

### 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. 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.

<b>Grade Three</b>			
<b>Matter and Energy</b>			
Texas Essential Knowledge and Skills for Science (TEKS)	Readorium Books By Standard	Readorium Magazine Articles (A) and Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<b>Matter and Energy: matter has measurable physical properties and those properties determine how matter is classified, changed, and used</b>			
<b>5A. Measure, test and record physical properties of matter, including temperature, mass, magnetism, and ability to sink and float</b>	<ul style="list-style-type: none"> <li>● Science- What's it All About?</li> <li>● Science Girls</li> <li>● Unbalanced Forces</li> <li>● Food Chemistry</li> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle(A)</li> <li>● Wonder Fabrics - Things that Can't get Wet! (A)</li> <li>● A River of Ice (A)</li> <li>● The Science of Movie Stunts (A)</li> <li>● Hair Time!(A)</li> <li>● Making Hovercrafts (A)</li> <li>● A Trip to Mars (A)</li> <li>● How Can You Become an Astronaut?(A)</li> </ul>	

		<ul style="list-style-type: none"> <li>● Spirit and Opportunity on Mars (A)</li> <li>● How to Make a Cartesian Diver (A)</li> <li>● Treasures in the Sky(A)</li> </ul>	
<b>5B. Describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> <li>● Making Movie Magic</li> <li>● Solving Crimes with Forensics</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● All About Recycling (A)</li> <li>● Rocks Rock! (A)</li> <li>● Make Your Own Rock Candy (A)</li> </ul>	
<b>5C. predict, observe, and record changes in the state of matter caused by heating or cooling</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> <li>● Making Movie Magic</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● The Science of Jelly Beans (A)</li> <li>● All About Recycling (A)</li> <li>● A River of Ice (A)</li> <li>● Catching a Comet (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Graphic Features (CL-1, A-1 Global Climate Change)</li> </ul>
<b>5D. Explore and recognize that a mixture is created when two materials are combined such as gravel, and sand and metal and plastic paper clips</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> </ul>		
<b>Force, Motion and Energy: forces cause change and that energy exists in many forms.</b>			
<b>6A. Explore different forms of energy, including mechanical, light, sound, and heat/thermal in everyday life</b>	<ul style="list-style-type: none"> <li>● Amusement Park Physics</li> </ul>	<ul style="list-style-type: none"> <li>● Splash (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Graphic Features (CL-1,</li> </ul>

	<ul style="list-style-type: none"> <li>● Good Vibes- Making Waves with Sounds</li> <li>● Olympic Champs: It's Not Just Luck – It's Physics!</li> <li>● On the Move with Transportation Technology</li> <li>● Science of Music (The)</li> <li>● Unbalanced Forces</li> </ul>	<ul style="list-style-type: none"> <li>● The Water Cycle (A)</li> <li>● Crime Scene Science (A)</li> <li>● Look a Rainbow! Where Did that Come From? (A)</li> <li>● The Science of Movie Stunts (A)</li> <li>● Cool Beams! (A)</li> <li>● Raise Your Voice (A)</li> <li>● Making Hovercrafts (A)</li> <li>● Make Your Own Rock Candy (A)</li> <li>● Aurora Borealis: The Glowing Lights (A)</li> <li>● How to Make a Cartesian Diver (A)</li> <li>● Our Own Star, the Sun (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> <li>● Where Did the Planets Come From? (A)</li> </ul>	<p>A-2 Greenhouse Effect)</p> <ul style="list-style-type: none"> <li>● Inferring (CL-1, A-3 Why Is the Sky Blue?)</li> </ul>
<p><b>6B. Demonstrate and observe how position and motion can be changed by pushing and pulling objects to show work being done such as swings, balls, pulleys, and wagons</b></p>	<ul style="list-style-type: none"> <li>● Amusement Park Physics</li> <li>● Changing Face of Earth (The)</li> <li>● Making Movie Magic</li> </ul>	<ul style="list-style-type: none"> <li>● Cancer: Cells Out of Control (A)</li> </ul>	

	<ul style="list-style-type: none"> <li>● Olympic Champs: It's Not Just Luck – It's Physics!</li> <li>● On the Move with Transportation Technology</li> <li>● Unbalanced Forces</li> </ul>		
<b>6C. Observe forces such as magnetism and gravity acting on objects</b>	<ul style="list-style-type: none"> <li>● Deep Space</li> <li>● Science Girls</li> <li>● Unbalanced Forces</li> </ul>	Making Hovercrafts (A) Aurora Borealis: The Glowing Lights (A) Black Holes (V) Sea Turtles (V) Where Did the Planets Come From? (A) Treasures in the Sky(A)	<ul style="list-style-type: none"> <li>●Text Organization (CL-1, A-2 How do Satellites Stay in Space?)</li> </ul>
<b>Earth and Space: Earth consists of natural resources and its surface is constantly changing</b>			
<b>7A. Explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains</b>	<ul style="list-style-type: none"> <li>● The Changing Face of the Earth</li> <li>● Earth's Systems</li> </ul>	<ul style="list-style-type: none"> <li>● Rocks Rock (A)</li> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● A River of Ice (A)</li> <li>● Crime Scene Science (A)</li> <li>● Biotechnology (A)</li> </ul>	<ul style="list-style-type: none"> <li>●Word Learning (CL-1, A-1 Introduction to Archeology)</li> <li>●Word Learning (CL-1, A-2 How Archaeologists Work)</li> <li>●Word Learning (CL-1, A-3 The Archeology Lab)</li> </ul>

<p><b>7B. Investigate rapid changes in Earth’s surface such as volcanic eruptions, earthquakes, and landslides</b></p>	<ul style="list-style-type: none"> <li>● Natural Hazards</li> </ul>	<ul style="list-style-type: none"> <li>● Rocks Rock! (A)</li> <li>● Earthquakes (V)</li> <li>● Where Did the Planets Come From? (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Author's Purpose (CL-1, A-3 Tornado)</li> </ul>
<p><b>7C. Identify and compare different landforms, including mountains, hills, valleys and plains</b></p>		<ul style="list-style-type: none"> <li>● A Trip to Mars (A)</li> <li>● Catching a Comet (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> </ul>	
<p><b>7D. Explore the characteristics of natural resources that make them useful in products and materials such as clothing and furniture and how resources may be conserved</b></p>	<ul style="list-style-type: none"> <li>● Earth's Systems</li> <li>● Polluting Our Earth</li> </ul>	<ul style="list-style-type: none"> <li>● The Water Cycle (A)</li> <li>● Splash (A)</li> <li>● Wonder Fabrics - Things that Can't get Wet!(A)</li> <li>● All About Recycling(A)</li> <li>● Rocks Rock! (A)</li> <li>● Matter Matters!(A)</li> <li>● Amazing Teen Scientist (A)</li> <li>● Crime Scene Science (A)</li> <li>● Cool Beams! (A)</li> <li>● Hair Time!(A)</li> <li>● Treasures in the Sky(A)</li> </ul>	<ul style="list-style-type: none"> <li>● Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> </ul>
<p><b>Earth and Space: there are recognizable patterns in the natural world and among objects in the sky</b></p>			

<p><b>8A. Observe, measure, record and compare day-to-day weather changes in different locations at the same time that include air temperature, wind direction and precipitation</b></p>	<ul style="list-style-type: none"> <li>● Weather Around the World</li> <li>● Changing the Face of Earth</li> </ul>	<ul style="list-style-type: none"> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● Look a Rainbow! Where Did that Come From? (A)</li> <li>● Catching a Comet (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Author's Purpose (CL-1, A-1 Weather Scientist)</li> </ul>
<p><b>8B. Describe and illustrate the Sun as a star composed of gases that provides light and heat energy for the water cycle</b></p>	<ul style="list-style-type: none"> <li>● Deep Space</li> <li>● Earth's Systems</li> <li>● Weather Around the World</li> </ul>	<ul style="list-style-type: none"> <li>● The Water Cycle (A)</li> <li>● A River of Ice (A)</li> <li>● Aurora Borealis: The Glowing Lights (A)</li> <li>● Catching a Comet (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> <li>● Where Did the Planets Come From? (A)</li> </ul>	
<p><b>8C. Construct models that demonstrate the relationship of the Sun, Earth, and Moon, including orbits and positions</b></p>	<ul style="list-style-type: none"> <li>● Living in Space</li> <li>● Our Planet Earth</li> </ul>	<p>A Trip to Mars (A)  Our Own Star, the Sun (A)  Catching a Comet (A)  Spirit and Opportunity on Mars (A)</p>	<ul style="list-style-type: none"> <li>● Questioning (CL-2, A-1 Crazy Careers in Science)</li> <li>● Text Organization (CL-1, A-1 What Is a Satellite?)</li> </ul>

		Where Did the Planets Come From? (A) Treasures in the Sky(A)	<ul style="list-style-type: none"> <li>• Text Organization (CL-1, A-2 How do Satellites Stay in Space?)</li> <li>• Text Organization (CL-1, A-3 How Satellites Work)</li> </ul>
<b>8D. Identify the planets in Earth's solar system and their position in relation to the Sun</b>	<ul style="list-style-type: none"> <li>• Our Planet Earth</li> <li>• Deep Space</li> </ul>	A Trip to Mars (A) Our Own Star, the Sun (A) Catching a Comet (A) Spirit and Opportunity on Mars (A) Where Did the Planets Come From? (A) Treasures in the Sky(A)	<ul style="list-style-type: none"> <li>• Inferring (CL-1, A-2 What is a Planet?)</li> <li>• Text Organization (CL-1, A-1 What Is a Satellite?)</li> <li>• Text Organization (CL-1, A-2 How do Satellites Stay in Space?)</li> <li>• Text Organization (CL-1, A-3 How Satellites Work)</li> </ul>
<b>Organisms and Environments: organisms have characteristics that help them survive and can describe patterns, cycles, systems and relationships within the environment</b>			
<b>9A. Observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem</b>	<ul style="list-style-type: none"> <li>• Inheritance, It's All in the Genes</li> <li>• Buzzing about Bees and Wasps</li> </ul>	<ul style="list-style-type: none"> <li>• Splash (A)</li> <li>• Matter Matters! (A)</li> <li>• The Water Cycle (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> </ul>

	<ul style="list-style-type: none"> <li>● Exploring the Ocean's Depths</li> <li>● Exploring Ecosystems</li> <li>● Secret Language of Animals (The)</li> </ul>	<ul style="list-style-type: none"> <li>● Wonder Fabrics - Things that Can't get Wet! (A)</li> <li>● Crime Scene Science (A)</li> <li>● Biotechnology (A)\</li> <li>● Breathe Easier - Understanding Asthma (A)</li> <li>● Raise Your Voice (A)</li> <li>● Twin Fascination (A)</li> <li>● :Leaf Cutter Ants (V)</li> <li>● Bee-bee-havior (A)</li> <li>● Beneath the Fin (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Main Idea/Details (CL-1, A-1 Mantled Howler Monkeys)</li> </ul>
<p><b>9B. Identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field</b></p>	<ul style="list-style-type: none"> <li>● Dependency of Life (The)</li> <li>● Invasive Species</li> </ul>	<ul style="list-style-type: none"> <li>● Splash (A)</li> <li>● The Water Cycle (The) (A)</li> <li>● Animals of Ice (V)</li> <li>● Invasion of the Earthworms (V)</li> <li>● RoboBees (V)</li> </ul>	
<p><b>9C. Describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations</b></p>	<ul style="list-style-type: none"> <li>● Birds of a Feather</li> <li>● Dependency of Life, The</li> <li>● Natural Hazards</li> <li>● Powering Our Lives with Energy</li> </ul>	<ul style="list-style-type: none"> <li>● Rocks Rock (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● Matter Matters! (A)</li> <li>● The Science of Movie Stunts (A)</li> <li>● Tsunami Research</li> </ul>	<ul style="list-style-type: none"> <li>● Author's Purpose (CL-1, A-3 Tornado)</li> </ul>

**Organisms and environments: organisms undergo similar life processes and have structures that help them survive within their environments.**

**10A. Explore how structures and functions of plants and animals allow them to survive in a particular environment**

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|---|--|---|
| <ul style="list-style-type: none"> <li>● Beetlemania</li> <li>● Birds of a Feather</li> <li>● Buzzing About Bees and Wasps</li> <li>● Deadliest Creatures</li> <li>● Deep Sea Creatures</li> <li>● Exploring the Ocean's Depths</li> <li>● Invasive Species</li> <li>● Life and Death in the Wild</li> <li>● Our Planet Earth</li> <li>● Spider Stories</li> <li>● Weird and Wonderful World of Plants</li> </ul> | <ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● Biotechnology (A)</li> <li>● Wonder Fabrics - Things that Can't get Wet! (A)</li> <li>● Crime Scene Science (A)</li> <li>● Excuse Me, But Burping is Natural (A)</li> <li>● Hair Time!(A)</li> <li>● Why Are Some Hands More "Handy" Than Others? (A)</li> <li>● Make Way for Ducklings (V)</li> <li>● Antlers, Shells, and Beaks (V)</li> <li>● Just by a Whisker (V)</li> <li>● Emperor Penguins (V)</li> <li>● Bee-bee-havior (A)</li> <li>● Lion in Waiting (A)</li> <li>● Weird Animal Defense Mechanisms (A)</li> </ul> | <ul style="list-style-type: none"> <li>● Click or Clunk (CL-2, A-3 The Venomous Sea Wasp)</li> <li>● Main Idea/Details (CL-2, A-2 Animals of Panama)</li> <li>● Main Idea/Details (CL-3, A-1 Camels)</li> <li>● Questioning (CL-1, A-1 White-Throated Capuchins)</li> <li>● Questioning (CL-1, A-2 Agoutis)</li> <li>● Questioning (CL-1, A-3 Sloths)</li> <li>● Questioning (CL-2, A-2 Vampires in Nature)</li> <li>● Questioning (CL-2, A-3 Parasites: Nature's Thieves)</li> </ul> |
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		<ul style="list-style-type: none"> <li>● The Venus Flytrap: A Meat-Eating Plant (A)</li> <li>● Interesting and Funny Animal Relationships (A)</li> <li>● Beneath the Fin (A)</li> <li>● Carnivorous Dinosaurs (A)</li> <li>● How Spiders Catch Prey (A)</li> <li>● Fireflies of the Ocean (A)</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p><b>10B. Explore that some characteristics of organisms are inherited such as the number of limbs on an animal or flower color and recognize that some behaviors are learned in response to living in a certain environment such as animals using tools to get food</b></p>	<ul style="list-style-type: none"> <li>● Inheritance, It's All in the Genes</li> <li>● Beetlemania</li> <li>● Birds of a Feather</li> <li>● Dependency of Life (The)</li> <li>● Exploring Ecosystems</li> <li>● How We Learn</li> <li>● Invasive Species</li> <li>● Smarter Than You think, Animals that Amaze</li> <li>● Spider Stories</li> <li>● Weird and Wonderful World of Plants</li> </ul>	<ul style="list-style-type: none"> <li>● Wonder Fabrics - Things that Can't get Wet! (A)</li> <li>● Biotechnology (A)</li> <li>● A Sweet Treat (A)</li> <li>● Breathe Easier - Understanding Asthma (A)</li> <li>● How Do We Think? (A)</li> <li>● Twin Fascination (A)</li> <li>● Leaf Cutter Ants(V)</li> <li>● Monkey Business (V)</li> <li>● Orangutan Copycats (V)</li> <li>● Why Dandelions are Dandy (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Questioning (CL-1, A-3 Sloths)</li> <li>● Main Idea/Details (CL-4, A-3 Why Hair Turns Grey?)</li> </ul>

<p><b>10C. Investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and ladybugs</b></p>	<ul style="list-style-type: none"> <li>● Invasive Species</li> <li>● Our Gross World</li> </ul>	<ul style="list-style-type: none"> <li>● Rocks Rock (A)</li> <li>● Splash (A)</li> <li>● Crime Scene Science (A)</li> <li>● Biotechnology (A)</li> <li>● Cicada Swarm (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Main Idea/Details (CL-1, A-1 Mantled Howler Monkeys)</li> </ul>

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<b>Grade Four</b>			
<b>Matter and Energy</b>			
Texas Essential Knowledge and Skills for Science (TEKS)	Readorium Books By Standard	Readorium Magazine Articles (A) and Videos (V) by Standard	Classroom Strategy Lessons (CL) with Articles (A) by Standard
<b>Matter and Energy: Matter has measurable physical properties and those properties determine how matter is classified, changed, and used</b>			
<b>5A. Measure, compare, and contrast physical properties of matter, including size, mass, volume, states (solid, liquid, gas), temperature, magnetism, and the ability to sink or float</b>	<ul style="list-style-type: none"> <li>● Science- What's it All About?</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● All About Recycling (A)</li> <li>● Rocks Rock! (A)</li> <li>● A River of Ice (A)</li> <li>● Look a Rainbow! Where Did that Come From? (A)</li> <li>● Amazing Teen Scientist (A)</li> <li>● Excuse Me, But Burping is Natural (A)</li> <li>● Hair Time!(A)</li> <li>● Making Hovercrafts (A)</li> </ul>	

		<ul style="list-style-type: none"> <li>● How to Make a Cartesian Diver (A)</li> <li>● Catching a Comet (A)</li> <li>● Treasures in the Sky(A)</li> <li>● Spirit and Opportunity on Mars (A)</li> <li>● Where Did the Planets Come From? (A)</li> </ul>	
<b>5B. Predict the changes caused by heating and cooling such as ice becoming liquid water and condensation forming on the outside of a glass of ice water</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> <li>● Solving Crimes with Forensics</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● The Science of Jelly Beans (A)</li> <li>● A River of Ice (A)</li> <li>●</li> </ul>	
<b>5C. Compare and contrast a variety of mixtures and solutions such as rocks in sand, sand in water, or sugar in water</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>● Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul>
<b>Force, Motion and Energy: Energy exists in many forms and can be observed in cycles, patterns, and systems.</b>			
<b>6A. Differentiate among forms of energy, including mechanical, sound, electrical, light, and heat/thermal</b>	<ul style="list-style-type: none"> <li>● Amusement Park Physics</li> <li>● Computer Revolution (The)</li> <li>● Good Vibes- Making Waves with Sounds</li> <li>● Making Movie Magic</li> </ul>	<ul style="list-style-type: none"> <li>● Crime Scene Science (A)</li> <li>● The Science of Movie Stunts (A)</li> <li>● Cool Beams! (A)</li> <li>● Raise Your Voice (A)</li> </ul>	

	<ul style="list-style-type: none"> <li>● Olympic Champs: It's Not Just Luck – It's Physics!</li> <li>● On the Move with Transportation Technology</li> <li>● Science of Music (The)</li> <li>● Technology Changes Medicine</li> <li>● Unbalanced Forces</li> </ul>	<ul style="list-style-type: none"> <li>● Lightning Strikes (V)</li> </ul>	
<b>6B. Differentiate between conductors and insulators</b>	<ul style="list-style-type: none"> <li>● Amusement Park Physics</li> <li>● Changing Face of Earth (The)</li> <li>● Olympic Champs: It's Not Just Luck – It's Physics!</li> <li>● Unbalanced Forces</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>	
<b>6C. Demonstrate that electricity travels in a closed path, creating an electrical circuit, and explore an electromagnetic field</b>	<ul style="list-style-type: none"> <li>● Assistive Technology</li> <li>● Computer Revolution (The)</li> <li>● Deep Space</li> <li>● Making Movie Magic</li> <li>● Technology Changes Medicine</li> <li>● Unbalanced Forces</li> </ul>	<ul style="list-style-type: none"> <li>● A Computer's Best Friend(A)</li> </ul>	
<b>6D. Design an experiment to test the effect of force on an object such as a push or a pull, gravity, friction, or magnetism</b>	<ul style="list-style-type: none"> <li>● Deep Space</li> <li>● Making Movie Magic</li> <li>● Science Girls</li> <li>● Unbalanced Forces</li> </ul>	<ul style="list-style-type: none"> <li>● Making Hovercrafts (A)</li> <li>● Science Pirates Hypothesis (V)</li> </ul>	<ul style="list-style-type: none"> <li>● Graphic Features (CL-2, A-1 Siege Engines)</li> </ul>

		<ul style="list-style-type: none"> <li>● Catching a Comet (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Text Organization (CL-1, A-2 How do Satellites Stay in Space?)</li> </ul>
<b>Earth and Space: Earth consists of useful resources and its surface is constantly changing</b>			
<b>7A. Examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants</b>	<ul style="list-style-type: none"> <li>● The Changing Face of the Earth</li> <li>● Earth's Systems</li> </ul>	<ul style="list-style-type: none"> <li>● Rocks Rock (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● Crime Scene Science (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> </ul>	
<b>7B. Observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice</b>	<ul style="list-style-type: none"> <li>● Deep Space</li> <li>● Earth's Systems</li> <li>● Weather Around the World</li> </ul>	<ul style="list-style-type: none"> <li>Matter Matters! (A)</li> <li>Splash (A)</li> <li>The Water Cycle (A)</li> <li>Rocks Rock! (A)</li> <li>A River of Ice (A)</li> </ul>	
<b>7C. Identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation.</b>	<ul style="list-style-type: none"> <li>● Our Planet Earth</li> <li>● Polluting Our Earth</li> </ul>	<ul style="list-style-type: none"> <li>Matter Matters! (A)</li> <li>The Water Cycle (A)</li> <li>Wonder Fabrics - Things that Can't get Wet! (A)</li> <li>All About Recycling (A)</li> <li>Cool Beams! (A)</li> <li>Pig Poop Fuel (V)</li> </ul>	

**Earth and Space: The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system.**

<p><b>8A. Measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key</b></p>	<ul style="list-style-type: none"> <li>● Weather Around the World</li> <li>● Changing the Face of Earth</li> </ul>	<ul style="list-style-type: none"> <li>● A River of Ice (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Author's Purpose (CL-1, A-1 Weather Scientist)</li> </ul>
<p><b>8B. Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process</b></p>	<ul style="list-style-type: none"> <li>● Earth's Systems</li> </ul>	<ul style="list-style-type: none"> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● A River of Ice (A)</li> <li>● The Science of Movie Stunts (A)</li> <li>● Our Own Star, the Sun (A)</li> <li>● Where Did the Planets Come From? (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> </ul>	
<p><b>8C. Collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time</b></p>	<p>No books</p>		<ul style="list-style-type: none"> <li>● Inferring (CL-1, A-1 What Causes Seasons?)</li> </ul>

**Organisms and Environments: Living organisms within an ecosystem interact with one another and with their environment.**

<p><b>9A. Investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food</b></p>	<ul style="list-style-type: none"> <li>● Inheritance, It's All in the Genes</li> <li>● Buzzing about Bees and Wasps</li> </ul>	<ul style="list-style-type: none"> <li>● The Water Cycle (A)</li> <li>● Bee-bee-havior (A)</li> <li>● Beneath the Fin (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> </ul>
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	<ul style="list-style-type: none"> <li>• The Secret language of Animals</li> <li>• Exploring Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>• Carnivorous Dinosaurs (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Inferring (CL-2, A-2 The Marabou Stork)</li> </ul>
<p><b>9B. Describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web such as a fire in a forest.</b></p>	<ul style="list-style-type: none"> <li>• Dependency of Life (The)</li> <li>• Exploring Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>• The Science of Movie Stunts (A)</li> <li>• Cool Beams! (A)</li> <li>• A Sweet Treat (A)</li> <li>• Our Own Star, the Sun (A)</li> <li>• Spirit and Opportunity on Mars (A)</li> </ul>	
<p><b>Organisms and environments: organisms undergo similar life processes and have structures that help them survive within their environments.</b></p>			
<p><b>10A. Explore how adaptations enable organisms to survive in their environment such as comparing birds' beaks and leaves on plants</b></p>	<ul style="list-style-type: none"> <li>• Beetlemania</li> <li>• Birds of a Feather</li> <li>• Buzzing About Bees and Wasps</li> <li>• Deep Sea Creatures</li> <li>• Exploring the Ocean's Depths</li> <li>• Invasive Species</li> <li>• Life and Death in the Wild</li> <li>• Our Gross World</li> <li>• Our Planet Earth</li> <li>• Smarter Than You Think, Animals that Amaze</li> <li>• Spider Stories</li> </ul>	<ul style="list-style-type: none"> <li>• Why Are Some Hands More "Handy" Than Others? (A)</li> <li>• Twin Fascination (A)</li> <li>• Bee-bee-havior (A)</li> <li>• Lion in Waiting (A)</li> <li>• The Symbiotic Friendship of a Goby and a Shrimp (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Click or Clunk (CL-2, A-3 The Venomous Sea Wasp)</li> <li>• Main Idea/Details (CL-2, A-2 Animals of Panama)</li> <li>• Main Idea/Details (CL-3, A-1 Camels)</li> <li>• Questioning (CL-1, A-1 White-Throated Capuchins)</li> </ul>

	<ul style="list-style-type: none"> <li>● Weird and Wonderful World of Plants</li> </ul>		<ul style="list-style-type: none"> <li>● Questioning (CL-1, A-2 Agoutis)</li> <li>● Questioning (CL-1, A-3 Sloths)</li> <li>● Questioning (CL-2, A-2 Vampires in Nature)</li> <li>● Questioning (CL-2, A-3 Parasites: Nature's Thieves)</li> </ul>
<p><b>10B. Demonstrate that some likenesses between parents and offspring are inherited, passed from generation to generation such as eye color in humans or shapes of leaves in plants. Other likenesses are learned such as table manners or reading a book and seals balancing balls on their noses</b></p>	<ul style="list-style-type: none"> <li>● Inheritance, It's All in the Genes</li> <li>● Beetlemania</li> <li>● Birds of a Feather</li> <li>● Dependency of Life (The)</li> <li>● Exploring Ecosystems</li> <li>● Invasive Species</li> <li>● Spider Stories</li> <li>● Weird and Wonderful World of Plants</li> </ul>	<ul style="list-style-type: none"> <li>● Biotechnology (A)</li> <li>● Hair Time!(A)</li> <li>● Why Are Some Hands More "Handy" Than Others? (A)</li> <li>● How Do We Think? (A)</li> <li>● Twin Fascination (A)</li> <li>● Science Pirates - Wash Your Hands (V)</li> </ul>	<ul style="list-style-type: none"> <li>● Main Idea/Details (CL-4, A-3 Why Hair Turns Grey?)</li> <li>● Questioning (CL-1, A-3 Sloths)</li> </ul>
<p><b>10C. Explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans</b></p>	<ul style="list-style-type: none"> <li>● Invasive Species</li> <li>● Our Gross World</li> </ul>	<ul style="list-style-type: none"> <li>● Crime Scene Science (A)</li> <li>● Biotechnology (A)</li> </ul>	

### 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. 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.

<b>Grade Five</b>			
<b>Matter and energy</b>			
<b>Texas Essential Knowledge and Skills for Science (TEKS)</b>	<b>Readorium Books By Standard</b>	<b>Readorium Magazine Articles (A) and Videos (V) by Standard</b>	<b>Classroom Strategy Lessons (CL) with Articles (A) by Standard</b>
<b>Matter and Energy: Matter has measurable physical properties and those properties determine how matter is classified, changed, and used</b>			
<b>5A. Classify matter based on physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating), solubility in water, and the ability to conduct or insulate thermal energy or electric energy</b>	<ul style="list-style-type: none"> <li>● Making Movie Magic</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● Wonder Fabrics - Things that Can't get Wet! (A)</li> <li>● The Science of Jelly Beans (A)</li> <li>● All About Recycling (A)</li> <li>● Rocks Rock! (A)</li> <li>● Crime Scene Science (A)</li> <li>● Amazing Teen Scientist (A)</li> <li>● The Science of Movie Stunts (A)</li> </ul>	

		<ul style="list-style-type: none"> <li>● Cool Beams! (A)</li> <li>● Excuse Me, But Burping is Natural (A)</li> <li>● Hair Time!(A)</li> <li>● A Trip to Mars (A)</li> <li>● Make Your Own Rock Candy (A)</li> <li>● How Can You Become an Astronaut?(A)</li> <li>● Catching a Comet (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> <li>● Lightning Strikes (V)</li> <li>● Where Did the Planets Come From? (A)</li> <li>● Treasures in the Sky(A)</li> </ul>	
<b>5B. Identify the boiling and freezing/melting points of water on the Celsius scale</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> <li>● Solving Crimes with Forensics</li> </ul>	<ul style="list-style-type: none"> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● The Science of Jelly Beans (A)</li> </ul>	
<b>5C. Demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand</b>	<ul style="list-style-type: none"> <li>● Food Chemistry</li> </ul>		

**Force, Motion and Energy: Energy occurs in many forms and can be observed in cycles, patterns, and systems.**

**6A. Explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy**

- Amusement Park Physics
- Good Vibes- Making Waves with Sounds
- Olympic Champs: It's Not Just Luck – It's Physics!
- On the Move with Transportation Technology
- Science of Music (The)
- Unbalanced Forces

- The Science of Movie Stunts (A)
- Cool Beams! (A)
- Making Hovercrafts (A)

**6B. Demonstrate that the flow of electricity in circuits requires a complete path through which an electric current can pass and can produce light, heat, and sound**

- Amusement Park Physics
- Changing Face of Earth (The)
- Computer Revolution (The)
- Good Vibes- Making Waves with Sounds
- Making Movie Magic
- Olympic Champs: It's Not Just Luck – It's Physics!
- Unbalanced Forces

- A Computer's Best Friend(A)
- The Science of Movie Stunts (A)

<p><b>6C. Demonstrate that light travels in a straight line until it strikes an object or travels through one medium to another and demonstrate that light can be reflected such as the use of mirrors or other shiny surfaces and refracted such as the appearance of an object when observed through water</b></p>	<ul style="list-style-type: none"> <li>● Unbalanced Forces</li> <li>● Deep Space</li> </ul>	<ul style="list-style-type: none"> <li>● Look a Rainbow! Where Did that Come From? (A)</li> <li>● Cool Beams! (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Inferring (CL-1, A-3 Why Is the Sky Blue?)</li> </ul>
<p><b>6D. Design an experiment that tests the effect of force on an object</b></p>	<p>Unbalanced Forces Deep Space</p>	<p>Science Pirates (V)</p>	
<p><b>Earth and Space Earth's surface is constantly changing and consists of useful resources</b></p>			
<p><b>7A. Explore the processes that led to the formation of sedimentary rocks and fossil fuels</b></p>	<ul style="list-style-type: none"> <li>● The Changing Face of the Earth</li> <li>● Earth's Systems</li> </ul>	<ul style="list-style-type: none"> <li>● Rocks Rock (A)</li> <li>● Matter Matters! (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● A River of Ice (A)</li> <li>● Core on the Floor (V)</li> </ul>	
<p><b>7B. Recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, and ice</b></p>	<ul style="list-style-type: none"> <li>● Deep Space</li> <li>● Earth's Systems</li> <li>● Weather Around the World</li> </ul>	<ul style="list-style-type: none"> <li>● Matter Matters! (A)</li> <li>● Rocks Rock (A)</li> <li>● Splash (A)</li> <li>● The Water Cycle (A)</li> <li>● A River of Ice (A)</li> <li>● Spirit and Opportunity on Mars (A)</li> </ul>	
<p><b>7C Identify alternative energy resources such as wind, solar, hydroelectric, geothermal, and biofuels</b></p>	<ul style="list-style-type: none"> <li>● Our Planet Earth</li> </ul>	<ul style="list-style-type: none"> <li>● The Water Cycle (A)</li> <li>● Making Hovercrafts (A)</li> </ul>	

		<ul style="list-style-type: none"> <li>● Aurora Borealis: The Glowing Lights (A)</li> <li>● Pig Poop Fuel (V)</li> </ul>	
<b>7D Identify fossils as evidence of past living organisms and the nature of the environments at the time using models</b>	<ul style="list-style-type: none"> <li>● Our Planet Earth</li> </ul>	<ul style="list-style-type: none"> <li>● Biotechnology (A)</li> <li>● Herbivorous Dinosaurs (A)</li> </ul>	
<b>Earth and Space: The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system.</b>			
<b>8A. Differentiate between weather and climate</b>	<ul style="list-style-type: none"> <li>● Weather Around the World</li> <li>● Changing the Face of Earth</li> </ul>	<ul style="list-style-type: none"> <li>● The Science of Movie Stunts (A)</li> </ul>	
<b>8B. Explain how the Sun and the ocean interact in the water cycle</b>	<ul style="list-style-type: none"> <li>● Earth's Systems</li> </ul>	<ul style="list-style-type: none"> <li>● The Water Cycle (A)</li> <li>● Our Own Star, the Sun (A)</li> </ul>	
<b>8C. Demonstrate that Earth rotates on its axis once approximately every 24 hours causing the day/night cycle and the apparent movement of the Sun across the sky</b>	<ul style="list-style-type: none"> <li>● No books</li> </ul>		
<b>8D. Identify and compare the physical characteristics of the Sun, Earth, and Moon.</b>	<ul style="list-style-type: none"> <li>● No books</li> </ul>	<ul style="list-style-type: none"> <li>Our Own Star, the Sun (A)</li> <li>Catching a Comet (A)</li> <li>Treasures in the Sky(A)</li> </ul>	<ul style="list-style-type: none"> <li>●Text Organization (CL-1, A-1 What Is a Satellite?)</li> <li>●Text Organization (CL-1, A-2</li> </ul>

			<p>How do Satellites Stay in Space?)</p> <ul style="list-style-type: none"> <li>• Text Organization (CL-1, A-3 How Satellites Work)</li> </ul>
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**Organisms and Environments: There are relationships, systems, and cycles within environments.**

<p><b>9A. Observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving elements</b></p>	<ul style="list-style-type: none"> <li>• Inheritance, It's All in the Genes</li> <li>• Buzzing about Bees and Wasps</li> <li>• Our Gross World</li> <li>• Secret Language of Animals, The</li> <li>• Smarter Than You Think, Animals that Amaze</li> <li>• Exploring Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>• Crime Scene Science (A)</li> <li>• The Science of Movie Stunts (A)</li> <li>• Hair Time!(A)</li> <li>• A Sweet Treat</li> <li>• (A) The Brain! ...What's in There?(A)</li> <li>• Why Are Some Hands More "Handy" Than Others? (A)</li> <li>• Mysteries of the Common Cold(A)</li> <li>• Breathe Easier - Understanding Asthma (A)</li> <li>• How Do We Think? (A)</li> <li>• Raise Your Voice (A)</li> <li>• Babies and Learning (V)</li> </ul>	<ul style="list-style-type: none"> <li>• Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> <li>• Inferring (CL-2, A-2 The Marabou Stork)</li> </ul>
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		<ul style="list-style-type: none"> <li>● Leaf Cutter Ants (V)</li> <li>● Bee-bee-havior (A)</li> <li>● The Symbiotic Friendship of a Goby and a Shrimp (A)</li> </ul>	
<p><b>9B. Describe how the flow of energy derived from the Sun, used by producers to create their own food, is transferred through a food chain and food web to consumers and decomposers</b></p>	<ul style="list-style-type: none"> <li>● Exploring Ecosystems</li> <li>● Dependency of Life (The)</li> </ul>	<ul style="list-style-type: none"> <li>● Crime Scene Science (A)</li> <li>● Biotechnology (A)</li> <li>● Arctic Krill (V)</li> <li>● Leaf Cutter Ants (V)</li> <li>● Our Own Star, the Sun (A)</li> <li>● Bee-bee havior (A)</li> <li>● The Venus Flytrap: A Meat-Eating Plant (A)</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p><b>9C. Predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways</b></p>	<ul style="list-style-type: none"> <li>● Exploring Ecosystems</li> <li>● Polluting our Earth</li> </ul>	<ul style="list-style-type: none"> <li>● Breathe Easier - Understanding Asthma (A)</li> <li>● The Water Cycle (A)</li> <li>● Biotechnology (A)</li> <li>● Twin Fascination (A)</li> <li>● Invasion of the Earthworm (Antlers, Shells, and Beaks (V)</li> </ul>	<ul style="list-style-type: none"> <li>● Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> <li>● Inferring (CL-2, A-1 Invasive Species)</li> </ul>

		<ul style="list-style-type: none"> <li>● Our Debris Filling the Ocean (V)</li> <li>● Lion in Waiting (A)</li> <li>● Beneath the Fin (A)</li> </ul>	
<b>9D. Identify the significance of the carbon dioxide-oxygen cycle to the survival of plants and animals</b>	<ul style="list-style-type: none"> <li>● Exploring Ecosystems</li> </ul>		
<b>Organisms and environments: organisms undergo similar life processes and have structures that help them survive within their environments.</b>			
<b>10A. Compare the structures and functions of different species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals</b>	<ul style="list-style-type: none"> <li>● Beetlemania</li> <li>● Birds of a Feather</li> <li>● Buzzing About Bees and Wasps</li> <li>● Deep Sea Creatures</li> <li>● Invasive Species</li> <li>● Life and Death in the Wild</li> <li>● Our Planet Earth</li> <li>● Smarter Than You think, Animals that Amaze</li> <li>● Spider Stories</li> <li>● Weird and Wonderful World of Plants</li> </ul>	<ul style="list-style-type: none"> <li>● Hair Time!(A)</li> <li>● Emperor Penguins (V)</li> <li>● Polar Bears (V)</li> <li>● What is Sea Ice and Why is it Shrinking? (V)</li> <li>● Bee-bee-havior (A)</li> <li>● Beneath the Fin (A)</li> <li>● The Amazing Water Bear (A)</li> <li>● Herbivorous Dinosaurs (A)</li> <li>● Carnivorous Dinosaurs (A)</li> <li>● How Spiders Catch Prey (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Click or Clunk (CL-2, A-3 The Venomous Sea Wasp)</li> <li>● Main Idea/Details (CL-2, A-2 Animals of Panama)</li> <li>● Main Idea/Details (CL-3, A-1 Camels)</li> <li>● Questioning (CL-1, A-1 White-Throated Capuchins)</li> <li>● Questioning (CL-1, A-2 Agoutis)</li> <li>● Questioning (CL-1, A-3 Sloths)</li> </ul>

			<ul style="list-style-type: none"> <li>● Questioning (CL-2, A-2 Vampires in Nature)</li> <li>● Questioning (CL-2, A-3 Parasites: Nature's Thieves)</li> <li>● Word Learning (CL-2, A-2 What is a Waterfowl?)</li> <li>● Word Learning (CL-2, A-3 Webbed Wonders)</li> </ul>
<p><b>10B. Differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle</b></p>	<ul style="list-style-type: none"> <li>● Inheritance, It's All in the Genes</li> <li>● Beetlemania</li> <li>● Birds of a Feather</li> <li>● Dependency of Life (The)</li> <li>● Exploring Ecosystems</li> <li>● How We Learn</li> <li>● Invasive Species</li> <li>● Smarter Than You think, Animals that Amaze</li> <li>● Spider Stories</li> <li>● Weird and Wonderful World of Plants</li> </ul>	<ul style="list-style-type: none"> <li>● Hair Time!(A)</li> <li>● Monkey Business (V)</li> <li>● Bird Brains (V)</li> <li>● Why Dandelions are Dandy (A)</li> </ul>	<ul style="list-style-type: none"> <li>● Questioning (CL-1, A-3 Sloths)</li> <li>● Main Idea/Details (CL-4, A-3 Why Hair Turns Grey?)</li> <li>● Word Learning (CL-2, A-2 What is a Waterfowl?)</li> </ul>

**10C. Describe the differences between complete and incomplete metamorphosis of insects.**

- Invasive Species