

Readorium Alignment to TEKS Content Standards in Science

The first 4 categories of Texas Essential Knowledge and Skills in Science have to do with scientific investigations and reasoning. Currently the six Readorium books and the magazine article that address this are: *The Scientific Method*, *Character Traits of a Good Scientist*, *Scientists Who Changed the World*, *Life on a Research Ship*, *Superstition or Science?*, *Microscopes: Seeing the Tiny World* and *Lab Safety*, or *Even Mad Scientists Need to Be Careful* Because Readorium is content based, the following chart shows the alignment of Readorium content to TEKS content requirements in Matter and Energy; Force, **Motion** and Energy; Earth and Space; and Organisms and Environments.

Readorium Alignment to TEKS Content Standards in Science: Grade 6

Matter and Energy

Texas Essential Knowledge and Skills for Science (TEKS): The student knows the differences between elements and compounds. The student is expected to:

5A. Know that an element is a pure substance represented by chemical symbols

5B. Recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere

5C. Differentiate between elements and compounds on the most basic level

5D. Identify the formation of a new substance by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Fizz, Pop, Boom, and Beyond: Understanding Chemistry 1 ● Fizz, Pop, Boom, and Beyond: Understanding Chemistry 2 ● Light Sound Action (B) ● Pollution 	<ul style="list-style-type: none"> ● Cafeteria Chemistry (Play with your Food and Astound Your Friends) (A) ● Cool World of Chemistry (A) ● Crystals (A) ● Girls in Chemistry (Part 3 of Girls in Science Series)(A) ● Matter Matters (A) ● Splash (A) ● Things That Go BOOM!: The History and Chemistry of Explosives (A) 	<ul style="list-style-type: none"> ● Print Features (CL-2, A-2 -Crazy Careers in Science) ● Inferring (CL-2, A-3 Cafeteria Chemistry) ● Creating Sensory Images (CL-1, A-2 Kitchen Chemistry)

Readorium Alignment to TEKS Content Standards in Science: Grade Six Continued

Matter and Energy.

Texas Essential Knowledge and Skills for Science (TEKS): The student knows matter has physical properties that can be used for classification. The student is expected to:

6A. Compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability

6B. Calculate density to identify an unknown substance

6C. Observe forces such as magnetism and gravity acting on objects

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Fizz, Pop, Boom, and Beyond: Understanding Chemistry 1 ● Fizz, Pop, Boom, and Beyond: Understanding Chemistry 2 ● Light Sound Action ● Sports Physics 	<ul style="list-style-type: none"> ● Challenge of Gravity (A) ● Elephant Toothpaste (A) ● Gold-the Magnificent Metal (A) ● Gravity: The Evil Basketball Player (A) ● Inventor of the Toughest Stuff (A) ● Science of Jelly Beans (A) ● Things That Go BOOM!: The History and Chemistry of Explosives (A) ● Wonder Fabrics-Things that Can't Get Wet (A) ● Strong but Sensitive Metal Foam (V) 	<ul style="list-style-type: none"> ● Determining Importance (CL-1, A-2 Crystals) ● Creating Sensory Images (CL-1, A-2 Kitchen Chemistry) ● Context Clues (CL-3, A-1 Things That Go Boom!)

Readorium Alignment to TEKS Content Standards in Science: Grade Six Continued

Matter and Energy

Texas Essential Knowledge and Skills for Science (TEKS): **The student knows that some of Earth's energy resources are available on a nearly perpetual basis, while other can be renewed over a relatively short period of time. Some energy resources, once depleted are essentially nonrenewable. The student is expected to:**

7A. Research and debate the advantages of using coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources

7B. Design a logical plan to manage energy resources in the home, school or community

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Pollution ● Weather Around the World 	<ul style="list-style-type: none"> ● Chilling Facts about a Burning Issue: The Climate Change Quiz Part 1 ● Chilling Facts about a Burning Issue: The Climate Change Quiz Part 2 ● Garbage Island (A) ● It's Too Hot (A) ● Let's Save Our Planet (A) ● From Waste to Energy: Bacteria Gives a Boost (V) ● Hydrogen Power (V) ● Pig Poop and Other Energy Sources (V) ● Wave of the Future- Green Gasoline (V) ● Wave of the Future - Clean Ocean Energy 	

Readorium Alignment to TEKS Content Standards in Science: Grade Six Continued

Force, Motion, and Energy.

Texas Essential Knowledge and Skills for Science (TEKS): The student knows force and motion are related to potential and kinetic energy. The student is expected to:

- 8A. Compare and contrast potential and kinetic energy
- 8B. Identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces
- 8C. Calculate average speed using distance and time measurements
- 8D. Measure and graph changes in motion
- 8E. Investigate how inclined planes and pulleys can be used to change the amount of force to move an object.

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Light, Sound, Action ● Sports Physics ● Newton's Laws ● Scientific Method 	<ul style="list-style-type: none"> ● Machines of Ancient War: The Physics and History of Siege Engines (A), ● Things That Go BOOM!: The History and Chemistry of Explosives (A) 	

Texas Essential Knowledge and Skills for Science (TEKS): The student knows the Law of Conservation of Energy states that energy can neither be created nor destroyed, it just changes form. The student is expected to:

- 9A. Investigate methods of thermal energy transfer, including conduction, convection, and radiation
- 9B. Verify through investigations that thermal energy moves in a predictable pattern from warmer to cooler until all the substances attain the same temperature such as an ice cube melting
- 9C. Demonstrate energy transformations such as energy in a flashlight batter changes from chemical energy to electrical energy to light energy

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Continental Drift ● Light, Sound, Action 	<ul style="list-style-type: none"> ● Things That Go BOOM!: The History and Chemistry of Explosives (A) 	<ul style="list-style-type: none"> ● Context Clues (CL-3, A-1 Things That Go Boom!)

Readorium Alignment to TEKS Content Standards in Science: Grade Six Continued

Earth and Space

Texas Essential Knowledge and Skills for Science (TEKS): The student knows the Law of Conservation of Energy states that energy can neither be created nor destroyed, it just changes form. The student is expected to:

- 10A. Build a model to illustrate the structural layers of Earth, including the inner core, outer core, mantle, crust, asthenosphere, and lithosphere
- 10B. Classify rocks as metamorphic, igneous, or sedimentary by the processes of their formation
- 10C. Identify the major tectonic plates including Eurasian, African, Indo-Australian, Pacific, North American, and South American
- 10D. Describe how plate tectonics causes major geological events such as ocean basins, earthquakes, volcanic eruptions, and mountain building

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Big Delicious Earth ● Shaking Up Our World: Earthquakes and Seismic Waves ● Formation of Mountains and Deserts ● Learning from Natural Disasters ● Volcanic Expedition 	<ul style="list-style-type: none"> Rocks Rock (A) Icy Evidence in the Core (V) Science on Ice (V) 	<ul style="list-style-type: none"> ● Determining Importance (CL-3, A-2 Crystals)

Readorium Alignment to TEKS Content Standards in Science: Grade Six Continued

Earth and Space

Texas Essential Knowledge and Skills for Science (TEKS): **The student understands the organization of our solar system and the relationships among the various bodies that comprise it. The student is expected to:**

11A. Describe the physical properties, locations, and movements of the Sun, planets, Galilean moons, meteors, asteroids, and comets

11B. Understand that gravity is the force that governs the motion of our solar system

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● The Earth in Motion ● Inner and Outer Planets ● Space Rocks ● Big Delicious Earth 	<ul style="list-style-type: none"> ● Aurora Borealis (A) ● Biggest Shadow of All: A Solar Eclipse (A) ● Catching a Comet (A) ● Challenge of Gravity (A) ● Deep Mystery of Black Holes (A) ● Future of the Sun (A) ● Our Galactic Neighborhood ● Our Own Star the Sun (A) ● Search for Life on Mars (The) (A) ● Spirit and Opportunity on Mars: The Little Robots that Could (A) ● Strange Stars (A) ● Trip to Mars (A) ● Treasures in the Sky (A) ● Surface and Eclipses of the Moon (The) (A) ● Space Junk: Are We Trashing our Solar System? (A) ● Voyager Space Probes (A) ● Where did Planets Come From (A) ● Gaps in the Galaxies (V) ● Sparkling Sunspots (V) 	<ul style="list-style-type: none"> ● Context Clues (CL-2, A-2 Life on Mars) ● Monitoring for Meaning (CL-3, A-1 Sharing the Sun)

Readorium Alignment to TEKS Content Standards in Science: Grade Six Continued

Organisms and Environments

Texas Essential Knowledge and Skills for Science (TEKS): The student knows all organisms are classified into Domains and Kingdoms. Organisms within these taxonomic groups share similar characteristics which allow them to interact with the living and nonliving parts of their ecosystem. The student is expected to:

- 12A. Understand that all organisms are composed of one or more cells
- 12B. Recognize that the presence of a nucleus determines whether a cell is prokaryotic or eukaryotic
- 12C. Recognize that the broadest taxonomic classification of living organisms is divided into currently recognized Domains
- 12D. Identify the basic characteristics of organisms, including prokaryotic or eukaryotic, unicellular or multicellular, autotrophic or heterotrophic and mode of reproduction, that further classify them in the currently recognized Kingdoms
- 12E. Describe biotic and abiotic parts of an ecosystem in which organisms interact
- 12F. Diagram the levels of organization within an ecosystem, including organism, population, community, and ecosystem

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Caves (Life in the Zones) ● Desert Biomes (Life) ● Genetics ● Microscopes: Seeing the Tiny World ● Mitosis and Meiosis-The Formation and Growth of Human Life ● Importance of Coral Reefs (Life) ● Our Marvelous Bodies ● Prairie Ecosystems ● Prairie Ecosystems ● Rainforests (Life) ● Scientists Who Changed the World ● Surviving in Nature 	<ul style="list-style-type: none"> ● Amazing Water Bears(A) ● Animal Cannibals (A) ● Ant Activism (A) ● Bee Bee-havior (A) ● Beneath the Fin (A) ● Cancer: Cells Out of Control (A) ● Carnivorous Dinosaurs (A) ● Cells and Smells (A) ● Cicada Swarm (A) ● Crime Solving Insects (A) ● Deadly Mushrooms (A) ● Fireflies of the Ocean: Noctiluca Scintillans (A) ● Herbivorous Dinosaurs (A) ● How Plants Trick Animals (A) ● How Spiders Catch Prey (A) ● Humongous Mega fish (A) ● Invasive Species (A) ● Interesting & Funny Animal Relationships (A) ● I'm Squished: Battle Between Cell Parts (A) ● Life Inside Deep Caves (A) 	<ul style="list-style-type: none"> ● Creating Sensory Images (CL-2, A-1 The Call of the Tinamou) ● Creating Sensory Images (CL-3, A-1 Night Walk) ● Determining Importance (CL-1, A-1 A Place with Many Levels) ● Making Connections/Synthesizing (CL-3, A-1 Predator-Prey Relationships: The Lynx and the Hare) ● Monitoring for Meaning (CL-1, A-2 Reflections of Dead Wood) ● Inferring (CL-1, A-2 Animal Cannibals)

- Life Near Undersea Vents (A)
- Pirate Spiders (A)
- Spitting Spiders (A)
- Survival of the Fittest (A)
- Tartigrades...AKA Waterbears (A)
- Tigers and Lions (A)
- Tiniest Killers (A)
- Tiny World of Cells (A)
- Symbiotic Friendship of a Goby & a Shrimp (A)
- Vampires in Nature (A)
- Venomous Sea Wasp(A)
- Very Peculiar Anglerfish (A)
- Weird Animal: The Binturong (A)
- Weird Animal: Defense Mechanisms
- World's Most Disgusting Animal: The Hagfish (A)
- Bird Brains (V)
- Birds Strut their Stuff (V)
- Disappearing-frogs (V)
- Earthworm-invasion (V)
- Extreme Bacteria (V)
- Fascinating Flights (V)
- From Waste to Energy: Bacteria Gives a Boost (V)
- Insects and Their Teamwork (V)
- Leaf Cutter Ants (V)
- Lord of the Tree Rings (V)
- Make Way for Ducklings (V)
- Snaking Around (V)
- Squid: Underwater Masters of Disguise (V)
- Totally Batty (V)

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**Readorium Alignment to TEKS Content Standards in
Science: Grade 7**

The first 4 categories of Texas Essential Knowledge and Skills in Science have to do with scientific investigations and reasoning. Currently the six Readorium books and the magazine articles that address this are: *The Scientific Method, Character Traits of a Good Scientist, Scientists Who Changed the World, Life on a Research Ship, Superstitions, or Science?, Microscopes: Seeing the Tiny World and Lab Safety, or Even Mad Scientists Need to Be Careful* Because Readorium is content-based, the following chart shows the alignment of Readorium content to TEKS content requirements in Matter and Energy, Force, Motion and Energy, Earth and Space; and Organisms and Environments.

Readorium Alignment to TEKS Content Standards in Science: Grade Seven		
Matter and Energy		
Texas Essential Knowledge and Skills for Science (TEKS): Matter has measurable physical properties and those properties determine how matter is classified, changed, and used		
5A. Recognize that radiant energy from the Sun is transformed into chemical energy through the process of photosynthesis		
5B. Demonstrate and explain the cycling of matter within living systems such as in the decay of biomass in a compost bin		
5C. Diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids		
Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Coral Reefs ● Desert Biomes ● Life on a Research Ship ● Nature's Weird Surprises ● Surviving in Nature 	<ul style="list-style-type: none"> ● How Plants Trick Animals (A) ● How Plants Survive_Part 2 ● Garbage Island (A) 	<ul style="list-style-type: none"> ● Monitoring for Meaning (CL-3, A-1 Sharing the Sun) ● Print Features (CL-1, A-2 Plants that Trick Animals!) ● Print Features (CL-2, A-2 Crazy Careers in Science)

Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Matter and Energy

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that matter has physical and chemical properties and can undergo physical and chemical changes. The student is expected to:

6A. Identify that organic compounds contain carbon and other elements such as hydrogen, oxygen, phosphorus, nitrogen, or sulfur

6B. Distinguish between physical and chemical changes in matter in the digestive system

6C. Recognize how large molecules are broken down into smaller molecules such as carbohydrates can be broken down into sugars

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Becoming and Staying Healthy ● Fizz, Pop, Boom, and Beyond: Understanding Chemistry 1 ● Fizz, Pop, Boom, and Beyond: Understanding Chemistry 2 ● Inner and Outer Planets ● Our Bodies: The Most Marvelous Machines 	<ul style="list-style-type: none"> ● Cafeteria Chemistry: How to Play with Your Food and Astound Your Friends (A) ● Buried Alive (A) ● Let's Save Our Planet (A) ● Deadly Mushrooms ● Hydrogen Power (V) 	<ul style="list-style-type: none"> ● Print Features (CL-2, A-1 Symbiosis: Living Together and Loving It)

Force, Motion and Energy

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that there is a relationship among force, motion, and energy. The student is expected to:

7A. Contrast situations where work is done with different amounts of force to situations where no work is done such as moving a box with a ramp and without a ramp, or standing still

7B. Illustrate the transformation of energy within an organism such as the transfer from chemical energy to heat and thermal energy in digestion

7C. Demonstrate and illustrate forces that affect motion in everyday life such as emergence of seedlings, turgor pressure, and geotropism

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Newton's Law ● Scientific Method ● Sports Physics ● Our Bodies: The Most Marvelous Machines 	<ul style="list-style-type: none"> ● A Titanic Collision: The Science Behind the Sunken Ship (A) ● An Inventor of the Toughest Stuff (A) ● Smart Cars! (V) ● Smart Helicopters (V) ● Strong but Sensitive: Metal Foam (V) 	<ul style="list-style-type: none"> ●

Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Earth and Space:

Texas Essential Knowledge and Skills for Science (TEKS): **The student knows that natural events and human activity can impact Earth systems. The student is expected to:**

8A. Predict and describe how different types of catastrophic events impact ecosystems such as floods, hurricanes, and tornadoes

8B. Analyze the effects of weathering, erosion, and deposition on the environment in eco-regions of Texas

8C. Model the effects of human activity on groundwater and surface water in a watershed

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Learning from Natural Disasters ● Weather ● Volcanic Expedition ● The Importance of Coral Reefs ● Earthquakes and Seismic Waves ● Formation of Mountains and Deserts ● Sea Floor Spreading 	<ul style="list-style-type: none"> ● Hurricane hunting (V) ● Safe from tsunamis (V) ● Twist and Shout Tornado Trouble (V) ● Too Much Water (A) ● Flowing Free (V) ● Coral Corrosion (V) 	<ul style="list-style-type: none"> ● Print Features (CL-3, A-2 Flying Into a Hurricane)

Earth and Space:

Texas Essential Knowledge and Skills for Science (TEKS): The student knows components of our solar system. The student is expected to:

9A. Analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere

9B. Identify the accommodations, considering the characteristics of our solar system, that enabled manned space exploration

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Inner and Outer Planets ● Space Race ● Artificial Satellites ● Total Lunacy ● Lives of Stars ● Earth in Motion 	<ul style="list-style-type: none"> ● Aurora Borealis (A) ● Biggest Shadow of All: A Solar Eclipse (A) ● Catching a Comet (A) ● Challenge of Gravity (A) ● Deep Mystery of Black Holes (A) ● Future of the Sun (A) ● Our Galactic Neighborhood ● Our Own Star the Sun (A) ● Search for Life on Mars (The) (A) ● Spirit and Opportunity on Mars: The Little Robots that Could (A) ● Strange Stars (A) ● Trip to Mars (A) ● Treasures in the Sky (A) ● Surface and Eclipses of the Moon (The) (A) ● Space Junk: Are We Trashing our Solar System? (A) ● Voyager Space P{robes (A) ● Where did Planets Come From (A) ● Gaps in the Galaxies (V) ● Sparkling Sunspots (V) 	<ul style="list-style-type: none"> ● Print Features (CL-3, A-2 Flying Into a Hurricane) ● Monitoring for Meaning (CL-3, A-1 Sharing the Sun)

Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Organisms and Environment

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that there is a relationship between organisms and the environment. The student is expected to:

10(A) Observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms

10(B) Describe how biodiversity contributes to the sustainability of an ecosystem

10(C) Observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Caves (Life in the Zones) ● Desert Biomes ● Importance of Coral Reefs ● Life in the Tundra ● Nature’s Weird Surprises ● Prairie Ecosystems ● Rainforests ● Surviving in Nature 	<ul style="list-style-type: none"> ● Amazing Water Bears(A) ● Animal Cannibals (A) ● Ant Activism (A) ● Bee Bee-havior (A) ● Beneath the Fin (A) ● Cancer: Cells Out of Control (A) ● Carnivorous Dinosaurs (A) ● Cells and Smells (A) ● Cicada Swarm (A) ● Crime Solving Insects (A) ● Deadly Mushrooms (A) ● Fireflies of the Ocean: Noctiluca Scintillans (A) ● Herbivorous Dinosaurs (A) ● How Plants Trick Animals (A) ● How Spiders Catch Prey (A) ● Humongous Mega fish (A) ● Invasive Species (A) ● Interesting and Funny Animal Relationships (A) ● I'm Squished: Battle Between Cell Parts (A) 	<ul style="list-style-type: none"> ● Monitor for Meaning (CL-1, A-2 Reflections on Dead Wood) ● Monitor for Meaning (CL-3 A-1 Sharing the Sun) ● Print Features (CL-3 A-1 Home Sweet Home: Dens and Other Shelters) ● Inferring (CL-1, A-2 Animal Cannibals) ● Making Connections/Synthesizing (CL-1, A-1 A Marsupial for Every Occasion) ● Monitor for Meaning CL-2, A-1 Great Barrier Reef) ● Monitor for Meaning (CL-3 A-2 The Illegal Wildlife Trade) ● Print Features (CL-1, A-2 Plants that Trick Animals!)

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| | <ul style="list-style-type: none">● Life Near Undersea Vents (A)● Pirate Spiders (A)● Spitting Spiders (A)● Survival of the Fittest (A)● Tartigrades...AKA Waterbears (A)● Tigers and Lions (A)● Tiniest Killers (A)● Tiny World of Cells (A)● Symbiotic Friendship of a Goby & a Shrimp (A)● Vampires in Nature (A)● Venomous Sea Wasp(A)● Very Peculiar Anglerfish (A)● Weird Animal: The Binturong (A)● Weird Animal: Defense Mechanisms● World's Most Disgusting Anima; The Hagfish (A)● Bird Brains (V)● Birds Strut their Stuff (V)● Disappearing-frogs (V)● Earthworm-invasion (V)● Extreme Bacteria (V)● Fascinating Flights (V)● From Waste to Energy: Bacteria Gives a Boost (V)● Insects and Their Teamwork (V)● Leaf Cutter Ants (V)● Lord of the Tree Rings (V)● Make Way for Ducklings (V)● Snaking Around (V)● Squid: Underwater Masters of Disguise (V)● Totally Batty (V) | |
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Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Organisms and Environment

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. The student is expected to:

- 11(A) Examine organisms or their structures such as insects or leaves and use dichotomous keys for identification
- 11(B) Explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival such as migration, hibernation, or storage of food in a bulb
- 11(C) Observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Caves (Life in the Zones) ● Character Traits of a Good Scientist (chapter on Darwin) ● Desert Biomes ● Prairie Ecosystems ● Scientists who Changed the World (chapter on Darwin) ● Surviving in Nature 	<ul style="list-style-type: none"> ● Carnivorous Dinosaurs (A) ● Humongous Megafish (A) ● Life Near Undersea Vents (A) ● Marabou Stork: Exceptionally Ugly & Gross! (A) ● Surprising Intelligence of Birds (A) ● Survival of the Fittest (A) ● Tardigrades.. AKA Water Bears (A) ● Vampires in Nature (A) ● Very Peculiar Anglerfish (A) ● Weird Animal: The Binturong (A) ● Bird-brains (V) ● Birds- Strut- Their- Stuff (V) ● Robots- With- Whiskers (V) 	<ul style="list-style-type: none"> ● Inferring (CL-1, A-2 Animal Cannibals) ● Inferring (CL-3 A-1 Meet a Scientist)

Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Organisms and Environment

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that living systems at all levels of organization demonstrate the complementary nature of structure and function. The student is expected to:

- 12(A) Investigate and explain how internal structures of organisms have adaptations that allow specific functions such as gills in fish, hollow bones in birds, or xylem in plants
- 12(B) Identify the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous, and endocrine systems
- 12(C) Recognize levels of organization in plants and animals including cells, tissues, organs, organ systems, and organisms
- 12 (D) Differentiate between structure and function in plant and animal cell organelles, including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole
- 12(E) Compare the functions of a cell to the functions of organisms such as waste removal
- 12(F) Recognize that according to cell theory all organisms are composed of cells and cells carry on similar functions such as extracting energy from food to sustain life

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> ● Becoming and Staying Healthy ● Caves ● Desert Biomes ● Importance of Coral Reefs (The) ● Life in the Tundra <p>Mitosis and Meiosis: he Formation and Growth of Human Life (This book addresses animal mitosis and meiosis.)</p> <ul style="list-style-type: none"> ● Nature’s Weird Surprises ● Nature’s Weird Surprises ● Our Bodies: The Most Marvelous Machines ● Prairie Ecosystems ● Surviving in Nature 	<ul style="list-style-type: none"> ● Artificial Blood (A) ● Behind the Scenes at the Hospital: Pathology (A) ● Carnivorous Dinosaurs (A) ● Cells and Smells (A) ● Crime-Solving Insects (A) ● Deadly Mushrooms (A) ● Dreams (A) ● From Blinking to Thinking: The Amazing Human Brain (A) ● How Plants Survive-Part 1 (A) ● How Video Games Affect Your Personality (A) ● Humongous Megafish (A) ● I'm Squished (A) ● Life Near Undersea Vents (A) ● Limits of the Human Body (A) ● Looks like an Ant... Or Does It?(A) ● Making Memories (A) 	<ul style="list-style-type: none"> ● Determining Importance (CL-1, A-2 The Frilled Lizard) ● Determining Importance(CL-3, A-1 An Anchor in the Storm)

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| | <ul style="list-style-type: none">• Marabou Stork: Exceptionally Ugly & Gross! (A)• Optical Illusions: Is Seeing Believing? (A)• Pirate Spiders (A)• Rhymes and Riddles of Science (A)• Sounds and Hearing (A)• Spider with Deadly Aim (A)• Spitting Spiders (A)• Surprising Intelligence of Birds (A)• Tardigrades.. AKA Water Bears (A)• Teenage Brain → Why Teens Act so Twisted! (A)• Teeth (A)• The Brain!... What's in There? (A)• Tiny World of Cells (A)• Vampires in Nature (A)• Venomous Sea Wasp (A)• Very Peculiar Anglerfish (A)• World's Most Disgusting Animal: The Hagfish (A)• Your Brain at Sleep (A)• Antlers-beaks-geckos-and-us (V)• Bird-brains (V)• Nanoparticles. (V)• Tongue-driven (V)• Vision-for-the-blind-fact-or-fiction (V) | |
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Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Organisms and Environment

Texas Essential Knowledge and Skills for Science (TEKS): The student **Organisms and environments. The student knows that a living organism must be able to maintain balance in stable internal conditions in response to external and internal stimuli.**

The student is expected to:

13(A) Investigate how organisms respond to external stimuli found in the environment such as phototropism and fight or flight

13(B) Describe and relate responses in organisms that may result from internal stimuli such as wilting in plants and fever or vomiting in animals that allow them to maintain balance.

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by
<ul style="list-style-type: none"> • Caves (Life in the Zones) • Importance of Coral Reefs (The) • Life in the Tundra • Life on a Research Ship • Nature’s Weird Surprise 	<ul style="list-style-type: none"> • Carnivorous Dinosaurs (A) • Crime-Solving Insects (A) • How Plants Trick Animals (A) • Humongous Megafish (A) • Life Near Undersea Vents (A) • Looks like an Ant... Or Does It? (A) • Marabou Stork: Exceptionally Ugly and Gross! (A) • Orangutans See, Orangutans Do? (V) • Pirate Spiders (A) • Spider with Deadly Aim (A) • Spitting Spiders (A) • Surprising Intelligence of Birds (A) • Tardigrades.. AKA Water Bears (A) • Vampires in Nature (A) • Venomous Sea Wasp (A) • Very Peculiar Anglerfish (A) • Weird Animal: The Binturong (A) • World's Most Disgusting Animal: The Hagfish (A) 	<ul style="list-style-type: none"> • Determining Importance (CL-1, A-2 The Frilled Lizard) • Inferring (CL-1, A-1 In the Night) • Inferring (CL-3 A-2 A Memorable Reptile)

	<ul style="list-style-type: none">• Birds- Strut -Their- Stuff (V)• Fascinating- Fights (V)• Insects- and- Team-work (V)• Make -Way- for- Ducklings (V)• Orangutans See, Orangutans Do? (V)• Robots- With- Whiskers (V)• Snaking -Around (V)• Squid -Underwater- Masters -of- Disguise (V)• Taking -the -Bite- out- of- Mosquitos (V)• Totally -Batty (V)	
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Readorium Alignment to TEKS Content Standards in Science: Grade Seven Continued

Organisms and Environment

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that reproduction is a characteristic of living organisms and that the instructions for traits are governed in the genetic material. The student is expected to:

14 (A) Define heredity as the passage of genetic instructions from one generation to the next generation

14 (B) Compare the results of uniform or diverse offspring from sexual reproduction or asexual reproduction; such as wilting in plants and fever or vomiting in animals that allow them to maintain balance.

14(C) Recognize that inherited traits of individuals are governed by the genetic material found in the genes within chromosomes in the nucleus.

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> • Genetics: Why We Look the Way We Do • Life on a Research Ship • Mitosis and Meiosis- The Formation and Growth of Human Life • Prairie Ecosystem 	<ul style="list-style-type: none"> • Animal Magnetism • Bones Tell the Story (A) • Cloning: The More the Merrier (A) • Creating Designer Dogs (A) • Getting DNA Out of Ancient Fossils (A) • Selective Breeding, Genetic Engineering, and Pedigrees (A) • Strange Medical Conditions (A) • The Good-the-Bad-and the Baby (A) • Warrior Gene (A) • What Makes Us Tick? (A) 	<ul style="list-style-type: none"> • Making Connections/ Synthesizing (CL-1, A-2 The Warrior Gene) • Monitor for Meaning (CL-2, A-2 Is that Popcorn? No, it's a Binturong!) • Making Connections/ Synthesizing (CL-1, A-2 The Warrior Gene)

Readorium Alignment to TEKS Content Standards in Science: Grade Eight

Matter and Energy

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that matter is composed of atoms and has chemical and physical properties. The student is expected to:

5(A) describe the structure of atoms, including the masses, electrical charges, and locations, of protons and neutrons in the nucleus and electrons in the electron cloud

5(B) identify that protons determine an element's identity and valence electrons determine its chemical properties, including reactivity

5(C) interpret the arrangement of the Periodic Table, including groups and periods, to explain how properties are used to classify elements

5 (E) investigate how evidence of chemical reactions indicate that new substances with different properties are formed

5 (F) recognize whether a chemical equation containing coefficients is balanced or not and how that relates to the law of conservation of mass

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none">• Fizz, Pop, Boom, and Beyond: Understanding Chemistry 2• Light Sound Action• Pollution	<ul style="list-style-type: none">• Cool World of Chemistry (A)• Crystals (A)• Girls in Science Series: Part 2 (A)• Many Uses of Submarines(A)• Rhymes and Riddles of Science (A)	

Readorium Alignment to TEKS Content Standards in Science: Grade Eight Continued

Force, Motion, and Energy

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that there is a relationship between force, motion, and energy. The student is expected to:

6(A) demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion

6(B) differentiate between speed, velocity, and acceleration

6(C) investigate and describe applications of Newton's law of inertia, law of force and acceleration, and law of action-reaction such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by
<ul style="list-style-type: none"> • Scientists Who Changed the World • Newton's Laws • Sports Physics 	<ul style="list-style-type: none"> • Titanic Collision (A) • Robots with Whiskers(V) • Smart Cars (V) • Smart Helicopters (V) • Strong but Sensitive Metal Foam (V) • Women Powered Robots (V) 	

Readorium Alignment to TEKS Content Standards in Science: Grade Eight Continued

Earth and Space

Texas Essential Knowledge and Skills for Science (TEKS): The student knows the effects resulting from cyclical movements of the Sun, Earth, and Moon. The student is expected to:

7(A) model and illustrate how the tilted Earth rotates on its axis, causing day and night, and revolves around the Sun causing changes in seasons

7(B) demonstrate and predict the sequence of events in the lunar cycle

7(C) relate the position of the Moon and Sun to their effect on ocean tides

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> • Character Traits of Good Scientists • Earth in Motion • Scientists Who Changed the World • Total Lunacy Phases, Eclipses, and Tides on Earth 	<ul style="list-style-type: none"> • Biggest Shadow of All: A Solar Eclipse (A) • Future of the Sun (The) (A) • Our Own Star, the Sun (A) • Surface and Eclipses of the Moon (A) • Girl-Powered Science (V) 	

Readorium Alignment to TEKS Content Standards in Science: Grade Eight Continued

Earth and Space

Texas Essential Knowledge and Skills for Science (TEKS): The student knows student knows characteristics of the universe and is expected to:

8(A) Describe components of the universe, including stars, nebulae, and galaxies, and use models such as the Hertzsprung-Russell diagram for classification

8 (B) recognize that the Sun is a medium-sized star near the edge of a disc-shaped galaxy of stars and that the Sun is many thousands of times closer to Earth than any other star

8 (C) Explore how different wavelengths of the electromagnetic spectrum such as light and radio waves are used to gain information about distances and properties of components in the universe

8 (D) Model and describe how light years are used to measure distances and sizes in the universe

8(E) Research how scientific data are used as evidence to develop scientific theories to describe the origin of the universe

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> • Earth in Motion • Light Sound Action • Lives of Stars 	<ul style="list-style-type: none"> • Aurora Borealis: The Glowing Lights (A) • Deep Mystery of Black Holes (A) • Future of the Sun (The) (A) • Getting DNA Out of Ancient Fossils (A) • Our Galactic Neighborhood (A) • Our Own Star, the Sun (A) • Strange Stars (A) • Where Did the Planets Come From? (A) • Gaps -in- the- Galaxies (V) • Girl- Powered- Science (V) 	<ul style="list-style-type: none"> • Monitor for Meaning (CL-3, A-1 Sharing the Sun)

Readorium Alignment to TEKS Content Standards in Science: Grade Eight Continued

Earth and Space

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that natural events can impact Earth systems. The student is expected to:

9(A) Describe the historical development of evidence that supports plate tectonic theory

9(B) Relate plate tectonics to the formation of crustal features

9(C) Interpret topographic maps and satellite views to identify land and erosional features and predict how these features may be reshaped by weathering.

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> • Big Delicious Earth • Continental Drift • Earth in Motion • Earthquakes • Formation of Mountains and Deserts • Natural Disasters 	<ul style="list-style-type: none"> • Getting DNA Out of Ancient Fossils (A) • Rocks Rock! 	

Readorium Alignment to TEKS Content Standards in Science: Grade Eight Continued

Earth and Space

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that climatic interactions exist among Earth, ocean, and weather systems. The student is expected to:

10(A) Recognize that the Sun provides the energy that drives convection within the atmosphere and oceans, producing winds and ocean currents

10(B) Identify how global patterns of atmospheric movement influence local weather using weather maps that show high and low pressures and fronts;

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> • Natural Disasters • On the Move: with Plate Tectonics • Sea Floor Spreading • Weather 	<ul style="list-style-type: none"> • Clean- Ocean- Energy (V) • Lord- of- the- Tree -Rings (V) 	<ul style="list-style-type: none"> • Monitor for Meaning (CL-3, A-1 Sharing the Sun) • Determining Importance (CL-1, A-1 Place with Many Levels)

Readorium Alignment to TEKS Content Standards in Science: Grade Eight Continued

Organisms and Environments

Texas Essential Knowledge and Skills for Science (TEKS): The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. The student is expected to:

11(A) Describe producer/consumer, predator/prey, and parasite/host relationships as they occur in food webs within marine, freshwater, and terrestrial ecosystems

11(B) Investigate how organisms and populations in an ecosystem depend on and may compete for biotic and abiotic factors such as quantity of light, water, range of temperatures, or soil composition

11(C) Explore how short- and long-term environmental changes affect organisms and traits in subsequent populations

11(D) Recognize human dependence on ocean systems and explain how human activities such as runoff, artificial reefs, or uses of resources have modified these systems.

Readorium Books by Standard	Readorium Magazine Articles (A) & Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<ul style="list-style-type: none"> • Caves (Life in the Zones) • Desert Biomes • Importance of Coral Reefs (The) • Life in the Tundra • Nature’s Weird Surprises • Pollution • Prairie Ecosystems • Rainforests • Surviving in Nature 	<ul style="list-style-type: none"> • A Weird Animal: The Binturong (A) • Animal Cannibals (A) • Artificial Reefs (A) • Carnivorous Dinosaurs (A) • Chilling Facts: Climate Change Quiz- Part 1 and Part 2 (A) • Evolution of the Peppered Moth (A) • Head Lice - Don’t Bug Me (A) • How Plants Trick Animals (A) • Humongous Megafish (A) • It's Too Hot (A) • Life Near Undersea Vents (A) • Parasites: Nature's Thieves (A) • Pirate Spiders (A) • Survival of the Fittest (A) • Vampires in Nature (A) • Venomous Sea Wasp (A) • Very Peculiar Anglerfish (The) (A) 	<ul style="list-style-type: none"> • Context Clues CL-2, A-1 Life at the Top) • Creating Sensory Images (CL-1, A-1 The Rainforest Awakens My Senses) • Creating Sensory Images (CL-3 A-2 An Afternoon Rain) • Determining Importance (CL-1, A-1 A Place with Many Levels) • Determining Importance (CL-2, A-1 Dragonflies: Flying Aces) • Graphic Features (CL-3, A-1 Rainforest Precipitation) • Inferring (CL-1, A-1 In the Night) • Inferring (CL-1, A-2 Animal Cannibals) • Inferring (CL-2, A-1 Sloth Stories)

	<ul style="list-style-type: none">• Coral Corrosion (V)• Disappearing Frogs (V)• Earthworm- Invasion (V)	<ul style="list-style-type: none">• Making Connections/Synthesizing (CL-2, A-1 Tamarins Make a Great Day in the Forest)• Living Together and Loving It)• Making Connections/Synthesizing (CL-3, A-1 Predator-Prey Relationships: The Lynx and the Hare)• Monitor for Meaning (CL-1, A-1 Lizard Lifestyles)• Monitor for Meaning (CL-3 A-1 Sharing the Sun)• Monitor for Meaning CL-2, A-1 Great Barrier Reef)• Print Features (CL-1, A-1 Bats)• Print Features (CL-3 A-1 Home Sweet Home: Dens & Other Shelters)• Print Features CL-2, A-1 Symbiosis
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Additional Science Articles (A) and National Science Foundation Videos (V) Grades 6-8

- 25 Scrumptious Facts About Food (A)
- 50 Fun Facts That Will Amaze Your Friends (A)
- The Adventure of Keeping an Aquarium (A)
- Bacteria (V)
- Chores- don't- have -to- be -a- pain -in -the- butler (V)
- Coral- corrosion (V)
- ESP: A Lab -in -a -can (V)
- Extreme -bacteria (V)
- Flowing -free (V)
- Getting -ready- for- earthquakes (V)
- Girl -powered- science (V)
- Hydrogen- power (V)
- Icy -evidence -in- the- core (V)
- Ins- and -outs -of the -brain (V)
- Locked -in -syndrome (V)
- Lord -of- the -tree -rings (V)
- Musical- computer (V)
- Nanoparticles (V)
- Picking- your -brain (V)
- Pig- poop- energy (V)
- Robots- of- your -dreams (V)
- Science -on -ice (V)
- Sensible -sensors (V)
- Signing -made -simple (V)
- Sparkling -sunspots (V)
- The- creative- brain (V)
- The -good- the- bad- and- the -baby (V)
- Tongue -driven (V)
- Virtual- wildfires (V)