

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

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

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and test explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.1. Students know how to identify and critically evaluate information in data, tables, and graphs. E/S

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 16, 22, 24

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and text explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.2. Students know how to critically evaluate information to distinguish between facts and opinion. E/S

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

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and text explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.3. Students know different explanations can be given for the same evidence. E/S

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

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and text explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.4. Students know how to design and conduct a controlled experiment. E/L

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 15

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and text explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.5. Students know how to use appropriate technology and laboratory procedures safely for observing, measuring, recording, and analyzing data. E/L

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

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and text explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.6. Students know scientific inquiry includes evaluating results of scientific investigations, experiments, observations, theoretical and mathematical models, and explanations proposed by other scientists. E/S

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 2, 3, 4, 5, 11, 20

Scientific Inquiry (Nature of Science Unifying Concept A)

Scientific inquiry is the process by which human systematically examine the natural world. Scientific inquiry is a human endeavor and involves observation, reasoning, insight, energy, skill, and creativity. Scientific inquiry is used to formulate and text explanations of nature through observation, experiments, and theoretical or mathematical models. Scientific explanations and evidence are constantly reviewed and examined by others. Questioning, response to criticism and open communication are integral to the process of science.

N.8.A. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.7. Students know there are multiple methods for organizing items and information. E/S

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 1, 2, 4, 5, 6, 7, 10, 11, 12, 15, 16, 19, 20, 21, 24, 26, 27, 29

<p>Science, Technology, and Society (Nature of Science Unifying Concept B) Technology defines a society or era. It can shape the environment in which people live, and it has increasingly become a larger part of people’s lives. While many of technology’s effects on society are regarded as desirable, other effects are seen as less desirable. These concepts are shared across subject areas such as science, math, technology, social studies and language arts. The development and use of technology affects society and the environment in which we live, and, at the same time, society affects the development of technology and its impact on culture.</p>
<p>N.8.B. Students understand the interactions of science and society in an ever-changing world.</p>
<p>N.8.B.1. Students understand that consequences of technologies can cause resource depletion and environmental degradation, but technology can also increase resource availability, mitigate environmental degradation, and make new resources economical.</p>
<p>Life Science Lab Teacher’s Handbook: Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p>
<p>Physical Science Lab Teacher’s Handbook: Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91</p>

<p>Science, Technology, and Society (Nature of Science Unifying Concept B) Technology defines a society or era. It can shape the environment in which people live, and it has increasingly become a larger part of people’s lives. While many of technology’s effects on society are regarded as desirable, other effects are seen as less desirable. These concepts are shared across subject areas such as science, math, technology, social studies and language arts. The development and use of technology affects society and the environment in which we live, and, at the same time, society affects the development of technology and its impact on culture.</p>
<p>N.8.B. Students understand the interactions of science and society in an ever-changing world.</p>
<p>N.8.B.2. Students know scientific knowledge is revised through a process of incorporating new evidence gained through on-going investigation and collaborative discussion. E/S</p>
<p>Life Science Lab Teacher’s Handbook: Hands-On Activity 1, <i>Examining Cells</i>, pages 77-79; Hands-On Activity 2, <i>Culturing Bacteria</i>, pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i>, pages 85-87; Hands-On Activity 4, <i>Your Cardiovascular System</i>, pages 89-91; Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95; Hands-On Activity 6, <i>How Much Does Energy Cost?</i>, pages 97-99; Hands-On Activity 7, <i>The Effects of Acid Rain</i>, pages 101-103</p>
<p>Earth Science Lab Teacher’s Handbook: Hands-On Activity 1, <i>Identifying Minerals with the Mohs Scale</i>, pages 73-75; Hands-On Activity 2, <i>Plate Boundaries in Action</i>, pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i>, pages 81-83; Hands-On Activity 4, <i>Using Sound Waves</i>, pages 85-87; Hands-On Activity 5, <i>What is in the Air?</i>, pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i>, pages 93-95; Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99; Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i>, pages 101-103</p>
<p>Physical Science Lab Teacher’s Handbook: Hands-On Activity 1, <i>Measuring pH of Acids and Bases</i>, pages 77-79; Hands-On Activity 2, <i>Chemical Reaction Rates</i>, pages 81-83; Hands-On Activity 3, <i>Energy Conversion</i>, pages 85-87; Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91; Hands-On Activity 5, <i>Making a Potato Battery</i>, pages 93-95; Hands-On Activity 6, <i>Making Sound</i>, pages 97-99</p>

<p>Matter (Physical Science Unifying Concept A) Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>
<p>P.8.A. Students understand the properties and changes of properties in matter.</p>
<p>P.8.A.1. Students know particles are arranged differently in solids, liquids, and gases of the same substance. E/S</p>
<p>Physical Science Lab, Level A: Cards 5, 6, 7, 8</p>
<p>Physical Science Lab, Level B: Cards 5, 6, 7, 8</p>

<p>Matter (Physical Science Unifying Concept A) Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>
<p>P.8.A. Students understand the properties and changes of properties in matter.</p>
<p>P.8.A.2. Students know elements can be arranged in the periodic table which shows repeating patterns that group elements with similar properties. E/S</p>
<p>Physical Science Lab, Level A: Cards 17, 18, 19, 20 Physical Science Lab, Level B: Cards 17, 18, 19, 20</p>

<p>Matter (Physical Science Unifying Concept A) Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>
<p>P.8.A. Students understand the properties and changes of properties in matter.</p>
<p>P.8.A.3. Students know methods for separating mixtures based on the properties of the components. E/S</p>
<p>Physical Science Lab, Level A: Cards 8, 12, 13 Physical Science Lab, Level B: Cards 8, 12, 13</p>

<p>Matter (Physical Science Unifying Concept A) Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>
<p>P.8.A. Students understand the properties and changes of properties in matter.</p>
<p>P.8.A.4. Students know atoms often combine to form molecules, and that compounds form when two or more different kinds of atoms chemically bond. E/S</p>
<p>Physical Science Lab, Level A: Cards 3, 4, 10, 11, 31, 32 Physical Science Lab, Level B: Cards 3, 4, 10, 11, 31, 32</p>

<p>Matter (Physical Science Unifying Concept A) Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>
<p>P.8.A. Students understand the properties and changes of properties in matter.</p>
<p>P.8.A.5. Students know mass is conserved in physical and chemical changes. E/S</p>
<p>Physical Science Lab, Level A: Cards 7, 8, 9 Physical Science Lab, Level B: Cards 7, 8, 9</p>

<p>Matter (Physical Science Unifying Concept A) Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</p>
<p>P.8.A. Students understand the properties and changes of properties in matter.</p>
<p>P.8.A.6. Students know matter is made up of tiny particles called atoms. E/S</p>
<p>Physical Science Lab, Level A: Cards 3, 4, 10, 11 Physical Science Lab, Level B: Cards 3, 4, 10, 11</p>

Matter (Physical Science Unifying Concept A)
Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.
P.8.A. Students understand the properties and changes of properties in matter.
P.8.A.7. Students know the characteristics of electrons, protons, and neutrons. E/S
Physical Science Lab, Level A: Cards 21, 22, 23, 24, 25
Physical Science Lab, Level B: Cards 21, 22, 23, 24, 25

Matter (Physical Science Unifying Concept A)
Matter has various states with unique properties that can be used as a basis for organization. The relationship between properties of matter and its structure is an essential component of study in the physical sciences. The understanding of matter and its properties leads to practical applications, such as the capacity to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.
P.8.A. Students understand the properties and changes of properties in matter.
P.8.A.8. Students know substances containing only one kind of atom are elements which cannot be broken into smaller pieces by normal laboratory processes. E/S
Physical Science Lab, Level A: Cards 4, 10, 11, 12
Physical Science Lab, Level B: Cards 4, 10, 11, 12

Force and Motion (Physical Science Unifying Concept B)
The laws of motion are used to describe the effects of forces on the movement of objects.
P.8.B. Students understand that position and motion of an object result from the net effect of the different forces acting on it.
P.8.B.1. Students know the effects of balanced and unbalanced forces on an object's motion. E/S
Physical Science Lab, Level A: Cards 50, 54, 55, 56, 63, 64
Physical Science Lab, Level B: Cards 50, 54, 55, 56, 63, 64
Physical Science Lab Teacher's Handbook: Hands-On Activity 4, <i>Reducing Friction</i>, pages 89-91

Force and Motion (Physical Science Unifying Concept B)
The laws of motion are used to describe the effects of forces on the movement of objects.
P.8.B. Students understand that position and motion of an object result from the net effect of the different forces acting on it.
P.8.B.2. Students know electric currents can produce magnetic forces and magnets can cause electric currents. E/S
Physical Science Lab, Level A: Cards 74, 75, 76
Physical Science Lab, Level B: Cards 74, 75, 76

Force and Motion (Physical Science Unifying Concept B)
The laws of motion are used to describe the effects of forces on the movement of objects.
P.8.B. Students understand that position and motion of an object result from the net effect of the different forces acting on it.
P.8.B.3. Students know every object exerts gravitational force on every other object, and the magnitude of this force depends on the mass of the objects and their distance from one another. I/S
Physical Science Lab, Level A: Cards 57, 59
Physical Science Lab, Level B: Cards 57, 59

Energy (Physical Science Unifying Concept C) The total energy of the universe is constant. All events involve the transfer of energy in one form or another. IN all energy transfers, the overall effect is that the energy is spread out uniformly.
P.8.C. Students understand transfer of energy.
P.8.C.1. Students know visible light is a narrow band within the electromagnetic spectrum. I/S
Physical Science Lab, Level A: Cards 82, 83, 84, 85 Physical Science Lab, Level B: Cards 82, 83, 84, 85

Energy (Physical Science Unifying Concept C) The total energy of the universe is constant. All events involve the transfer of energy in one form or another. IN all energy transfers, the overall effect is that the energy is spread out uniformly.
P.8.C. Students understand transfer of energy.
P.8.C.2. Students know vibrations (e.g., sounds, earthquakes) move at different speeds in different materials, have different wavelengths, and set up waves-like disturbances that spread away from the source uniformly. E/S
Physical Science Lab, Level A: Cards 77, 78, 79, 80, 81 Physical Science Lab, Level B: Cards 77, 78, 79, 80, 81 Physical Science Lab Teacher's Handbook: Hands-On Activity 6, <i>Making Sound</i> , pages 97-99

Energy (Physical Science Unifying Concept C) The total energy of the universe is constant. All events involve the transfer of energy in one form or another. IN all energy transfers, the overall effect is that the energy is spread out uniformly.
P.8.C. Students understand transfer of energy.
P.8.C.3. Students know physical, chemical, and nuclear changes involve a transfer of energy. E/S
Physical Science Lab, Level A: Cards 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 Physical Science Lab, Level B: Cards 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 Physical Science Lab Teacher's Handbook: Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87

Energy (Physical Science Unifying Concept C) The total energy of the universe is constant. All events involve the transfer of energy in one form or another. IN all energy transfers, the overall effect is that the energy is spread out uniformly.
P.8.C. Students understand transfer of energy.
P.8.C.4. Students know energy cannot be created or destroyed, in a chemical or physical reaction, but only changed from one form to another. E/S
Physical Science Lab, Level A: Cards 37, 38, 39, 40 Physical Science Lab, Level B: Cards 37, 38, 39, 40 Physical Science Lab Teacher's Handbook: Hands-On Activity 3, <i>Energy Conversion</i> , pages 85-87

Energy (Physical Science Unifying Concept C) The total energy of the universe is constant. All events involve the transfer of energy in one form or another. IN all energy transfers, the overall effect is that the energy is spread out uniformly.
P.8.C. Students understand transfer of energy.
P.8.C.5. Students know heat energy flows from warmer materials or regions to cooler ones through conduction, convection, and radiation. E/S
Earth Science Lab, Level A: Card 38 Earth Science Lab, Level B: Card 38 Physical Science Lab, Level A: Cards 43, 44 Physical Science Lab, Level B: Cards 43, 44

Energy (Physical Science Unifying Concept C) The total energy of the universe is constant. All events involve the transfer of energy in one form or another. IN all energy transfers, the overall effect is that the energy is spread out uniformly.
P.8.C. Students understand transfer of energy.
P.8.C.6. Students know electrical circuits provide a means of transferring electrical energy to produce heat, light, sound, and chemical changes. I/S
Physical Science Lab, Level A: Cards 68, 69, 70, 71, 72 Physical Science Lab, Level B: Cards 68, 69, 70, 71, 72 Physical Science Lab Teacher’s Handbook: Hands-On Activity 5, <i>Making a Potato Battery</i> , pages 93-95

Heredity (Life Science Unifying Concept A) Heredity is the genetic passing of a set of instructions from generation to generation. These instructions are encoded as DNA and may manifest themselves as characteristics. Some characteristics are inherited, and some result from interactions with the environment.
L.8.A. Students understand the role of genetic information in the continuation of a species.
L.8.A.1. Students know heredity is the passage of genetic instructions from one generation to the next generation. E/S
Life Science Lab, Level A: Cards 61, 62, 63, 64 Life Science Lab, Level B: Cards 61, 62, 63, 64

Heredity (Life Science Unifying Concept A) Heredity is the genetic passing of a set of instructions from generation to generation. These instructions are encoded as DNA and may manifest themselves as characteristics. Some characteristics are inherited, and some result from interactions with the environment.
L.8.A. Students understand the role of genetic information in the continuation of a species.
L.8.A.2. Students know changes in genes of eggs and sperm can cause changes in inherited characteristics. E/S
Life Science Lab, Level A: Cards 62, 63, 64 Life Science Lab, Level B: Cards 62, 63, 64

Heredity (Life Science Unifying Concept A) Heredity is the genetic passing of a set of instructions from generation to generation. These instructions are encoded as DNA and may manifest themselves as characteristics. Some characteristics are inherited, and some result from interactions with the environment.
L.8.A. Students understand the role of genetic information in the continuation of a species.
L.8.A.3. Students know organisms can be bred for specific characteristics. I/L
Life Science Lab, Level A: Cards 65, 66 Life Science Lab, Level B: Cards 65, 66

Heredity (Life Science Unifying Concept A) Heredity is the genetic passing of a set of instructions from generation to generation. These instructions are encoded as DNA and may manifest themselves as characteristics. Some characteristics are inherited, and some result from interactions with the environment.
L.8.A. Students understand the role of genetic information in the continuation of a species.
L.8.A.4. Students know some characteristics of an organism are the result of a combination of interaction with the environment and genetic information. E/S
Life Science Lab, Level A: Cards 23, 24, 41, 43, 62, 63, 65, 66 Life Science Lab, Level B: Cards 23, 24, 41, 43, 62, 63, 65, 66

Structure of Life (Life Science Unifying Concept B) All living things are composed of cells, Cells range from very simple to complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures or disease.
L.8.B. Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.
L.8.B.1. Students know all organisms are composed of cells, which are the fundamental units of life. E/S
Life Science Lab, Level A: Cards 1, 5, 6, 7 Life Science Lab, Level B: Cards 1, 5, 6, 7 Life Science Lab Teacher's Handbook: Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79

Structure of Life (Life Science Unifying Concept B) All living things are composed of cells, Cells range from very simple to complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures or disease.
L.8.B. Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.
L.8.B.2. Students know cells grow, divide, and take in nutrients which they use to provide energy for cell functions. E/S
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, <i>Examining Cells</i> , pages 77-79

Structure of Life (Life Science Unifying Concept B) All living things are composed of cells, Cells range from very simple to complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures or disease.
L.8.B. Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.
L.8.B.3. Students know some organisms are made of just one cell and that multicellular organisms can consist of thousands to millions of cells working together. E/S
Life Science Lab, Level A: Cards 1, 5, 6, 7, 11, 12, 14, 15, 16 Life Science Lab, Level B: Cards 1, 5, 6, 7, 11, 12, 14, 15, 16 Life Science Lab Teacher's Handbook: Hands-On Activity 1, <i>Examining Cells</i> , pages 77-79

Structure of Life (Life Science Unifying Concept B) All living things are composed of cells, Cells range from very simple to complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures or disease.
L.8.B. Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.
L.8.B.4. Students know cells combine to form tissues that combine to form organs and organ systems that are specialized to perform life functions. E/S/
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, <i>Your Cardiovascular System</i> , pages 89-91

Structure of Life (Life Science Unifying Concept B) All living things are composed of cells, Cells range from very simple to complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures or disease.
L.8.B. Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.
L.8.B.5. Students know disease can result from defects in body systems or from damage caused by infection. E/S
Life Science Lab, Level A: Cards 45, 47, 48, 49 Life Science Lab, Level B: Cards 45, 47, 48, 49

Organisms and Their Environment (Life Science Unifying Concept C) A variety of ecosystems and communities exist on Earth. Ecosystems are dynamic interactions of organisms and their environment. Ecosystems have distinct characteristics and components that allow certain organisms to thrive. Change in one or more components can affect the entire ecosystem.
L.8.C. Students understand how living and non-living components of ecosystems interact.
L.8.C.1. Students know how matter and energy are transferred through food webs in an ecosystem. E/S
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, <i>How Much Does Energy Cost?</i> , pages 97-99

Organisms and Their Environment (Life Science Unifying Concept C) A variety of ecosystems and communities exist on Earth. Ecosystems are dynamic interactions of organisms and their environment. Ecosystems have distinct characteristics and components that allow certain organisms to thrive. Change in one or more components can affect the entire ecosystem.
L.8.C. Students understand how living and non-living components of ecosystems interact.
L.8.C.2. Students know how to characterize organisms in any ecosystem by their functions. E/S
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, <i>How Much Does Energy Cost?</i> , pages 97-99

Organisms and Their Environment (Life Science Unifying Concept C) A variety of ecosystems and communities exist on Earth. Ecosystems are dynamic interactions of organisms and their environment. Ecosystems have distinct characteristics and components that allow certain organisms to thrive. Change in one or more components can affect the entire ecosystem.
L.8.C. Students understand how living and non-living components of ecosystems interact.
L.8.C.3. Students will evaluate how changes in environments can be beneficial or harmful/ E/S
Life Science Lab, Level A: Cards 72, 80, 84, 85, 86, 87, 88, 89, 90 Life Science Lab, Level B: Cards 72, 80, 84, 85, 86, 87, 88, 89, 80 Life Science Lab Teacher’s Handbook: Hands-On Activity 7, <i>The Effects of Acid Rain</i> , pages 101-103

Organisms and Their Environment (Life Science Unifying Concept C) A variety of ecosystems and communities exist on Earth. Ecosystems are dynamic interactions of organisms and their environment. Ecosystems have distinct characteristics and components that allow certain organisms to thrive. Change in one or more components can affect the entire ecosystem.
L.8.C. Students understand how living and non-living components of ecosystems interact.
L.8.C.4. Students know inter-related factors affect the number and type of organisms an ecosystem can support. E/S
Life Science Lab, Level A: Cards 72, 73, 74, 75, 76 Life Science Lab, Level B: Cards 72, 73, 74, 75, 76

Diversity of Life (Life Science Unifying Concept D) Evidence suggests that living things change over periods of time. These changes can be attributed to genetic and/or environmental influences. This process of change over time is called biological evolution. The diversity of life on Earth is classified using objective characteristics. Scientific classification uses a hierarchy of groups and subgroups based on similarities that reflect evolutionary relationships.
L.8.D. Students understand that life forms change over time, contributing to the variety of organisms found on the Earth.
L.8.D.1. Students know species can be identified and classified based upon their characteristics. E/S
Life Science Lab, Level A: Cards 2, 3, 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, 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, <i>Culturing Bacteria</i> , pages 81-83; Hands-On Activity 3, <i>Investigating Arthropods</i> , pages 85-87

<p>Diversity of Life (Life Science Unifying Concept D) Evidence suggests that living things change over periods of time. These changes can be attributed to genetic and/or environmental influences. This process of change over time is called biological evolution. The diversity of life on Earth is classified using objective characteristics. Scientific classification uses a hierarchy of groups and subgroups based on similarities that reflect evolutionary relationships.</p>
<p>L.8.D. Students understand that life forms change over time, contributing to the variety of organisms found on the Earth.</p>
<p>L.8.D.2. Students know fossils provide evidence of how life and environmental conditions have changed throughout geologic time. E/S</p>
<p>Life Science Lab, Level A: Cards 67, 68 Life Science Lab, Level B: Cards 67, 68 Life Science Lab Teacher’s Handbook: Hands-On Activity 5, <i>Making Fossils</i>, pages 93-95</p>
<p>Earth Science Lab, Level A: Cards 33, 34 Earth Science Lab, Level B: Cards 33, 34</p>

<p>Diversity of Life (Life Science Unifying Concept D) Evidence suggests that living things change over periods of time. These changes can be attributed to genetic and/or environmental influences. This process of change over time is called biological evolution. The diversity of life on Earth is classified using objective characteristics. Scientific classification uses a hierarchy of groups and subgroups based on similarities that reflect evolutionary relationships.</p>
<p>L.8.D. Students understand that life forms change over time, contributing to the variety of organisms found on the Earth.</p>
<p>L.8.D.3. Students know an organism’s behavior is based on both experience and on the species’ evolutionary history. E/S</p>
<p>Life Science Lab, Level A: Cards 24, 43, 65, 66, 67, 68 Life Science Lab, Level B: Cards 24, 43, 65, 66, 67, 68</p>

<p>Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth’s internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.</p>
<p>E.8.A. Students understand the relationship between the Earth’s atmosphere, topography, weather, and climate.</p>
<p>E.8.A.1. Students know seasons are caused by variations in the amounts of the Sun’s energy reaching Earth’s surface due to the planet’s axial tilt. E/S</p>
<p>Earth Science Lab, Level A: Card 62 Earth Science Lab, Level B: Card 62</p>

<p>Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth’s internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.</p>
<p>E.8.A. Students understand the relationship between the Earth’s atmosphere, topography, weather, and climate.</p>
<p>E.8.A.2. Students know how the processes involved in the water cycle affect climatic patterns. E/S</p>
<p>Earth Science Lab, Level A: Cards 47, 48, 49, 51, 55, 56, 57, 58, 60 Earth Science Lab, Level B: Cards 47, 48, 49, 51, 55, 56, 57, 58, 60</p>

Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth’s internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.
E.8.A. Students understand the relationship between the Earth’s atmosphere, topography, weather, and climate.
E.8.A.3. Students know the properties that make water an essential component of the earth system. E/S
Earth Science Lab, Level A: Cards 43, 44, 47, 48, 82, 83, 84, 85, 87, 89, 90
Earth Science Lab, Level B: Cards 43, 44, 47, 48, 82, 83, 84, 85, 87, 89, 90
Earth Science Lab Teacher’s Handbook: Hands-On Activity 8, <i>Temperature, Salinity, and Water Density</i> , pages 101-103

Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth’s internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.
E.8.A. Students understand the relationship between the Earth’s atmosphere, topography, weather, and climate.
E.8.A.4. Students understand the composition of Earth’s atmosphere, emphasizing the role of the atmosphere in Earth’s weather and climate. I/S
Earth Science Lab, Level A: Cards 36, 37, 38, 39, 40, 41, 42, 44, 45, 46, 47, 48, 49, 52, 53, 54, 55, 56, 57, 58, 59, 60
Earth Science Lab, Level B: Cards 36, 37, 38, 39, 40, 41, 42, 44, 45, 46, 47, 48, 49, 52, 53, 54, 55, 56, 57, 58, 59, 60
Earth Science Lab Teacher’s Handbook: Hands-On Activity 5, <i>What is in the Air?</i> , pages 89-91; Hands-On Activity 6, <i>Modeling a Tornado</i> , pages 93-95

Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth’s internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.
E.8.A. Students understand the relationship between the Earth’s atmosphere, topography, weather, and climate.
E.8.A.5. Students know the difference between local weather and regional climate. I/S
Earth Science Lab, Level A: Cards 55, 56, 57, 58, 60, 61
Earth Science Lab, Level B: Cards 55, 56, 57, 58, 60, 61

Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) Earth systems have internal and external sources of energy, both of which create heat. Driven by sunlight and Earth’s internal heat, a variety of cycles connect and continually circulate energy and material through the components of the earth systems.
E.8.A. Students understand the relationship between the Earth’s atmosphere, topography, weather, and climate.
E.8.A.6. Students know topography and patterns of global and local atmospheric movement influence local weather which occurs primarily in the lower atmosphere. E/S
Earth Science Lab, Level A: Cards 40, 41, 45, 46, 56, 57, 58, 59, 60, 61
Earth Science Lab, Level B: Cards 40, 41, 45, 46, 56, 57, 58, 59, 60, 61

Solar System and Universe (Earth and Space Science Unifying Concept B) The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.
E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.
E.5.B.1. Students know the universe contains many billions of galaxies, and each galaxy contains many billions of stars. W/L
Earth Science Lab, Level A: Cards 75, 77, 78
Earth Science Lab, Level B: Cards 75, 77, 78

<p>Solar System and Universe (Earth and Space Science Unifying Concept B) The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.</p>
<p>E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.</p>
<p>E.5.B.2. Students know the solar system includes a great variety of planetary moons, asteroids, and comets. I/S</p>
<p>Earth Science Lab, Level A: Cards 63, 67, 68, 69, 70, 71, 72, 73, 74 Earth Science Lab, Level B: Cards 63, 67, 68, 69, 70, 71, 72, 73, 74 Earth Science Lab Teacher's Handbook: Hands-On Activity 7, <i>Sizes in the Solar System</i>, pages 97-99</p>

<p>Solar System and Universe (Earth and Space Science Unifying Concept B) The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.</p>
<p>E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.</p>
<p>E.5.B.3. Students know characteristics of the planets in our solar system. I/S</p>
<p>Earth Science Lab, Level A: Cards 69, 70, 71, 72 Earth Science Lab, Level B: Cards 69, 70, 71, 72</p>

<p>Solar System and Universe (Earth and Space Science Unifying Concept B) The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.</p>
<p>E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.</p>
<p>E.5.B.4. Students know Earth is part of a solar system located within the Milky Way. E/S</p>
<p>Earth Science Lab, Level A: Cards 68, 69 Earth Science Lab, Level B: Cards 68, 69 Earth Science Lab Teacher's Handbook: Hands-On Activity 7</p>

<p>Solar System and Universe (Earth and Space Science Unifying Concept B) The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.</p>
<p>E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.</p>
<p>E.5.B.5. Students know the Sun is many thousands of times closer to Earth than any other star, and billions of times closer that the far end of the Milky Way Galaxy. W/L</p>
<p>Earth Science Lab, Level A: Cards 67, 75, 77, 79 Earth Science Lab, Level B: Cards 67, 75, 77, 79</p>

Solar System and Universe (Earth and Space Science Unifying Concept B)
The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.
E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.
E.5.B.6. Students know the Sun is a medium-sized star located in the Milky Way Galaxy, part of which can be seen as a glowing band of light spanning the clear night sky. W/L
Earth Science Lab, Level A: Cards 67, 77
Earth Science Lab, Level B: Cards 67, 77

Solar System and Universe (Earth and Space Science Unifying Concept B)
The universe is a dynamic system of matter and energy. The universe is extremely large and massive with its components separated by vast distances. Tools of technology continue to aid in the investigation of the components, origins, processes and age of the universe. Earth is one part of our solar system, which is within the Milky Way galaxy. The Sun is the energy-producing star for our solar system. Most objects in our solar system are in predictable motion, resulting in phenomena such as day/night, year, phases of the moon, tides, and eclipses.
E.8.B. Students understand characteristics of our solar system that is part of the Milky Way galaxy.
E.5.B.7. Students know regular and predictable motions of Earth around the Sun and the Moon around the Earth explain such phenomena as the day, the year, phases of the Moon, and eclipses. E/S
Earth Science Lab, Level A: Cards 62, 64, 65
Earth Science Lab, Level B: Cards 62, 64, 65

Earth's Composition and Structure (Earth and Space Science Unifying Concept C)
Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.1. Students know sedimentary rocks and fossils provide evidence for changing environments and the constancy of geological processes. E/S
Life Science Lab, Level A: Cards 67, 68
Life Science Lab, Level B: Cards 67, 68
Earth Science Lab, Level A: Cards 7, 33, 34
Earth Science Lab, Level B: Cards 7, 33, 34

Earth's Composition and Structure (Earth and Space Science Unifying Concept C)
Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.2. Students know rocks at Earth's surface weather, forming sediments that are buried, then compacted, heated, and often recrystallized into new rock. E/S
Earth Science Lab, Level A: Cards 6, 7, 8, 9, 22
Earth Science Lab, Level B: Cards 6, 7, 8, 9, 22

Earth's Composition and Structure (Earth and Space Science Unifying Concept C)
Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.3. Students know Earth is composed of a crust (both continental and oceanic); hot convecting mantle; and dense, metallic core. E/S
Earth Science Lab, Level A: Cards 1, 2, 88
Earth Science Lab, Level B: Cards 1, 2, 88

Earth's Composition and Structure (Earth and Space Science Unifying Concept C) Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.4. Students know the very slow movement of large crustal plates result in geological events. E/S
Earth Science Lab, Level A: Cards 10, 11, 12, 13, 14, 15, 16, 17
Earth Science Lab, Level B: Cards 10, 11, 12, 13, 14, 15, 16, 17
Earth Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79

Earth's Composition and Structure (Earth and Space Science Unifying Concept C) Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.5. Students know how geologic processes account for state and regional topography. E/S
Earth Science Lab, Level A: Cards 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29
Earth Science Lab, Level B: Cards 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29
Earth Science Lab Teacher's Handbook: Hands-On Activity 2, <i>Plate Boundaries in Action</i> , pages 77-79; Hands-On Activity 3, <i>Interpreting a Topographic Map</i> , pages 81-83

Earth's Composition and Structure (Earth and Space Science Unifying Concept C) Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.6. Students know minerals have different properties and different distributions according to how they form. E/S
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, <i>Identifying Minerals with the Mohs Scale</i> , pages 73-75

Earth's Composition and Structure (Earth and Space Science Unifying Concept C) Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.7. Students know the characteristics, abundances, and location of renewable and nonrenewable resources found in Nevada. E/S
Life Science Lab, Level A: Cards 87, 88, 89, 90
Life Science Lab, Level B: Cards 87, 88, 89, 90
Earth Science Lab, Level A: Cards 3, 23, 29, 35
Earth Science Lab, Level B: Cards 3, 23, 29, 35

Earth's Composition and Structure (Earth and Space Science Unifying Concept C) Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.
E.8.C. Students understand that landforms result from a combination of constructive and destructive processes.
E.8.C.8. Students know soils have properties, such as color, texture, and water retention, and provide nutrients for life according to how they form. E/S
Life Science Lab, Level A: Cards 87, 88
Life Science Lab, Level B: Cards 87, 88
Earth Science Lab, Level A: Cards 23, 29
Earth Science Lab, Level B: Cards 23, 29