

**Classroom Jeopardy!® Science Basics, Space Science, and Life Science (Middle School)
Standards and Correlation Document**

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Topic	Games/Categories	Source of Standard	Standard
Motions and forces	Science Basics: Friction or Gravity?	McRel Content Knowledge Standards and Benchmarks, Science, Physical Sciences, Standard 10, Level III (Grade 6-8)	Benchmark 1 <ul style="list-style-type: none"> • Understands general concepts related to gravitational force (e.g., every object exerts gravitational force on every other object; this force depends on the mass of the objects and their distance from one another; gravitational force is hard to detect unless at least one of the objects, such as the Earth, has a lot of mass).
		Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, Force and Motion	<ul style="list-style-type: none"> • knows that gravity is a force that causes an object to fall to the ground. • knows that gravity causes an object to have weight.
		Florida Dept. of Education Sunshine State Standards, Science, Seventh Grade, The Nature of Matter	<ul style="list-style-type: none"> • understands that weight is the result of gravitational pull on an object.
		Florida Dept. of Education Sunshine State Standards, Science, Seventh Grade, Force and Motion	<ul style="list-style-type: none"> • understands that gravity is a force exerted on a mass that causes an object to have weight. • knows that gravity is a force that holds the Solar System together.
		California State Board of Education K-12 Content Standards, Grade 8 Science, Forces	<i>g. Students know</i> the role of gravity in forming and maintaining the shapes of planets, stars, and the solar system.
Light	Life Science Game 2: Light and Life	McRel Content Knowledge Standards and Benchmarks, Science, Physical Sciences, Standard 9, Level III (Grade 6-8)	Benchmark 8 Knows ways in which light interacts with matter (e.g., transmission, including refraction; absorption; scattering, including reflection). Benchmark 9 Knows that only a narrow range of wavelengths of electromagnetic radiation can be seen by the human eye; differences of wavelength within that range of visible light are perceived as differences in color.
		Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, Energy	<ul style="list-style-type: none"> • knows types of radiant energy that come to Earth from the Sun (for example, visible, infrared, ultraviolet). • knows the effect of sunlight on photosynthetic pigments.
		Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	8 (B) identify that radiant energy from the Sun is transferred into chemical energy through the process of photosynthesis.

Structure and function in human body and other living systems	Science Basics: What's the System?	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Structure and Function in Living Systems	<ul style="list-style-type: none"> • Living systems at all levels of organization demonstrate the complementary nature of structure and function. Important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms, and ecosystems. • Specialized cells perform specialized functions in multicellular organisms. Groups of specialized cells cooperate to form a tissue, such as a muscle. Different tissues are in turn grouped together to form larger functional units, called organs. Each type of cell, tissue, and organ has a distinct structure and set of functions that serve the organism as a whole. • The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control, and coordination, and for protection from disease. These systems interact with one another.
	Science Basics: Small to Large		
	Life Science Game 1: What's the System?		
	Life Science Game 1: The Largest	McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 5, Level III (Grade 6-8)	<p>Benchmark 3 Knows the levels of organization in living systems, including cells, tissues, organs, organ systems, whole organisms, ecosystems, and the complementary nature of structure and function at each level.</p> <p>Benchmark 4 Knows that multicellular organisms have a variety of specialized cells, tissues, organs, and organ systems that perform specialized functions (e.g., digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, protection from disease).</p> <p>Benchmark 5 Knows that organisms have a great variety of body plans and internal structures that serve specific functions for survival (e.g., digestive structures in vertebrates, invertebrates, unicellular organisms, and plants).</p>
	Life Science Game 2: Name that Bone		
	Life Science Game 2: Name that Organ		
Life Science Game 2: Small to Large			
Life Science Game 3: Seed Plants			
	Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	(10) Science concepts. The student knows the relationship between structure and function in living systems. The student is expected to: (A) differentiate between structure and function. (B) determine that all organisms are composed of cells that carry on functions to sustain life. (C) identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations.	
	Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, Processes of Life	<ul style="list-style-type: none"> • knows ways systems in an organism function and interact (for example, the muscular system provides the ability to move and is supported by the skeletal system when one is present). • knows that the levels of structural organization in living things include cells, tissues, organs, systems, and organisms. 	
	Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 6, Standard 3: Structure and Function in Living Systems	2. Living systems are organized by levels of complexity (i.e., cells, organisms, and ecosystems).	

		California State Board of Education K-12 Content Standards, Grade 7 Science, Structure and Function in Living Systems	5. The anatomy and physiology of plants and animals illustrate the complementary nature of structure and function. As a basis for understanding this concept: a. <i>Students know</i> plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism. b. <i>Students know</i> organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system. c. <i>Students know</i> how bones and muscles work together to provide a structural framework for movement.
		Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	9 (A) identify the systems of the human organism and describe their functions.
		Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 7, Standard 2: Structure and Function in Living Systems	1. Living systems are organized by levels of complexity (i.e., cells, tissues, organs, and/or systems). 2. Specialized structures perform specific functions at all levels of complexity (e.g., leaves on trees and wings on birds).
		Florida Dept. of Education Sunshine State Standards, Science, Eighth Grade, Processes of Life	<ul style="list-style-type: none"> • understands that living things are composed of major systems that function in reproduction, growth, maintenance, and regulation. • knows some of the functions of some types of cells, tissues, organs, and systems in advanced organisms.
		Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	6 (A) describe interactions among systems in the human organism.
Cells	Science Basics: Which Scope?	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Structure and Function in Living Systems	<ul style="list-style-type: none"> • All organisms are composed of cells—the fundamental unit of life. Most organisms are single cells; other organisms, including humans, are multicellular. • Cells carry on the many functions needed to sustain life. They grow and divide, thereby producing more cells. This requires that they take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or an organism needs.
	Science Basics: Double-Duty Words		
	Life Science Game 1: Plant Cell, Animal Cell, or Both?	McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 5, Level III (Grade 6-8)	<p>Benchmark 1 Knows that all organisms are composed of cells, which are the fundamental units of life; most organisms are single cells, but other organisms (including humans) are multicellular.</p> <p>Benchmark 2 Knows that cells convert energy obtained from food to carry on the many functions needed to sustain life (e.g., cell growth and division, production of materials that the cell or organism needs).</p>
	Life Science Game 2: Small to Large	Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	10 (B) determine that all organisms are composed of cells that carry on functions to sustain life.
	Life Science Game 2: One Cell or More?		
	Life Science Game 3: Initial It	Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, Processes of Life	<ul style="list-style-type: none"> • knows that the cell is the basic unit of structure and function in all living things. • knows that there is great diversity among unicellular organisms. • knows that in multicellular organisms cells grow and divide to form and repair various organs and tissues. • understands that there are structures with particular functions that are unique to certain types of cells (for example, plant cells have cell walls, animal cells do not). • knows the functions of structures in plant and animal cells.
Life Science Game 3: Stages and Cycles			
Life Science Game 3: Cells			

		Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 6, Standard 3: Structure and Function in Living Systems	1. Cells are the building blocks of all organisms (both plants and animals).
		California State Board of Education K-12 Content Standards, Grade 7 Science, Cell Biology	1. All living organisms are composed of cells, from just one to many trillions, whose details usually are visible only through a microscope. As a basis for understanding this concept: a. <i>Students know</i> cells function similarly in all living organisms. b. <i>Students know</i> the characteristics that distinguish plant cells from animal cells, including chloroplasts and cell walls. c. <i>Students know</i> the nucleus is the repository for genetic information in plant and animal cells. e. <i>Students know</i> cells divide to increase their numbers through a process of mitosis, which results in two daughter cells with identical sets of chromosomes.
		South Carolina Curriculum Standards, Science, Grade 7, II. Life Science	A. 1. b. Classify organisms as single-celled (e.g., bacteria, algae, protozoa, and certain fungi) or multicellular (e.g., animals [vertebrate/invertebrate]).
		Florida Dept. of Education Sunshine State Standards, Science, Eighth Grade, Processes of Life	<ul style="list-style-type: none"> • knows the structures of cells, and their function and ways these mirror the structure and function of multicellular organisms. • knows the processes of division, growth, and maturation that occur during the cell cycle. • knows that the cell is a system of organelles that mirrors the systems within multicellular organisms. • knows the difference between meiosis and mitosis and when each occurs.
		Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	6 (C) relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings.
Human eye	Life Science Game 2: Light and Life	California State Board of Education K-12 Content Standards, Grade 7 Science, Structure and Function in Living Systems	5 g. <i>Students know</i> how to relate the structures of the eye and ear to their functions.
	Life Science Game 2: The Eye	California State Board of Education K-12 Content Standards, Grade 7 Science, Physical Principles in Living Systems	6 b. <i>Students know</i> that for an object to be seen, light emitted by or scattered from it must be detected by the eye. 6 d. <i>Students know</i> how simple lenses are used in a magnifying glass, the eye, a camera, a telescope, and a microscope. 6 e. <i>Students know</i> that white light is a mixture of many wavelengths (colors) and that retinal cells react differently to different wavelengths.
Reproduction and life cycles	Life Science Game 2: Final Jeopardy! Life Science Game 3: Taxonomy Facts Life Science Game 3: Stages and Cycles	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Reproduction and Heredity	<ul style="list-style-type: none"> • Reproduction is a characteristic of all living systems; because no individual organism lives forever, reproduction is essential to the continuation of every species. Some organisms reproduce asexually. Other organisms reproduce sexually. • In many species, including humans, females produce eggs and males produce sperm. Plants also reproduce sexually—the egg and sperm are produced in the flowers of flowering plants. An egg and sperm unite to begin development of a new individual. That new individual receives genetic information from its mother (via the egg) and its father (via the sperm). Sexually produced offspring never are identical to either of their parents.

		McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 4, Level III (Grade 6-8)	<p>Benchmark 1 Knows that reproduction is a characteristic of all living things and is essential to the continuation of a species.</p> <p>Benchmark 2 Knows that for sexually reproducing organisms, a species comprises all organisms that can mate with one another to produce fertile offspring.</p>
		California State Board of Education K-12 Content Standards, Grade 7 Science, Structure and Function in Living Systems	5. d. <i>Students know</i> how the reproductive organs of the human female and male generate eggs and sperm and how sexual activity may lead to fertilization and pregnancy.
Heredity	Life Science Game 3: Hereditary or Not Hereditary?	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Reproduction and Heredity	<ul style="list-style-type: none"> • Every organism requires a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to another. • Hereditary information is contained in genes, located in the chromosomes of each cell. Each gene carries a single unit of information. An inherited trait of an individual can be determined by one or by many genes, and a single gene can influence more than one trait. A human cell contains many thousands of different genes. • The characteristics of an organism can be described in terms of a combination of traits. Some traits are inherited and others result from interactions with the environment.
	Life Science Game 3: It's Genetic		
	Life Science Game 3: Initial It	McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 4, Level III (Grade 6-8)	<p>Benchmark 4 Knows that hereditary information is contained in genes (located in the chromosomes of each cell), each of which carries a single unit of information; an inherited trait of an individual can be determined by either one or many genes, and a single gene can influence more than one trait.</p> <p>Benchmark 5 Knows that the characteristics of an organism can be described in terms of a combination of traits; some traits are inherited and others result from interactions with the environment.</p>
	Life Science Game 3: Biology Who's Who		
	Life Science Game 3: Final Jeopardy!		
		Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	11 (B) identify cells as structures containing genetic material. 11 (C) interpret the role of genes in inheritance.
	California State Board of Education K-12 Content Standards, Grade 7 Science, Genetics	2. A typical cell of any organism contains genetic instructions that specify its traits. Those traits may be modified by environmental influences. As a basis for understanding this concept: b. <i>Students know</i> sexual reproduction produces offspring that inherit half their genes from each parent. c. <i>Students know</i> an inherited trait can be determined by one or more genes. d. <i>Students know</i> plant and animal cells contain many thousands of different genes and typically have two copies of every gene. The two copies (or alleles) of the gene may or may not be identical, and one may be dominant in determining the phenotype while the other is recessive. e. <i>Students know</i> DNA (deoxyribonucleic acid) is the genetic material of living organisms and is located in the chromosomes of each cell.	
	Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	10 (C) distinguish between dominant and recessive traits and recognize that inherited traits of an individual are contained in genetic material.	

		Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 7, Standard 3: Reproduction and Heredity	1. Characteristics of an organism result from inheritance and from interactions with the environment.
		Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	11 (B) distinguish between inherited traits and other characteristics that result from interactions with the environment.
		Florida Dept. of Education Sunshine State Standards, Science, Eighth Grade, Processes of Life	<ul style="list-style-type: none"> knows how dominant and recessive traits are inherited.
Health	Life Science Game 2: Viruses or Bacteria?	NSES Science Content Standards Grades 5-8; Content Standard F: Science in Personal and Social Perspectives; Personal Health	<ul style="list-style-type: none"> The use of tobacco increases the risk of illness. Students should understand the influence of short-term social and psychological factors that lead to tobacco use, and the possible long-term detrimental effects of smoking and chewing tobacco.
	Life Science Game 3: Initial It	NSES Science Content Standards Grades 5-8; Content Standard F: Science in Personal and Social Perspectives; Risks and Benefits	<ul style="list-style-type: none"> Students should understand the risks associated with natural hazards (fires, floods, tornadoes, hurricanes, earthquakes, and volcanic eruptions), with chemical hazards (pollutants in air, water, soil, and food), with biological hazards (pollen, viruses, bacterial, and parasites), social hazards (occupational safety and transportation), and with personal hazards (smoking, dieting, and drinking).
	Life Science Game 3: Biology Who's Who	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Structure and Function in Living Systems	<ul style="list-style-type: none"> Disease is a breakdown in structures or functions of an organism. Some diseases are the result of intrinsic failures of the system. Others are the result of damage by infection by other organisms.
		McRel Content Knowledge Standards and Benchmarks, Health, Standard 8, Level III (Grade 6-8)	<p>Benchmark 1 Understands how lifestyle, pathogens, family history, and other risk factors are related to the cause or prevention of disease and other health problems.</p> <p>Benchmark 2 Knows communicable, chronic, and degenerative disease processes and the differences between them.</p>
		McRel Content Knowledge Standards and Benchmarks, Science, Standard 5, Level III (Grade 6-8)	<p>Benchmark 8 Knows that disease in organisms can be caused by intrinsic failures of the system or infection by other organisms.</p>
Nutrition	Life Science Game 1: Nutrition News	NSES Science Content Standards Grades 5-8; Content Standard F: Science in Personal and Social Perspectives; Personal Health	<ul style="list-style-type: none"> Food provides energy and nutrients for growth and development. Nutrition requirements vary with body weight, age, sex, activity, and body functioning.
	Life Science Game 1: Name the Nutrients	McRel Content Knowledge Standards and Benchmarks, Health, Standard 6, Level III (Grade 6-8)	<p>Benchmark 1 Understands how eating properly can help to reduce health risks (in terms of anemia, dental health, osteoporosis, heart disease, cancer, malnutrition).</p>
	Life Science Game 3: Initial It		

Regulation and behavior	Life Science Game 1: Plant Cell, Animal Cell, or Both?	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Regulation and Behavior	<ul style="list-style-type: none"> All organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.
	Life Science Game 1: This Is to That	McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 5, Level III (Grade 6-8)	<p>Benchmark 6 Knows how an organism's ability to regulate its internal environment enables the organism to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.</p> <p>Benchmark 7 Knows that organisms can react to internal and environmental stimuli through behavioral response (e.g., plants have tissues and organs that react to light, water, and other stimuli; animals have nervous systems that process and store information from the environment), which may be determined by heredity or from past experience.</p>
		Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	9 (B) describe how organisms maintain stable internal conditions while living in changing external environments.
		Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 7, Standard 4: Behavior and Regulations	<ol style="list-style-type: none"> Living organisms strive to maintain a constant internal environment (i.e., temperature regulation). Living organisms have physical and/or behavioral responses to external stimuli (e.g., hibernation, migration, plant growth).
Diversity and adaptations of organisms	Life Science Game 1: Super Natural	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Regulation and Behavior	<ul style="list-style-type: none"> An organism's behavior evolves through adaptation to its environment. How a species moves, obtains food, reproduces, and responds to danger are based in the species' evolutionary history.
	Life Science Game 1: Plant Cell, Animal Cell, or Both?	NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Diversity and adaptations of organisms	<ul style="list-style-type: none"> Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.
	Life Science Game 1: This Is to That	Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, Processes of Life	<ul style="list-style-type: none"> knows adaptations that aid in species survival (for example, protective coloration, hibernation, delayed implantation).
	Life Science Game 1: The Largest	California State Board of Education K-12 Content Standards, Grade 7 Science, Evolution	<ol style="list-style-type: none"> 3 a. <i>Students know</i> both genetic variation and environmental factors are causes of evolution and diversity of organisms. 3 b. <i>Students know</i> the reasoning used by Charles Darwin in reaching his conclusion that natural selection is the mechanism of evolution.
	Life Science Game 2: Common Defense	Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	10 (B) compare traits of organisms of different species that enhance their survival and reproduction.
	Life Science Game 3: Seed Plants	Florida Dept. of Education Sunshine State Standards, Science, Eighth Grade, Processes of Life	<ul style="list-style-type: none"> knows ways organisms are adapted to their environment.
	Life Science Game 3: Biology Who's Who	Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 8, Standard 3: Diversity and Adaptations of Organisms	Organisms have a great variety of internal and external structures that enable them to survive in a specific habitat such as echolocation of bats, seed dispersal methods.

Classification of living things	Science Basics: Living or Nonliving?	McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 7, Level III (Grade 6-8)	Benchmark 4 Knows ways in which living things can be classified (e.g., taxonomic groups of plants, animals, and fungi; groups based on the details of organisms' internal and external features; groups based on functions served within an ecosystem such as producers, consumers, and decomposers).
	Science Basics: Double-Duty Words		
	Life Science Game 1: Living or Nonliving?	Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, How Living Things Interact with Their Environment	<ul style="list-style-type: none"> • understands that living things are sorted for convenience and identification. • understands that the structural characteristics among animals and plants are more alike as organisms are closer to the same kind or species within a classification level.
	Life Science Game 1: Spot the Not	California State Board of Education K-12 Content Standards, Grade 7 Science, Evolution	3 d. <i>Students know</i> how to construct a simple branching diagram to classify living groups of organisms by shared derived characteristics and how to expand the diagram to include fossil organisms.
	Life Science Game 2: Not Alive	Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 8, Standard 3: Diversity and Adaptations of Organisms	1. By classifying organisms, biologists consider details of internal and external structure.
	Life Science Game 2: Reptile or Amphibian?	South Carolina Curriculum Standards, Science, Grade 8, II. Life Science	A. 1. a. Observe, describe, and examine the diversity of organisms over time including differences and similarities based on kingdoms, phyla, classes (e.g., structure, body temperature, size, and shape).
	Life Science Game 2: Viruses or Bacteria?	Tennessee Science Curriculum Standards, Grade 8, Life Science	8.5.2 Identify characteristics used by scientists to classify organisms into different categories. a. Infer the relatedness of different organisms using a system of classification.
	Life Science Game 2: Tricky Critter	Utah Standards, Science—7 th Grade	Objective 4 Classify organisms according to taxonomic levels.
	Life Science Game 3: Get Specific		<ul style="list-style-type: none"> • Identify characteristics of living things within each kingdom. • Compare organisms at the same level of taxonomic classification.
Life Science Game 3: Taxonomy Facts			

Populations and ecosystems	<p>Science Basics: Science Tools</p> <p>Science Basics: What's the System?</p> <p>Science Basics: Living or Nonliving?</p> <p>Science Basics: Small to Large</p> <p>Science Basics: Double Letter Science</p> <p>Life Science Game 1: Ecology</p>	<p>NSES Science Content Standards Grades 5-8; Content Standard C: Life Science; Populations and Ecosystems</p>	<ul style="list-style-type: none"> • A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem. • Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some micro-organisms are producers—they make their own food. All animals, including humans, are consumers, which obtain food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify the relationships among producers, consumers, and decomposers in an ecosystem. • For ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism to organism in food webs. • The number of organisms an ecosystem can support depends on the resources available and abiotic factors, such as quantity of light and water, range of temperatures, and soil composition. Given adequate biotic and abiotic resources and no disease or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.
	<p>Life Science Game 1: Energy in Ecosystems</p> <p>Life Science Game 1: This Is to That</p> <p>Life Science Game 1: Final Jeopardy!</p> <p>Life Science Game 3: Name That Habitat</p>	<p>McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 6, Level III (Grade 6-8)</p>	<p>Benchmark 1 Knows that all individuals of a species that exist together at a given place and time make up a population, and all populations living together and the physical factors with which they interact compose an ecosystem.</p> <p>Benchmark 2 Knows factors that affect the number and types of organisms an ecosystem can support (e.g., available resources; abiotic factors such as quantity of light and water, range of temperatures, and soil composition; disease; competition from other organisms within the ecosystem; predation).</p> <p>Benchmark 3 Knows ways in which organisms interact and depend on one another through food chains and food webs in an ecosystem (e.g., producer/consumer, predator/prey, parasite/host, relationships that are mutually beneficial or competitive).</p> <p>Benchmark 4 Knows how energy is transferred through food webs in an ecosystem (e.g., energy enters ecosystems as sunlight, and green plants transfer this energy into chemical energy through photosynthesis; this chemical energy is passed from organism to organism; animals get energy from oxidizing their food, releasing some of this energy as heat).</p>
		<p>McRel Content Knowledge Standards and Benchmarks, Science, Life Sciences, Standard 7, Level III (Grade 6-8)</p>	<p>Benchmark 4 Knows ways in which living things can be classified (e.g., taxonomic groups of plants, animals, and fungi; groups based on the details of organisms' internal and external features; groups based on functions served within an ecosystem such as producers, consumers, and decomposers).</p>

		California State Board of Education K-12 Content Standards, Grade 6 Science, Ecology	5. Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept: a. <i>Students know</i> energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs. b. <i>Students know</i> matter is transferred over time from one organism to others in the food web and between organisms and the physical environment. c. <i>Students know</i> populations of organisms can be categorized by the functions they serve in an ecosystem. d. <i>Students know</i> different kinds of organisms may play similar ecological roles in similar biomes.
		Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	8 (C) describe energy flow in living systems including food chains and food webs. 12 (C) identify components of an ecosystem to which organisms may respond.
		Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, How Living Things Interact with Their Environment	<ul style="list-style-type: none"> • knows the nonliving (abiotic) and living (biotic) aspects of an ecosystem. • understands how the components of an ecosystem interact. • understands that food chains show specific trophic relationships and food webs are used to illustrate interrelationships of trophic levels.
		Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 6, Standard 4: Populations and Ecosystems	1. Organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Some source of energy is needed for all organisms to stay alive and grow. Energy transfer can be followed in food chains and webs.
		Tennessee Science Curriculum Standards, Grade 6, Life Science	6.2.1 Understand the nature of symbiotic relationships. <ul style="list-style-type: none"> • Describe commensal, parasitic, and mutualistic relationships. 6.2.2 Examine the competitive relationships among organisms within an ecosystem. <ul style="list-style-type: none"> a. Distinguish between predators and prey. 6.3.1 a. Classify organisms as producers, consumers, and decomposers. 6.3.1 b. Demonstrate interrelationships among organisms in a food chain or food web.
		Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	12 (A) identify components of an ecosystem. 12 (B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources. 12 (C) describe how different environments support different varieties of organisms.
		Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	6 (C) describe interactions within ecosystems.
		Tennessee Science Curriculum Standards, Grade 8, Life Science	8.2.3 Identify the major biomes of the world. <ul style="list-style-type: none"> • Characterize the major biomes according to specific environmental features and identify the organisms commonly found in these areas.
Resources	Science Basics: Final Jeopardy! Science Basics: Plant or Animal?	California State Board of Education K-12 Content Standards, Grade 6 Science, Resources	6. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. b. <i>Students know</i> different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable. c. <i>Students know</i> the natural origin of the materials used to make common objects.

Nitrogen cycle	Life Science Game 2: Viruses or Bacteria?		12 (C) predict the results of modifying the Earth's nitrogen, water, and carbon cycles.
Solar system and space	Science Basics: What's the System?	NSES Science Content Standards Grades 5-8; Content Standard D: Earth and Space Science; Earth in the Solar System	<ul style="list-style-type: none"> • The earth is the third planet from the sun in a system that includes the moon, the sun, eight other planets and their moons, and smaller objects, such as asteroids and comets. The sun, an average star, is the central and largest body in the solar system. • Most objects in the solar system are in regular and predictable motion. Those motions explain such phenomena as the day, the year, phases of the moon, and eclipses. • Gravity is the force that keeps planets in orbit around the sun and governs the rest of the motion in the solar system. Gravity alone holds us to the earth's surface and explains the phenomena of the tides.
	Science Basics: Which Scope?		
	Science Basics: "A" for Science	McRel Content Knowledge Standards and Benchmarks, Science, Earth and Space Sciences, Standard 3, Level III (Grade 6-8)	<p>Benchmark 1 Knows characteristics and movement patterns of the nine planets in our Solar System (e.g., planets differ in size, composition, and surface features; planets move around the Sun in elliptical orbits; some planets have moons, rings of particles, and other satellites orbiting them).</p> <p>Benchmark 2 Knows how the regular and predictable motions of the Earth and Moon explain phenomena on Earth (e.g., the day, the year, phases of the Moon, eclipses, tides, shadows).</p> <p>Benchmark 3 Knows characteristics of the Sun and its position in the universe (e.g., the Sun is a medium-sized star; it is the closest star to Earth; it is the central and largest body in the Solar System; it is located at the edge of a disk-shaped galaxy).</p> <p>Benchmark 4 Knows that gravitational force keeps planets in orbit around the Sun and moons in orbit around the planets.</p> <p>Benchmark 5 Knows characteristics and movement patterns of asteroids, comets, and meteors.</p> <p>Benchmark 6 Knows that the universe consists of many billions of galaxies (each containing many billions of stars) and that incomprehensible distances (measured in light years) separate these galaxies and stars from one another and from the Earth.</p>
	Science Basics: Small to Large		
	Science Basics: Double-Duty Words		
	Science Basics: Double Letter Science		
	Space Science: Our Solar System		
Space Science: Spot the Not	Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	<p>5 (A) identify and describe a system that results from the combination of two or more systems such as in the solar system.</p> <p>13 (A) identify characteristics of objects in our solar system including the Sun, planets, meteorites, comets, asteroids, and moons.</p> <p>13 (B) describe types of equipment and transportation needed for space travel.</p>	
Space Science: Sun True or False			
Space Science: Small to Large	Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, Earth and Space	<ul style="list-style-type: none"> • knows the relationship between tides on Earth and the positions of the Moon, the Sun, and Earth. • knows the relative sizes of the planets, Sun, Solar System, galaxy, and universe. • understands the positions of the Earth, Moon, and Sun during a solar eclipse and a lunar eclipse. • understands that our Sun is one of many stars in our galaxy. 	
Space Science: Earth's Moon?			
Space Science: Planet Positions			
Space Science: Star Power			
Space Science: Moon or Star?			

	Space Science: Asteroid or Comet?	Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	13 (B) relate the Earth's movement and the moon's orbit to the observed cyclical phases of the moon.
	Space Science: Take Away a Letter	Florida Dept. of Education Sunshine State Standards, Science, Seventh Grade, Earth and Space	<ul style="list-style-type: none"> • knows the relative sizes of planets. • understands the relationship between the phases of the Moon and the positions of the Moon, Earth, and Sun as the Moon revolves around the Earth. • understands the revolution and rotation of the Moon relative to the Earth, and knows that the same side of the Moon always faces the Earth.. • knows characteristics of the inner planets and outer planets. • knows basic features of the Moon and the moons of other planets. • knows some of the constellations of stars in the sky. • knows the life cycle of a star.
	Space Science: Colors in Space		
	Space Science: Astronomy by Example		
	Space Science: Final Jeopardy!	Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 7, Standard 6: Earth and the Solar System	1. Most objects in the solar system are in regular and predictable motion. Those motions explain such phenomena as the day, the year, phases of the moon, and eclipses.
	Science Basics: Friction or Gravity?	California State Board of Education K-12 Content Standards, Grade 8 Science, Forces	2. g. <i>Students know</i> the role of gravity in forming and maintaining the shapes of planets, stars, and the solar system.
		California State Board of Education K-12 Content Standards, Grade 8 Science, Earth in the Solar System	<p>4 a. <i>Students know</i> galaxies are clusters of billions of stars and may have different shapes.</p> <p>4 b. <i>Students know</i> that the Sun is one of many stars in the Milky Way galaxy and that stars may differ in size, temperature, and color.</p> <p>4 c. <i>Students know</i> how to use astronomical units and light years as measures of distances between the Sun, stars, and Earth.</p> <p>4 d. <i>Students know</i> that stars are the source of light for all bright objects in outer space and that the Moon and planets shine by reflected sunlight, not by their own light.</p> <p>4 e. <i>Students know</i> the appearance, general composition, relative position and size, and motion of objects in the solar system, including planets, planetary satellites, comets, and asteroids.</p>
		Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	12 (A) analyze and predict the sequence of events in the lunar and rock cycles.
	Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	13 (A) describe characteristics of the universe such as stars and galaxies. 13 (B) explain the use of light years to describe distances in the universe.	
	Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 8, Standard 4: Structures and Forces of the Earth and Solar System	3. Gravity is the force that governs the motion of the solar system and holds us to the earth's surface.	
History of science and technology	Life Science Game 3: Biology Who's Who Space Science: Astronomy by Example	NSES Science Content Standards Grades 5-8; Content Standard F: Science in Personal and Social Perspectives; Science and Technology in Society	<ul style="list-style-type: none"> • Science and technology have advanced through contributions of many different people, in different cultures, at different times in history. Science and technology have contributed enormously to economic growth and productivity among societies and groups within societies.

		NSES Science Content Standards Grades 5-8; Content Standard E: Science and Technology; Understandings about Science and Technology	<ul style="list-style-type: none"> • Many different people in different cultures have made and continue to make contributions to science and technology.
		NSES Science Content Standards Grades 5-8; Content Standard G: History and Nature of Science; History of Science	<ul style="list-style-type: none"> • Many individuals have contributed to the traditions of science. Studying some of these individuals provides further understanding of scientific inquiry, science as a human endeavor, the nature of science, and the relationships between science and society. • Tracing the history of science can show how difficult it was for scientific innovators to break through the accepted ideas of their time to reach the conclusions that we currently take for granted.
		McRel Content Knowledge Standards and Benchmarks, Science, Nature of Science, Standard 13, Level III (Grade 6-8)	Benchmark 5 Knows that throughout history, many scientific innovators have had difficulty breaking through accepted ideas of their time to reach conclusions that are now considered to be common knowledge.
		Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	3 (E) connect Grade 6 science concepts with the history of science and contributions of scientists.
		Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, The Nature of Science	<ul style="list-style-type: none"> • knows selected scientists and their accomplishments. • knows that scientific contributions may result in diverse technological products.
		Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	3 (F) connect Grade 7 science concepts with the history of science and contributions of scientists.
		Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	3 (E) connect Grade 8 science concepts with the history of science and contributions of scientists.
		Florida Dept. of Education Sunshine State Standards, Science, Eighth Grade, The Nature of Science	<ul style="list-style-type: none"> • extends and refines knowledge of selected scientists and their accomplishments and recognizes their varied backgrounds, talents, interests, and goals.
Fields and careers in science	Science Basics: Science Studies	NSES Science Content Standards Grades 5-8; Content Standard F: Science in Personal and Social Perspectives; Science and Technology in Society	<ul style="list-style-type: none"> • Scientists and engineers work in many different settings, including colleges and universities, businesses and industries, specific research institutes, and government agencies.
	Life Science Game 3: They Study What?	McRel Content Knowledge Standards and Benchmarks, Science, Nature of Science, Standard 13, Level III (Grade 6-8)	Benchmark 3 Knows various settings in which scientists and engineers may work (e.g., colleges and universities, businesses and industries, research institutes, government agencies).
	Life Science Game 3: Specialists	Florida Dept. of Education Sunshine State Standards, Science, Eighth Grade, The Nature of Science	<ul style="list-style-type: none"> • extends and refines knowledge that science disciplines differ from one another in topic, techniques, and outcomes but that they share a common purpose, philosophy, and enterprise.
	Space Science: Spot the Not		

Science tools and methods	Science Basics: What's the System?	NSES Science Content Standards Grades 5-8; Content Standard E: Science and Technology; Understandings about Science and Technology	<ul style="list-style-type: none"> Scientific inquiry and technological design have similarities and differences. Scientists propose explanations for questions about the natural world, and engineers propose solutions relating to human problems, needs, and aspirations. Technological solutions are temporary; technologies exist within nature and so they cannot contravene physical or biological principles; technological solutions have side effects; and technologies cost, carry risks, and provide benefits.
	Science Basics: Which Scope?		
	Science Basics: Science Plurals	California State Board of Education K-12 Content Standards, Grade 6 Science, Investigation and Experimentation	7 a. Develop a hypothesis. 7. b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
		Texas Essential Knowledge and Skills, 112.22/3/4 Science, Grade 6, 7 and 8	2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology.
		Texas Essential Knowledge and Skills, 112.22 Science, Grade 6	4 (A) collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes.
		Florida Dept. of Education Sunshine State Standards, Science, Sixth Grade, The Nature of Science	<ul style="list-style-type: none"> uses systematic, scientific processes to develop and test hypotheses.
		Oklahoma State Dept. of Education Priority Academic Student Skills, Science, Grade 6, Standard 1: Physical Properties of Matter	1. Matter has physical properties that can be measured (i.e., mass, volume, temperature, color, and texture). Changes in physical properties of objects can be observed, described, and measured using tools such as simple microscopes, gram spring scales, metric rulers, metric balances, and Celsius thermometers.
		California State Board of Education K-12 Content Standards, Grade 7 Science, Investigation and Experimentation	7 a. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
	Texas Essential Knowledge and Skills, 112.23 Science, Grade 7	4 (A) collect, analyze, and record information to explain a phenomenon using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets, and compasses.	
	Texas Essential Knowledge and Skills, 112.24 Science, Grade 8	4 (A) collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices.	