SRA Life, Earth, and Physical Science Laboratories
correlation to
Rhode Island Science Framework
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.

3A. THE NATURE OF TECHNOLOGY
Technology and Science
1. In earlier times, the accumulated information and techniques of each generation of workers were taught on the job directly to the next generation of workers. Today, the knowledge base for technology can be found as well in libraries of print and electronic resources and is often taught in the classroom.
This concept is not covered at this level.

3A. THE NATURE OF TECHNOLOGY
Technology and Science
2. Science and technology are essential to one another for such purposes as access to outer space and other remote locations, sample collection and treatment, measurement, data collection and storage, computation, and communication of information.
Life Science Lab, Level A: Cards 5, 59 **Life Science Lab, Level B:** Cards 5, 59 **Earth Science Lab, Level A:** Cards 16, 20, 31, 51, 54, 70, 79, 80, 81, 88 **Earth Science Lab, Level B:** Cards 16, 20, 31, 51, 54, 70, 79, 80, 81, 88 **Physical Science Lab, Level A:** Cards 81, 84, 90 **Physical Science Lab, Level B:** Cards 81, 84, 90

3A. THE NATURE OF TECHNOLOGY
Design and Systems
1. Design usually requires taking constraints into account. Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones, limit design choices.
This concept is not covered at this level.

3A. THE NATURE OF TECHNOLOGY
Design and Systems
4. Systems fail because they have faulty or poorly matched parts, are used in ways that exceed what was intended by the design, or were poorly designed to begin with. The most common ways to prevent failure are pretesting parts and procedures, overdesign, and redundancy.
Life Science Lab, Level A: Cards 5, 59, 64, 69, 83, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 5, 59, 64, 69, 83, 87, 88, 89, 90 **Earth Science Lab, Level A:** Cards 16, 20, 31, 37, 51, 54, 59, 70, 79, 80, 81, 88 **Earth Science Lab, Level B:** Cards 16, 20, 31, 37, 51, 54, 59, 60, 79, 08, 81, 88 **Physical Science Lab, Level A:** Cards 33, 35, 70, 71, 72, 73, 76, 81, 84, 90 **Physical Science Lab, Level B:** Cards 33, 35, 70, 71, 72, 73, 76, 81, 84, 90

3A. THE NATURE OF TECHNOLOGY
Issues in Technology
2. Technology cannot always provide successful solutions for problems or fulfill every human need.
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 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 37, 42, 59, 60, 61, 86 **Physical Science Lab, Level A:** Cards 38, 49 **Physical Science Lab, Level B:** Cards 38, 49

3A. THE NATURE OF TECHNOLOGY
Issues in Technology
3. Throughout history, people have carried out impressive technological feats, some of which would be hard to duplicate today even with modern tools. The purposes served by these achievements have sometimes been practical, sometimes ceremonial.
This concept is not covered at this level.

3A. THE NATURE OF TECHNOLOGY
Issues in Technology
4. Technology has strongly influenced the course of history and continues to do so. It is largely responsible for the great revolutions in agriculture, manufacturing, sanitation and medicine, warfare, transportation, information processing, and communications that have radically changed how people live.
Life Science Lab, Level A: Cards 5, 49, 64, 69 **Life Science Lab, Level B:** Cards 5, 49, 64, 69 **Earth Science Lab, Level A:** Cards 37, 42, 79, 80 **Earth Science Lab, Level B:** Cards 37, 42, 79, 80 **Physical Science Lab, Level A:** Cards 72, 81, 84, 90 **Physical Science Lab, Level B:** Cards 72, 81, 84, 90

3B. THE PHYSICAL SETTING
The Universe
1. The sun is a medium-sized star located near the edge of a disk-shaped galaxy (Milky Way) of stars, part of which can be seen as a glowing band of light that spans the sky on a very clear night. The universe contains many billions of galaxies, and each galaxy contains many billions of stars. To the naked eye, even the closest of these galaxies is no more than a dim, fuzzy spot.
Earth Science Lab, Level A: Cards 67, 68, 75, 76, 77 **Earth Science Lab, Level B:** Cards 67, 68, 75, 76, 77

3B. THE PHYSICAL SETTING
The Universe
2. The sun is many thousands of times closer to the earth than any other star. Light from the sun takes a few minutes to reach the earth, but light from the next nearest star takes a few years to arrive. The trip to that star would take the fastest rocket thousands of years. Some distant galaxies are so far away that their light takes several billion years to reach the earth. People on earth, therefore, see them as they were that long ago in the past.
Earth Science Lab, Level A: Cards 67, 68, 74, 75 **Earth Science Lab, Level B:** Cards 67, 68, 74, 75

3B. THE PHYSICAL SETTING
The Universe
4. Large numbers of chunks of rock orbit the sun. Some of those that the earth meets in its yearly orbit around the sun glow and disintegrate from friction as they plunge through the atmosphere—and sometimes impact the ground. Other chunks of rocks mixed with ice have long, off-center orbits that carry them close to the sun, where the sun's radiation (of light and particles) boils off frozen material from their surfaces and pushes it into a long, illuminated tail.
Earth Science Lab, Level A: Card 73 **Earth Science Lab, Level B:** Card 73

3B. THE PHYSICAL SETTING
The Earth
1. We live on a relatively small planet, the third from the sun in the only system of planets definitely known to exist (other, similar systems may be discovered in the universe).
Earth Science Lab, Level A: Cards 62, 68, 69 **Earth Science Lab, Level B:** Cards 62, 68, 69

3B. THE PHYSICAL SETTING
The Earth
2. The earth is mostly rock. Three-fourths of its surface is covered by a relatively thin layer of water (some of it frozen), and the entire planet is surrounded by a relatively think blanket of air. It is the only body in the solar system that appears able to support life. The other planets have compositions and conditions very different from earth.
Earth Science Lab, Level A: Cards 1, 2, 36, 37, 82, 87 **Earth Science Lab, Level B:** Cards 1, 2, 36, 37, 82, 87

3B. THE PHYSICAL SETTING
The Earth
3. Everything on or anywhere near the earth is pulled toward the earth's center by gravitational force.
Physical Science Lab, Level A: Cards 57, 59 **Physical Science Lab, Level B:** Cards 57, 59

3B. THE PHYSICAL SETTING
The Earth
4. Because the earth turns daily on an axis that is tilted relative to the plane of the earth's yearly orbit around the sun, sunlight falls more intensely on different parts of the earth during the year. The difference in heating of the earth's surface produces the planet's seasons and weather patterns.
Earth Science Lab, Level A: Cards 38, 45, 46, 52, 53, 54, 55, 57, 62 **Earth Science Lab, Level B:** Cards 38, 45, 46, 52, 53, 54, 55, 57, 62

3B. THE PHYSICAL SETTING
The Earth
5. The moon's orbit around the earth once in about 28 days changes what part of the moon is lighted by the sun and how much of that part can be seen from the earth—the phases of the moon, but the same side of the moon always faces the earth.
Earth Science Lab, Level A: Card 64 **Earth Science Lab, Level B:** Card 64

3B. THE PHYSICAL SETTING
Processes That Shape the Earth
3. Sediments of sand and smaller particles (sometimes containing the remains of organisms) are gradually buried and are cemented together by precipitation of dissolved minerals to form solid rock again.
Earth Science Lab, Level A: Cards 7, 9 **Earth Science Lab, Level B:** Cards 7, 9

3B. THE PHYSICAL SETTING
Processes That Shape the Earth
4. Sedimentary rock buried deep enough may be reformed by pressures and heat, perhaps melting and recrystallizing into different kinds of rock (metamorphism). These re-formed rock layers may be forced up again to become land surface and even mountains. Subsequently, this new rock too will erode. Rock bears evidence of the minerals, temperatures, and forces that created it.
Earth Science Lab, Level A: Cards 6, 7, 8, 9, 17, 21, 24, 25, 26, 27, 28 **Earth Science Lab, Level B:** Cards 6, 7, 8, 9, 17, 21, 24, 25, 26, 27, 28

3B. THE PHYSICAL SETTING
Processes That Shape the Earth
5. Thousands of layers of sedimentary rock confirm the long history of the changing surface of the earth and the changing life forms whole remains are found in successive layers. The youngest layers are not always found on top, because of folding, breaking, and uplift of layers.
Life Science Lab, Level A: Card 67 **Life Science Lab, Level B:** Card 67 **Earth Science Lab, Level A:** Cards 7, 9, 14, 30, 34 **Earth Science Lab, Level B:** Cards 7, 9, 14, 30, 34

3B. THE PHYSICAL SETTING
Processes That Shape the Earth
6. Although weathered rock is the basic component of soil, the composition and texture of soil and its fertility and resistance to erosion are greatly influenced by plant roots and debris, bacteria, fungi, worms, insects, rodents, and other organisms.
Earth Science Lab, Level A: Cards 23, 29 **Earth Science Lab, Level B:** Cards 23, 29

3B. THE PHYSICAL SETTING
Processes That Shape the Earth
7. Human activities, such as reducing the amount of forest cover, increasing the amount and variety of chemicals released into the atmosphere, and intensive farming, have changed the earth's land, oceans, and atmosphere. Some of these changes have decreased the capacity of the environment to support some life forms.
Life Science Lab, Level A: Cards 84, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 84, 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 35, 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 35, 37, 42, 59, 60, 61, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?,* pages 89-91

3B. THE PHYSICAL SETTING
Structure of Matter
1. All matter is made up of atoms, which are far too small to be seen directly through a microscope. The atoms of any elements are alike but are different from atoms of other elements. Atoms may stick together in well-defined molecules or may be packed together in large arrays. Different arrangements of atoms into groups compose all substances.
Physical Science Lab, Level A: Cards 3, 4, 10, 11, 17, 18, 19, 20 **Physical Science Lab, Level B:** Cards 3, 4, 10, 11, 17, 18, 19, 20

3B. THE PHYSICAL SETTING
Structure of Matter
2. Equal volumes of different substances usually have different masses.
Physical Science Lab, Level A: Card 2 **Physical Science Lab, Level B:** Card 2

3B. THE PHYSICAL SETTING
Structure of Matter
3. Atoms and molecules are perpetually in motion. Increased temperature means greater average energy of motion, so most substances expand when heated. In solids, the atoms are closely locked in position and can only vibrate. In liquids, the atoms or molecules have higher energy, are more loosely connected, and can slide past one another' some molecules may get enough energy to escape into a gas. In gases, the atoms or molecules have still more energy and are free of one another except during occasional collisions.
Physical Science Lab, Level A: Cards 5, 6, 7, 8, 42 **Physical Science Lab, Level B:** Cards 5, 6, 7, 8, 42

3B. THE PHYSICAL SETTING
Structure of Matter
4. The temperature and acidity of a solution influences reaction rates. Many substances dissolve in water, which may greatly facilitate reactions between them.
Physical Science Lab, Level A: Cards 9, 27, 28, 29, 30 **Physical Science Lab, Level B:** Cards 9, 27, 28, 29, 30 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 2, *Chemical Reaction Rates,* pages 81-83

3B. THE PHYSICAL SETTING
Structure of Matter
5. Scientific ideas about elements were borrowed from some Greek philosophers of 2,000 years earlier, who believed that everything was made from four basic substances: air, earth, fire, and water. It was the combination of these 'elements' in different proportions that gave other substances their observable properties. The Greeks were wrong about those four, but now over 100 different elements have been identified-some rare and some plentiful, out of which everything is made. Because most elements tend to combine with others, few elements are found in their pure form.
Physical Science Lab, Level A: Cards 10, 11, 17, 18, 19, 20 **Physical Science Lab, Level B:** Cards 10, 11, 17, 18, 19, 20

3B. THE PHYSICAL SETTING
Structure of Matter
7. No matter how substances within a closed system interact with one another, or how they combine or break apart, the total weight of the system remains the same. The idea of atoms explains the conservation of matter: If the number of atoms stays the same no matter how they are rearranged, then their total mass stays the same.
Physical Science Lab, Level A: Cards 3, 4, 6, 7, 8, 9, 27, 28, 29, 30 **Physical Science Lab, Level B:** Cards 3, 4, 6, 7, 8, 9, 27, 28, 29, 30

3B. THE PHYSICAL SETTING
Energy Transformations
1. Energy cannot be created or destroyed, but only changed from one form into another. Most of what goes on in the universe—from exploding stars and biological growth to the operation of machines and the motion of people—involves some form of energy being transformed into another. Energy in the form of heat is almost always one of the products of an energy transformation. Energy appears in different forms. Heat energy is the disorderly motion of molecules; chemical energy is in the arrangement of atoms; mechanical energy is in moving bodies or in elastically distorted shapes; gravitational energy is in the separation of mutually attracting masses.
Life Science Lab, Level A: Cards 1, 9, 17, 44, 45, 46 **Life Science Lab, Level B:** Cards 1, 9, 17, 44, 45, 46 **Earth Science Lab, Level A:** Cards 38, 76 **Earth Science Lab, Level B:** Cards 38, 76 **Physical Science Lab, Level A:** Cards 28, 34, 37, 38, 41, 42, 45, 46, 49, 58, 66, 67, 71, 73, 83, 85 **Physical Science Lab, Level B:** Cards 28, 34, 37, 38, 41, 42, 45, 46, 49, 58, 66, 67, 71, 73, 83, 85

3B. THE PHYSICAL SETTING
Energy Transformations
2. Heat can be transferred through materials by the collisions of atom (conduction) or across space through radiation. If the material is fluid, currents will be set up in it that aid the transfer of heat (convection).
Earth Science Lab, Level A: Cards 10, 38, 87 **Earth Science Lab, Level B:** Cards 10, 38, 87 **Physical Science Lab, Level A:** Cards 42, 43, 44 **Physical Science Lab, Level B:** Cards 42, 43, 44

3B. THE PHYSICAL SETTING
Motion
1. Light from the sun is made up of a mixture of many different colors of light, even though to the eye the light looks almost white. Other things that give off or reflect light have a different mix of colors.
Physical Science Lab, Level A: Cards 82, 83, 85 **Physical Science Lab, Level B:** Cards 82, 83, 85

3B. THE PHYSICAL SETTING
Motion
2. Something can be "seen" when light waves emitted or reflected by it enter the eye—just as something can be "heard" when sound waves from it enter the ear.
Physical Science Lab, Level A: Card 89 **Physical Science Lab, Level B:** Card 89

3B. THE PHYSICAL SETTING
Motion
3. An unbalanced force acting on an object changes its speed or path of motion, or both. If the force acts towards a single center, the object's path may curve into an orbit around the center.
Physical Science Lab, Level A: Cards 54, 55, 56, 58, 59 **Physical Science Lab, Level B:** Cards 54, 55, 56, 58, 59 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 4, *Reducing Friction*, pages 89-91

3B. THE PHYSICAL SETTING
Motion
4. Vibrations in materials set up wavelike disturbances that spread away from the source. Sound and earthquake waves are examples. These and other waves move at different speeds in different materials.
Earth Science Lab, Level A: Card 16 **Earth Science Lab, Level B:** Card 16 **Physical Science Lab, Level A:** Cards 77, 78, 79, 80, 81, 82, 83 **Physical Science Lab, Level B:** Cards 77, 78, 79, 80, 81, 82, 83 **Physical Science Lab Teacher's Handbook:** Hands-On Activity 6, *Making Sound*, pages 97-99

3B. THE PHYSICAL SETTING
Motion
5. Human eyes respond to only a narrow range of wavelengths of electromagnetic radiation—visible light. Differences of wavelength within that range are perceived as differences in color.
Physical Science Lab, Level A: Cards 82, 85, 89 **Physical Science Lab, Level B:** Cards 82, 85, 89

3B. THE PHYSICAL SETTING
Forces of Nature
1. Every object exerts gravitational force on every other object. The force depends on how much mass the objects have and on how far apart they are. The force is hard to detect unless at least one of the objects has a lot of mass.
Earth Science Lab, Level A: Card 66 **Earth Science Lab, Level B:** Card 66 **Physical Science Lab, Level A:** Cards 57, 59 **Physical Science Lab, Level B:** Cards 57, 59

3B. THE PHYSICAL SETTING
Forces of Nature
2. The sun's gravitational pull on the earth and other planets in their orbits, just as the planets' gravitational pull keeps their moon in orbit around them.
Earth Science Lab, Level A: Card 66 **Earth Science Lab, Level B:** Card 66 **Physical Science Lab, Level A:** Cards 57, 59 **Physical Science Lab, Level B:** Cards 57, 59

3B. THE PHYSICAL SETTING
Forces of Nature
3. Electric currents and magnets can exert a force on each other.
Physical Science Lab, Level A: Cards 74, 75, 76 **Physical Science Lab, Level B:** Cards 74, 75, 76

C. THE LIVING ENVIRONMENT
Diversity of Life
1. One of the most general distinctions among organisms is between plants, which use sunlight to make their own food, and animals, which consume energy-rich foods. Some kinds of organisms, many of them microscopic, cannot be neatly classified as either plants or animals.
Life Science Lab, Level A: Cards 2, 3, 6, 7, 16, 17, 25, 76, 77 **Life Science Lab, Level B:** Cards 2, 3, 6, 7, 25, 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells,* pages 77-79

C. THE LIVING ENVIRONMENT
Diversity of Life
2. Animals and plants have a great variety of body plans and internal structures that contribute to their being able to make or find food and reproduce.
Life Science Lab, Level A: Cards 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab, Level B:** Cards 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab Teacher's Handbook:** Hands-On Activity 2, *Culturing Bacteria,* pages 81-83; Hands-On Activity 3, *Investigating Arthropods,* pages 85-87

C. THE LIVING ENVIRONMENT
Diversity of Life
3. Similarities among organisms are found in internal anatomical features, which can be used to infer the degree of relatedness among organisms. In classifying organisms, biologists consider details of internal and external structures to be more important than behavior or general appearance.
Life Science Lab, Level A: Cards 1, 2, 3, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **Life Science Lab, Level B:** Cards 1, 2, 3, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 **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

C. THE LIVING ENVIRONMENT
Diversity of Life
4. For sexually reproducing organisms, a species comprises all organisms that can mate with one another to produce fertile offspring.
Life Science Lab, Level A: Card 1 **Life Science Lab, Level B:** Card 1

C. THE LIVING ENVIRONMENT
Diversity of Life
5. All organisms, including human species, are part of and depend on two main interconnected global food webs. One includes microscopic ocean plants, the animals that feed on them, and finally the animals that feed on those animals. The other web includes land plants, the animals that feed on them, and so forth. The cycles continue indefinitely because organisms decompose after death to return food material to the environment.
Life Science Lab, Level A: Cards 16, 17, 76, 77 **Life Science Lab, Level B:** Cards 16, 17, 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99 **Earth Science Lab, Level A:** Card 89 **Earth Science Lab, Level B:** Card 89

C. THE LIVING ENVIRONMENT
Heredity
1. In some kinds of organisms, all the genes come from a single parent, whereas in organisms that have sexes, typically half of the genes come from each parent.
Life Science Lab, Level A: Cards 58, 60, 61, 62, 63, 64 **Life Science Lab, Level B:** Cards 58, 60, 61, 62, 63, 64

C. THE LIVING ENVIRONMENT
Heredity
2. In sexual reproduction, a single specialized cell from a female merges with a specialized cell from a male. As the fertilized eggs, carrying genetic information from each parent, multiplies to form the complete organism with about a trillion cells, the same genetic information is copied in each cell.
Life Science Lab, Level A: Cards 58, 61, 62, 63 **Life Science Lab, Level B:** Cards 58, 61, 62, 63

C. THE LIVING ENVIRONMENT
Heredity
3. New varieties of cultivated plants and domestic animals have resulted from selective breeding for particular traits.
Life Science Lab, Level A: Card 69 **Life Science Lab, Level B:** Card 69

C. THE LIVING ENVIRONMENT
Cells
1. All living things are composed of cells, from just one to many millions, whose details are visible only through a microscope. Different body tissues and organs are made up of different kinds of cells. The cells in similar tissues and organs in other animals are similar to those in human beings but differ somewhat from cells found in plants.
Life Science Lab, Level A: Cards 1, 5, 6, 7, 8, 9, 10 **Life Science Lab, Level B:** Cards 1, 5, 6, 7, 8, 9, 10 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells,* pages 77-79

C. THE LIVING ENVIRONMENT
Cells
2. Cells continually divide to make more cells for growth and repair. Various organs and tissues function to serve the needs of cells for food, air, and waste removal.
Life Science Lab, Level A: Cards 10, 47, 48, 50, 51, 52, 60 **Life Science Lab, Level B:** Cards 10, 47, 48, 50, 51, 52, 60

C. THE LIVING ENVIRONMENT
Cells
3. Within cells, many of the basic functions of organisms—such as extracting energy from food and getting rid of waste—are carried out. The way in which cells function is similar in all living organisms.
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

C. THE LIVING ENVIRONMENT
Cells
4. About two-thirds of the weight of cells is accounted for by water, which gives cells many of their properties.
Life Science Lab, Level A: Cards 5, 6, 7, 8 **Life Science Lab, Level B:** Cards 5, 6, 7, 8 **Life Science Lab Teacher's Handbook:** Hands-On Activity 1, *Examining Cells,* pages 77-79

C. THE LIVING ENVIRONMENT
Interdependence of Life
1. In all environments—freshwater, marine, forest, desert, grassland, mountain, and others—organisms with similar needs may compete with one another for resources, including food, space, water, air, and shelter. In any particular environment, the growth and survival of organisms depend on the physical conditions.
Life Science Lab, Level A: Cards 72, 75, 81, 82 **Life Science Lab, Level B:** Cards 72, 75, 81, 82 **Earth Science Lab, Level A:** Card 89 **Earth Science Lab, Level B:** Card 89

C. THE LIVING ENVIRONMENT
Interdependence of Life
2. Two types of organism may interact with one another in several ways: they may be in a producer/consumer, predator/prey, or parasite/host relationship. Or one organism may scavenge or decompose another. Relationships may be competitive or mutually beneficial. Some species have become so adapted to each other that neither could survive without the other.
Life Science Lab, Level A: Cards 73, 74, 75, 76, 77 **Life Science Lab, Level B:** Cards 73, 74, 75, 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

C. THE LIVING ENVIRONMENT
Flow of Matter and Energy
1. Food provides the fuel and the building material for all organisms. Plants use the energy from light to make sugars from carbon dioxide and water. This food can be used immediately or stored for later use. Organisms that eat plants break down the plant structures to produce the materials and energy they need to survive. Then they are consumed by other organisms.
Life Science Lab, Level A: Cards 1, 7, 9, 13, 16, 17, 46, 76, 77 **Life Science Lab, Level B:** Cards 1, 7, 9, 13, 16, 17, 46, 76, 77

C. THE LIVING ENVIRONMENT
Flow of Matter and Energy
2. Over a long time, matter is transferred from one organism to another repeatedly and between organisms and their physical environment. As in all material systems, the total amount of matter remains constant, even though its form and location change.
Life Science Lab, Level A: Cards 1, 7, 9, 13, 16, 17, 46, 73, 74, 75, 76, 77 **Life Science Lab, Level B:** Cards 1, 7, 9, 13, 16, 17, 46, 73, 74, 75, 76, 77 **Life Science Lab Teacher's Handbook:** Hands-On Activity 6, *How Much Does Energy Cost?,* pages 97-99

C. THE LIVING ENVIRONMENT
Evolution of Life
1. Small differences between parents and offspring can accumulate (through selective breeding) in successive generations so that descendants are very different from their ancestors.
Life Science Lab, Level A: Cards 62, 63, 64, 65, 66, 67 **Life Science Lab, Level B:** Cards 62, 63, 64, 65, 66, 67

C. THE LIVING ENVIRONMENT
Evolution of Life
2. Individual organism with certain traits are more likely than other to survive and have offspring. Changes in environmental conditions can affect the survival of individual organisms and entire species.
Life Science Lab, Level A: Cards 65, 66, 67, 72, 86, 87, 88, 89, 90 **Life Science Lab, Level B:** Cards 65, 66, 67, 72, 86, 87, 88, 89, 90 **Life Science Lab Teacher's Handbook:** Hands-On Activity 7, *The Effects of Acid Rain,* pages 101-103 **Earth Science Lab, Level A:** Cards 15, 17, 37, 42, 59, 60, 61, 86 **Earth Science Lab, Level B:** Cards 15, 17, 37, 42, 59, 60, 61, 86 **Earth Science Lab Teacher's Handbook:** Hands-On Activity 5, *What is in the Air?,* pages 89-91

C. THE LIVING ENVIRONMENT
Evolution of Life
3. Many thousands of layers of sedimentary rock provide evidence for the long history of the earth and for the long history of changing life forms whose remains are found in the rocks. More recently deposited rock layers are more likely to contain fossils resembling existing species.
Life Science Lab, Level A: Cards 65, 66, 67, 68 **Life Science Lab, Level B:** Cards 65, 66, 67, 68 **Earth Science Lab, Level A:** Cards 7, 9, 33, 34 **Earth Science Lab, Level B:** Cards 7, 9, 33, 34

D. THE HUMAN ORGANISM
Human Identify
1. Like other animals, human beings have body systems for obtaining and providing energy, defense, reproduction, and the coordination of body functions.
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

D. THE HUMAN ORGANISM
Human Identify
2. Human beings have many similarities and differences. The similarities make it possible for human beings to reproduce and to donate blood and organs to one another throughout the world. Their differences provide the ability for adaptive change.
Life Science Lab, Level A: Cards 48, 58, 61 **Life Science Lab, Level B:** Cards 48, 58, 61