

**Readorium Alignment with Utah Science Standards: Grades 3-5**  
**Grade 3**

**Readorium Content:** In Readorium, students choose **science books** that interest them or teachers may lock or unlock specific books for classes, groups, or individuals. All students can understand the same rich content because the readability levels of the chapters and the supports students receive automatically adjust to their individual needs as they read. Once students receive tokens for completing books, they may select magazine articles or National Science Foundation videos. They may also participate in game-like activities based on the concepts and vocabulary they just learned. Teachers can log into the **Teacher Resource Center** to view student data and download resources and lessons based on this data. The following chart shows the content available for students by Utah standard. Some content applies to more than one standard.

<b>Readorium Alignment with Utah State Standards: Grade 3</b>		
<b>Physical Science</b>		
<b>Readorium Books By Standard</b>	<b>Magazine Articles (A) and Science Videos (V) By Standard</b>	<b>Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard</b>
<b>Utah Science Standard:</b> Forces cause changes in the speed or direction of the motion of an object. The greater the force placed on an object, the greater the change in motion. The more massive the object is, the less effect a given force will have upon the motion of the object. Earth's gravity pulls objects toward it without touching them.		
Students will understand the relationships between the forces applied to an object and resulting motion of the object		
<ul style="list-style-type: none"> <li>• Amusement Park Physics</li> <li>• Olympic Champs: It's Not Luck-It's Physics</li> </ul>	<ul style="list-style-type: none"> <li>• Making Hovercrafts (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Graphic Features (CL-2, A-1 War Machines-Siege Engines)</li> </ul>
<b>Utah Science Standard:</b> Demonstrate how forces cause changes in speed or direction of objects		
<ul style="list-style-type: none"> <li>• Amusement Park Physics</li> <li>• Olympic Champs: It's Not Luck-It's Physics</li> <li>• Unbalanced Forces</li> </ul>		<ul style="list-style-type: none"> <li>• Graphic Features (CL-2, A-1 War Machines-Siege Engines)</li> </ul>
<b>Utah Science Standard:</b> Demonstrate that the greater the force applied to an object, the greater the change in speed or direction of the object		
<ul style="list-style-type: none"> <li>• Good Vibes-Making Waves with Sound</li> <li>• Powering our Lives with Energy</li> <li>• Amusement Park Physics</li> <li>• Unbalanced Forces</li> </ul>		
<b>Readorium Alignment with Next Generation Utah State Standards: Grade 3</b>		
<b>Life Science</b>		
<b>Utah Science Standard:</b> For any particular environment, some types of plants and animals survive well, some survive less well and some cannot survive at all. Organisms in an environment interact with their environment. Models can be used to investigate these interactions.		
Students will understand that organisms depend on living and nonliving things within their environment		
Classify living and nonliving things in an environment		
<ul style="list-style-type: none"> <li>• Our Planet Earth</li> </ul>		
<b>Utah Science Standard:</b> Describe the interactions between living and nonliving things in a small environment.		
<ul style="list-style-type: none"> <li>• Deep Sea Creatures</li> <li>• Invasive Species</li> <li>• Life and Death in the Wild</li> <li>• Our Gross World</li> <li>• Spider Stories</li> <li>• The Weird and Wonderful World of Plants</li> <li>• Exploring Ecosystems</li> <li>• Dependency of Life</li> <li>• Buzzing About Bees</li> <li>• Birds of a Feather</li> <li>• Smarter than you Think</li> </ul>	<ul style="list-style-type: none"> <li>• Bee-Bee Behavior (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Inferring (CL-2, A-1 Invasive Species)</li> </ul>

**Readorium Alignment with Next Generation Utah State Standards: Grade 3**

**Earth and Space Science**

Readorium Books By Standard	Magazine Articles (A) and Science Videos (V) By Standard	Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard
<p><b>Utah Science Standard:</b> Earth orbits around the sun and the moon orbits around Earth. Earth is spherical in shape and rotates on its axis to produce the night and day cycle. To people on Earth, this turning of the planet makes it appear as though the sun, moon, planets, and stars are moving across the sky once a day. However, this is only a perception as viewed from Earth.</p>		
<p><b>Utah Science Standard:</b> Students will understand that the shape of the Earth and the moon are spherical and that Earth rotates on its axis to produce the appearance of the sun and moon moving through the sky.</p>		
<ul style="list-style-type: none"> <li>• The Changing Face of Earth</li> <li>• Earth's Systems</li> <li>• Our Planet Earth</li> <li>• Living in Space</li> </ul>	<ul style="list-style-type: none"> <li>• Surface and Eclipses of the Moon (A)</li> <li>• The Biggest Shadow of All – An Eclipse (A)</li> </ul>	
<p><b>Utah Science Standard:</b> Students will understand that objects near Earth are pulled toward Earth by gravity</p>		
<p><b>Utah Science Standard:</b> Demonstrate that gravity is a force</p>		
<p><b>Utah Science Standard:</b> Describe the effects of gravity on the motion of an object</p>		
<ul style="list-style-type: none"> <li>• Earth's Systems</li> <li>• Living in Space</li> <li>• Our Planet Earth</li> <li>• Amusement Park Physics</li> </ul>	<ul style="list-style-type: none"> <li>• The Challenge of Gravity</li> </ul>	

**Readorium Alignment with Next Generation Utah State Standards: Grade 3**

**Nature of Science, Application of Science, (ETAS)**

<p><b>Utah Science Standard:</b> Light is produced by the sun and observed on Earth. Living organism use heat and light from the sun. Heat is also produced from motion when one thing rubs against another. Things that give off heat often give off light. While operating, mechanical and electrical machines produce heat and/or light.</p>		
<p><b>Utah Science Standard:</b> Students will understand that the sun is the main source of heat and light for things living on Earth. They will also understand that the motion of rubbing objects together may produce heat.</p>		
<p><b>Utah Science Standard:</b> Provide evidence showing that the sun is the source of heat and light from Earth</p>		
<ul style="list-style-type: none"> <li>• The Changing Face of Earth</li> <li>• Earth's Systems</li> <li>• Our Planet Earth</li> <li>• Powering Our Lives with Energy</li> <li>• Natural Hazards that Shape the Earth</li> </ul>	<ul style="list-style-type: none"> <li>• Earth and Space (V)</li> <li>• Future of the Sun (A)</li> <li>• Our Own Star (A)</li> </ul>	
<p><b>Utah Science Standard:</b> Demonstrate that mechanical and electrical machines produce heat and sometimes light.</p>		
<ul style="list-style-type: none"> <li>• Polluting our Earth</li> <li>• On the Move with Transportation Technology</li> </ul>		
<p><b>Utah Science Standard:</b> Demonstrate that heat may be produced when objects are rubbed against one another.</p>		
<ul style="list-style-type: none"> <li>• Unbalanced Forces</li> <li>• Amusement Park Physics</li> <li>• Olympic Champs: It's Not Just Luck-It's Physics!</li> </ul>		

## Readorium Alignment with Utah State Standards: Grade 4

**Readorium Content:** In Readorium, students choose **science books** that interest them or teachers may lock or unlock specific books for classes, groups, or individuals. All students can understand the same rich content because the readability levels of the chapters and the supports students receive automatically adjust to their individual needs as they read. Once students receive tokens for completing books, they may select magazine articles or National Science Foundation videos. They may also participate in game-like activities based on the concepts and vocabulary they just learned. Teachers can log into the **Teacher Resource Center** to view student data and download resources and lessons based on this data. Some content applies to more than one standard.

Readorium Alignment with Utah State Standards: Grade 4		
Life Science		
Readorium Books By Standard	Magazine Articles (A) and Science Videos (V) By Standard	Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard
<p><b>Utah Science Standard:</b> Utah has diverse plant and animal life that is adapted to and interacts in areas that can be described as wetlands, forests, and deserts. The characteristics of the wetlands, forests, and deserts influence which plants and animals survive best there. Living and nonliving things are classified based on physical features.</p>		
<p><b>Utah Science Standard:</b> Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment.</p>		
<p><b>Utah Science Standard:</b> Describe the physical characteristics of Utah's wetlands, forests, and deserts</p>		
<ul style="list-style-type: none"> <li>• Earth's Systems</li> <li>• Our Planet Earth</li> </ul>	<ul style="list-style-type: none"> <li>• The Classification of Plants (A)</li> <li>• The Classification of Animals (A)</li> <li>• Living or Nonliving: You Decide (A)</li> </ul>	
<p><b>Utah Science Standard:</b> Describe the common plants and animals found in Utah environments and how these organisms have adapted to the environment in which they live.</p>		
<ul style="list-style-type: none"> <li>• The Weird and Wonderful World of Plants</li> <li>• Buzzing about Bees and Wasps</li> <li>• Dependency of Life</li> <li>• Invasive Species</li> <li>• Exploring Ecosystems</li> <li>• Life and Death in the Wild</li> </ul>	<ul style="list-style-type: none"> <li>• How Plants Survive (Parts 1 &amp; 2) (A)</li> <li>• Just by a Whisker (V)</li> <li>• The Venus Flytrap: A Meat-Eating Plant (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Word Learning (CL-2, A-2 What is a Waterfowl?)</li> <li>• Main Idea/Details (CL-3, A-3 Why Do Geese Fly in a V-Shape?)</li> <li>• Inferring (CL-2, A-2 The Marabou Stork)</li> <li>• Questioning (CL-1, A-3 Sloths)</li> </ul>
<p><b>Utah Science Standard:</b> Use a simple scheme to classify Utah plants and animals</p>		
<p><b>Utah Science Standard:</b> Observe and record the behavior of Utah animals</p>		
Readorium Alignment with Utah State Standards: Grade 4		
Earth and Space Science		
<p><b>Utah Science Standard:</b> Matter on Earth cycles from one form to another. The cycling of matter on Earth requires energy. The cycling of water is an example of this process. The sun is the source of energy for the water cycle. Water changes state as it cycles between the atmosphere, land, and bodies of water on Earth.</p>		
<p><b>Utah Science Standard:</b> Students will understand that water changes state as it moves through the water cycle</p>		
<p><b>Utah Science Standard:</b> Describe the relationship between heat energy, evaporation and condensation of water on Earth</p>		
<p><b>Utah Science Standard:</b> Describe the water cycle</p>		
<ul style="list-style-type: none"> <li>• Earth's Systems</li> <li>• Weather Around the World</li> <li>• The Changing Face of Earth</li> </ul>	<ul style="list-style-type: none"> <li>• The Water Cycle (A)</li> </ul>	
<p><b>Utah Science Standard:</b> Weather describes conditions in the atmosphere at a certain place and time. Water, energy from the sun, and wind create a cycle of changing weather. The sun's energy warms the oceans and lands at Earth's surface, creating changes in the atmosphere that cause the weather. The temperature and movement of air can be observed and measured to determine the effect on cloud formation and precipitation. Recording weather observations provides data that can be used to predict future weather conditions and establish patterns over time. Weather affects many aspects of people's lives.</p>		

<b>Utah Science Standard:</b> Students will understand that the elements of weather can be observed, measured, and recorded to make predictions and determine simple weather patterns.		
<b>Utah Science Standard:</b> Observe, measure, and record the basic elements of weather		
<b>Readorium Books By Standard</b>	<b>Magazine Articles (A) and Science Videos (V) By Standard</b>	<b>Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard</b>
<ul style="list-style-type: none"> <li>Weather Around the World</li> <li>Natural Hazards</li> </ul>		<ul style="list-style-type: none"> <li>Author's Purpose (CL-1, A-1 Weather Scientist)</li> <li>Author's Purpose (CL-1, A-2 Weather Folklore from Africa &amp; Asia)</li> </ul>
<b>Utah Science Standard:</b> Interpret recorded data for simple patterns		
		<ul style="list-style-type: none"> <li>Author's Purpose (CL-1, A-1 Weather Scientist)</li> </ul>
<b>Utah Science Standard:</b> Evaluate weather predictions based upon observational data		
		<ul style="list-style-type: none"> <li>Author's Purpose (CL-1, A-1 Weather Scientist)</li> </ul>
<b>Utah Science Standard:</b> Earth materials include rocks, soils, water, and gases. Rock is composed of minerals. Earth materials change over time from one form to another. These changes require energy. Erosion is the movement of materials and weathering is the breakage of bedrock and larger rocks into smaller rocks and soil materials. Soil is continually being formed from weathered rock and plant remains. Soil contains many living organisms. Plants generally get water from soil.		
<b>Utah Science Standard:</b> Students will understand the basic properties of rocks, the processes involved in the formation of soils, and the needs of plants provided by soil.		
<b>Utah Science Standard:</b> Identify basic properties of minerals and rocks.		
<ul style="list-style-type: none"> <li>Our Planet Earth</li> </ul>	<ul style="list-style-type: none"> <li>Rocks Rock (A)</li> </ul>	
<b>Utah Science Standard:</b> Explain how the processes of weathering and erosion change and move materials that become soil		
<ul style="list-style-type: none"> <li>Exploring Ecosystems</li> <li>Changing Face of Earth</li> <li>Our Planet Earth</li> </ul>		
<b>Utah Science Standard:</b> Observe the basic components of soil and relate the components to plant growth		
<ul style="list-style-type: none"> <li>Weird and Wonderful Plants</li> </ul>		
<b>Utah Science Standard:</b> Fossils are evidence of living organisms from the past and are usually preserved in sedimentary rocks. A fossil maybe an impression left in sediments, the preserved remains of an organism, or a trace mark showing that an organism once existed. Fossils are usually made from the hard parts of an organism because soft parts decay quickly. Fossils provide clues to Earth's history. They provide evidence that can be used to make inferences about past environments. Fossils can be compared to one another, to living organisms, and to organisms that lived long ago.		
Students will understand how fossils are formed, where they may be found in Utah, and how they can be used to make inferences		
Describe Utah fossils and explain how they were formed		
<ul style="list-style-type: none"> <li>Dependency of Life</li> </ul>		
Explain how fossils can be used to make inferences about past life, climate, geology, and environments		
<ul style="list-style-type: none"> <li>Dependency of Life</li> </ul>		

## Readorium Alignment with Utah State Standards: Grade 5

**Readorium Content:** In Readorium, students choose **science books** that interest them or teachers may lock or unlock specific books for classes, groups, or individuals. All students can understand the same rich content because the readability levels of the chapters and the supports students receive automatically adjust to their individual needs as they read. Once students receive tokens for completing books, they may select magazine articles or National Science Foundation videos. They may also participate in game-like activities based on the concepts and vocabulary they just learned. Teachers can log into the **Teacher Resource Center** to view student data and download resources and lessons based on this data. Some content applies to more than one standard.

Readorium Alignment with Utah State Standards: Grade 5		
Physical Science		
Readorium Books By Standard	Magazine Articles (A) and Science Videos (V) By Standard	Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard
<p><b>Utah Science Standard:</b> The weight of an object is always equal to the sum of its parts, regardless of how it is assembled. In a chemical reaction or physical change matter is neither created nor destroyed. When two or more materials are combined, either a chemical reaction or physical change may occur. Chemical reactions are often indicated when materials give off heat or cool as they take in heat, give off light, give off gas, or change colors. In a chemical reaction, materials are changed into new substances. In a physical change a new substance is not formed.</p>		
<p><b>Utah Science Standard:</b> Students will understand that chemical and physical changes occur in matter</p>		
<p><b>Utah Science Standard:</b> Describe that matter is neither created nor destroyed even though it may undergo change</p>		
<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> </ul>	<ul style="list-style-type: none"> <li>• Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul>
<p><b>Utah Science Standard:</b> Evaluate evidence that indicates a physical change has occurred</p>		
<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> </ul>	<ul style="list-style-type: none"> <li>• Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul>
<p><b>Utah Science Standard:</b> Investigate evidence for changes in matter that occur during a chemical reaction</p>		
<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> </ul>	<ul style="list-style-type: none"> <li>• Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul>
Readorium Alignment with Utah State Standards: Grade 5		
Life Science		
<p><b>Utah Science Standard:</b> All living things inherit a set of characteristics or traits from their parents. Members of any given species transfer traits from one generation to the next. The passing of traits from parent to offspring is called heredity and causes the offspring to resemble the parent. Some traits differ among members of population, and these variations may help a particular species to survive better in a given environment in getting food, finding shelter, protecting itself, and reproducing. These variations give the individual a survival advantage over other individuals of the same species.</p>		
<p><b>Utah Science Standard:</b> Students will understand that traits are passed from the parent organisms to their offspring, and that sometimes the offspring may possess variations of these traits that may help or hinder survival in a given environment.</p>		
<p><b>Utah Science Standard:</b> Using supporting evidence, show that traits are transferred from parent organism to its offspring</p>		
<ul style="list-style-type: none"> <li>• Inheritance – It's All in the Genes</li> </ul>	<ul style="list-style-type: none"> <li>• Twin Fascination (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Main Idea/Details (CL-4, A-3 Why Does Hair Turns Grey?)</li> <li>• Biotechnology (A)</li> <li>• Main Idea/Details (CL-1, A-1 Mantled Howler Monkeys)</li> </ul>
<p>Describe how some characteristics could give a species a survival advantage in a particular environment.</p>		
<ul style="list-style-type: none"> <li>• Invasive Species</li> <li>• Dependency of Life</li> <li>• Life and Death in the Wild</li> <li>• Birds of a Feather</li> <li>• Exploring Ecosystems</li> <li>• Smarter Than You Think – Animals that Amaze</li> </ul>	<ul style="list-style-type: none"> <li>• Cicada Swarms (A)</li> <li>• Beluga Whales (V)</li> <li>• Emperor Penguins (V)</li> <li>• Walruses (V)</li> </ul>	<ul style="list-style-type: none"> <li>Questioning (CL-1, A-3 Sloths)</li> <li>Word Learning (CL-2, A-2 What is a Waterfowl?)</li> <li>Word Learning (CL-2, A-3 Webbed Wonders)</li> </ul>

**Readorium Alignment with Utah State Standards: Grade 5**

**Earth and Space Science**

Readorium Books By Standard	Magazine Articles (A) and Science Videos (V) By Standard	Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard
--------------------------------	---	---

**Utah Science Standard:** The Earth's surface is constantly changing. Some changes happen very slowly over long periods of time, such as weathering erosion, and uplift. Other changes happen abruptly, such as landslides, volcanic eruptions, and earthquakes. All around us, we see the visible effects of the building up and breaking down of the Earth's surface.

**Utah Science Standard:** Students will understand that volcanoes, earthquakes, uplift, weathering, and erosion reshape Earth's surface

**Utah Science Standard:** Describe how weathering and erosion change Earth's surface

<ul style="list-style-type: none"> <li>Changing Face of Earth</li> </ul>		<ul style="list-style-type: none"> <li>Word Learning (CL-1, A-2 How Do Archeologists Work?)</li> </ul>
--	--	--

**Utah Science Standard:** Explain how volcanoes, earthquakes, and uplift affect Earth's surface

<ul style="list-style-type: none"> <li>Natural Hazards</li> <li>Changing Face of Earth</li> </ul>	<ul style="list-style-type: none"> <li>Earthquakes (V)</li> <li>How to Make a Volcano (A)</li> </ul>	
---	--	--

Relate the building up and breaking down of Earth's surface over time to the various physical land features

<ul style="list-style-type: none"> <li>Changing Face of Earth</li> </ul>		
--	--	--

**Readorium Alignment with Utah State Standards: Grade 5**

**Nature of Science, Application of Science, (ETAS)**

**Utah Science Standard:** Earth and some earth materials have magnetic properties. Without touching them, a magnet attracts things made of iron and either pushes or pulls on other magnets. Electricity is a form of energy. Current electricity can be generated and transmitted through pathways. Some materials are capable of carrying electricity more effectively than other materials. Static electricity is a result of objects being electrically charged. Without touching them, materials that are electrically charged may either push or pull other charged materials.

**Utah Science Standard:** Students will understand that magnetism can be observed when there is an interaction between the magnetic fields of magnets or between a magnet and materials made of iron.

**Utah Science Standard:** Investigate and compare the behavior of magnetism using magnets

<ul style="list-style-type: none"> <li>Unbalanced Forces</li> </ul>	<ul style="list-style-type: none"> <li>Fishing for Magnets (A)</li> <li>A Magnet Experiment (A)</li> <li>Adventures of Messy Magnet (A)</li> <li>Magnificent Magnets (A)</li> </ul>	
---	---	--

Describe how the magnetic field of Earth and a magnet are similar

<ul style="list-style-type: none"> <li>Birds of a Feather</li> <li>Unbalanced Forces</li> <li>Technology Changes Medicine</li> </ul>		
--	--	--

**Utah Science Standard:** Students will understand features of static and current electricity

**Utah Science Standard:** Describe the behavior of static electricity as observed in nature and everyday occurrences

**Utah Science Standard:** Analyze the behavior of current electricity

<ul style="list-style-type: none"> <li>Making Movie Magic</li> <li>The Science of Music</li> </ul>		<ul style="list-style-type: none"> <li>Text Organization (CL-1, A-1 What Is a Satellite?)</li> </ul>
--	--	--