is the major source of energy influencing climate and weather on Earth
Earth Science Lab, Level A: Cards 43, 55
Earth Science Lab, Level B: Cards 43, 55

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Forces that shape the Earth
SC.8.8.5
Explain the concepts of continental drift and plate tectonics
Earth Science Lab, Level A: Cards 10, 11, 12, 13
Earth Science Lab, Level B: Cards 10, 11, 12, 13

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Forces that shape the Earth
SC.8.8.6
Explain the relationship between density and convection currents in the ocean and atmosphere
Earth Science Lab, Level A: Cards 38, 39, 87
Earth Science Lab, Level B: Cards 38, 39, 87

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
Forces that shape the Earth
SC.8.8.7
Describe the physical characteristics of oceans
Earth Science Lab, Level A: Cards 87, 88
Earth Science Lab, Level B: Cards 87, 88

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
The Universe
SC.8.8.8
Describe the composition of objects in the galaxy
Earth Science Lab, Level A: Card 77
Earth Science Lab, Level B: Card 77

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
The Universe
SC.8.8.9
Explain the predictable motions of the Earth and moon
Earth Science Lab, Level A: Cards 62, 63, 64, 65
Earth Science Lab, Level B: Cards 62, 63, 64, 65

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
The Universe
SC.8.8.10
Compare the characteristics and movement patterns of the planets in our solar system
Earth Science Lab, Level A: Cards 68, 69, 70, 71, 72, 73
Earth Science Lab, Level B: Cards 68, 69, 70, 71, 72, 73

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
The Universe
SC.8.8.11
Describe the major components of the universe
Earth Science Lab, Level A: Cards 74, 75, 76, 77, 78
Earth Science Lab, Level B: Cards 74, 75, 76, 77, 78

Physical, Earth, and Space Sciences
Standard 8: Understand the Earth and its processes, the solar system, and the universe and its contents
The Universe
SC.8.8.12
Describe the role of gravitational force in the motions of planetary systems
Earth Science Lab, Level A: Card 68 Earth Science Lab, Level B: Card 68