

## Readorium Alignment with Carolina Biological Supply Company's Building Blocks of Science: Grades 3-5

**Readorium Content:** In Readorium, students choose **science books** that interest them, or teachers may easily 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 Readorium's alignment to Carolina Biological Supply Company's Building Blocks of Science based on the NGSS. Some Readorium content applies to more than one standard.

<b>Carolina Biological Supply Company: Building Blocks of Science: Grade 5 Structure and Properties of Matter</b>					
<b>Lesson 1 Structure and Properties of Matter</b>	<b>Lesson 2 Energy and States of Matter</b>	<b>Lesson 3 Physical Properties of Matter</b>	<b>Lesson 4 Making Mixtures and Solutions</b>	<b>Lesson 5 Physical and Chemical Changes</b>	<b>Lesson 6 Separating Matter</b>
<b>Vocabulary Lesson 1</b> Gas, Liquid, Mass, Matter, Solid, Volume	<b>Vocabulary Lesson 2</b> Boiling point, Condensation, Evaporation, Freezing point, Melting point	<b>Vocabulary Lesson 3</b> Buoyancy, Density, Hardness, Magnetism, Physical property, Viscosity	<b>Vocabulary Lesson 4</b> Dissolve, Filter, Mesh, Mixture, Separate, Sieve, Solubility, Solute, Solution, Solvent	<b>Vocabulary Lesson 5</b> Chemical change, Constant, Physical change	<b>Vocabulary Lesson 6</b> Filtration and all vocabulary from previous lessons.
<ul style="list-style-type: none"> <li>• <b>NGSS 5-PS1-1:</b> Develop a model to describe that matter is made of particles too small to be seen.</li> <li>• <b>NGSS 5-PS1-2:</b> Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.</li> <li>• <b>NGSS 5-PS1-3:</b> Make observations and measurements to identify materials based on their properties.</li> <li>• <b>NGSS 5-PS1-4:</b> Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</li> </ul>					
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>	
<ul style="list-style-type: none"> <li>• Food Chemistry</li> <li>• Good Vibes – Making Waves with Sound</li> <li>• Making Movie Magic</li> <li>• Solving Crimes with Forensics</li> </ul>		<ul style="list-style-type: none"> <li>• A Sweet Treat</li> <li>• All About Recycling</li> <li>• Biotechnology</li> <li>• Cool Beams!</li> <li>• Crime Scene Science</li> <li>• Excuse Me, But Burping is Natural</li> <li>• How Do We Think?</li> <li>• How to Make a Volcano (Coke &amp; Mentos)</li> <li>• How to Make Elephant Toothpaste</li> <li>• How to Make Your Own Slime</li> <li>• Make Your Own Rock Candy</li> <li>• Making a Potato Battery</li> <li>• Matter Matters!</li> <li>• Rocks Rock!</li> <li>• Science of Jelly Beans</li> <li>• Science of Movie Stunts</li> <li>• Wonder Fabrics</li> </ul> <p style="text-align: center;"><b>Videos</b></p> <ul style="list-style-type: none"> <li>• Virtual Reality Scientists</li> </ul>		<ul style="list-style-type: none"> <li>• Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>NGSS 3-5-ETS1-2:</b> Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</li> </ul>					
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>	
<ul style="list-style-type: none"> <li>• Improving Lives with Assistive Technology</li> <li>• Living in Space</li> <li>• Olympic Champs (Physics)</li> <li>• On the Move - Transportation Technology</li> <li>• Powering Our Lives with Energy</li> </ul>		<ul style="list-style-type: none"> <li>• A Computer's Best Friend</li> <li>• All About Recycling</li> <li>• Amazing Teen Scientist</li> <li>• Breathe Easier - Understanding Asthma</li> <li>• Mysteries of the Common Cold</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>• Science - What's it All About?</li> <li>• Solving Crime with Forensics</li> <li>• Technology Changes Medicine</li> </ul>	<ul style="list-style-type: none"> <li>• Shrimp Farming-A Shocking Tale</li> <li>• Why Are Some Hands More "Handy" Than Others?</li> </ul>				
<b>Readorium Alignment with Building Blocks of Science: Grade 5 - continued</b>					
<b>Carolina Biological Supply Company: Building Blocks of Science: Grade 5 Matter and Energy in Ecosystems</b>					
<b>Lesson 1</b> <b>Biotic and Abiotic Factors</b>	<b>Lesson 2</b> <b>Interdependence of Biotic Factors</b>	<b>Lesson 3</b> <b>Energy Flow in an Ecosystem</b>	<b>Lesson 4</b> <b>Interactions on Earth</b>	<b>Lesson 5</b> <b>Human Impact</b>	<b>Lesson 6</b> <b>Protecting the Ecosystem</b>
<b>Vocabulary Lesson 1</b> Abiotic factor, Biotic factor, Control, Ecosystem, Energy, Environment, Germination, Habitat, Leaf, Photosynthesis, Pollination, Region, Reproduction, Root, Seed, Seed dispersal, Stem, Variable	<b>Vocabulary Lesson 2</b> Consumer, Dissect, Food chain, Food pyramid, Interdependence, Owl pellet, Primary consumer, Producer, Secondary consumer, Tertiary consumer	<b>Vocabulary Lesson 3</b> Bacteria, Competition, Decomposer, Food web, Fungi, Organic, Predator, Prey	<b>Vocabulary Lesson 4</b> Atmosphere, Biosphere, Condensation, Evaporation, Geosphere, Hydrosphere, Precipitation, Runoff, Water cycle	<b>Vocabulary Lesson 5</b> Agriculture, Deforestation, Fossil fuel, Pollution, Technology	<b>Vocabulary Lesson 6</b> All vocabulary from previous lessons.
<ul style="list-style-type: none"> <li>• <b>NGSS 5-LS1-1:</b> Support an argument that plants get the materials they need for growth chiefly from air and water</li> <li>• <b>NGSS 5-LS2-1:</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</li> </ul>					
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>	
<ul style="list-style-type: none"> <li>• Beetlemania</li> <li>• Birds of a Feather</li> <li>• Buzzing About Bees and Wasps</li> <li>• Dependency of Life, The</li> <li>• Deep Sea Creatures</li> <li>• Exploring Ecosystems</li> <li>• Exploring the Ocean's Depths</li> <li>• Life and Death in the Wild</li> <li>• Our Gross World</li> <li>• Weird and Wonderful Plants</li> </ul>		<ul style="list-style-type: none"> <li>• Fireflies of the Ocean</li> <li>• How Plants Survive: Part 1</li> <li>• How Plants Survive: Part 2</li> <li>• Splash</li> </ul> <p style="text-align: center;"><b>Videos</b></p> <ul style="list-style-type: none"> <li>• Core on the Floor</li> <li>• Invasion of the Earthworms!</li> <li>• Just by a Whisker</li> <li>• Leaf Cutter Ants</li> <li>• Virtual Reality Scientists</li> </ul>		<ul style="list-style-type: none"> <li>• Graphic Features (CL-1, A-2 Greenhouse Effect)</li> <li>• Questioning (CL-1, A-2 Agoutis)</li> <li>• Questioning (CL-2, A2 Vampires in Nature)</li> <li>• Questioning (CL-2, A3 Parasites: Nature's Thieves)</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>NGSS 5-PS3-1:</b> Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.</li> </ul>					
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>	
<ul style="list-style-type: none"> <li>• Dependency of Life</li> <li>• Weird and Wonderful World of Plants, The</li> </ul>		<ul style="list-style-type: none"> <li>• Biotechnology</li> <li>• A Sweet Treat</li> </ul>			
<ul style="list-style-type: none"> <li>• <b>NGSS 5-ESS2-1:</b> Develop a model using an example to describe the ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</li> <li>• <b>NGSS 5-ESS3-1:</b> Obtain and combine information about ways individual communities use science ideas to protect the earth's resources and environment</li> </ul>					
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>	
<ul style="list-style-type: none"> <li>• Changing Face of Earth</li> <li>• Earth's Systems</li> <li>• Exploring the Ocean's Depths</li> <li>• Invasive Species</li> <li>• Natural Hazards that Shape the Earth</li> <li>• Our Planet Earth</li> <li>• Polluting Our Earth</li> <li>• Powering Our Lives with Energy</li> </ul>		<ul style="list-style-type: none"> <li>• Water Cycle</li> <li>• All about Recycling</li> <li>• Rocks Rock!</li> </ul> <p style="text-align: center;"><b>Videos</b></p> <ul style="list-style-type: none"> <li>• Debris Filling the Ocean</li> <li>• Earthquakes</li> <li>• Robotic Arms</li> <li>• When Lightning Strikes</li> <li>• What is Sea Ice? Why is it Shrinking?</li> </ul>		<ul style="list-style-type: none"> <li>• Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> <li>• Click or Clunk (CL-2, A-1 Illegal Wildlife Trade)</li> <li>• Click or Clunk (CL-2, A-2 Garbage Island)</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>NGSS 3-5-ETS1-3:</b> Generate and compare multiple solutions to a problem based on how well each is likely to meet the criteria and constraints of a problem</li> </ul>					
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>	
<ul style="list-style-type: none"> <li>• Science - What's It All About?</li> </ul>		<ul style="list-style-type: none"> <li>• Biotechnology</li> </ul>			

- Cancer: Cells Out of Control
  - Twin Fascination
- Videos**
- RoboBees
  - Robotic Arms
  - SpelBots
  - Virtual Reality Scientists

**Readorium Alignment with Building Blocks of Science: Grade 5 - continued**

**Carolina Biological Supply Company: Building Blocks of Science: Grade 5 Earth and Space Systems**

Lesson 1 Earth's Place in Space	Lesson 2 Stars	Lesson 3 Sun, Earth, and Moon	Lesson 4 Earth's Systems	Lesson 5 Protecting Earth's Systems
<b>Vocabulary Lesson 1</b>	<b>Vocabulary Lesson 2</b>	<b>Vocabulary Lesson 3</b>	<b>Vocabulary Lesson 4</b>	<b>Vocabulary Lesson 5</b>
Galaxy, Gravity, Model Planet, Revolution, Scale model, Solar system, Star, Sun, System, Universe	Axis, Constellation, Daytime, Nighttime, Rotation, Shadow	Equator, Hemisphere, Moon, Moon phase, Neap tide, Season, Spring tide, Tide, Waning, Waxing	Atmosphere, Biosphere, Condensation, Evaporation, Geosphere, Glacier, Groundwater, Hydrosphere, Infiltration, Precipitation, Runoff, Water cycle	Environment, Natural resource. Vocabulary from previous lessons
<ul style="list-style-type: none"> <li>• <b>NGSS 5-ESS1-1:</b> Support an argument that the apparent brightness of the sun and stars is due to their relative distances from the Earth.</li> </ul>				
<ul style="list-style-type: none"> <li>• <b>NGSS 5-ESS1-2:</b> Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.</li> </ul>				
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>
<ul style="list-style-type: none"> <li>• Deep Space</li> </ul>		<ul style="list-style-type: none"> <li>• Rocks Rock!</li> </ul> <p style="text-align: center;"><b>Videos</b></p> <ul style="list-style-type: none"> <li>• Earthquakes</li> <li>• Tsunami Research</li> <li>• Core on the Floor</li> </ul>		<ul style="list-style-type: none"> <li>• Word Learning (CL-1, A-1 Introduction to Archeology)</li> </ul>
<ul style="list-style-type: none"> <li>• <b>NGSS 5-ESS2-1:</b> Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</li> </ul>				
<ul style="list-style-type: none"> <li>• <b>NGSS 5-ESS2-2:</b> Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.</li> </ul>				
<ul style="list-style-type: none"> <li>• <b>NGSS 5-ESS2-3:</b> Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</li> </ul>				
<b>Readorium Chapter Books</b>		<b>Readorium Articles</b>		<b>Readorium Class Lessons</b>
<ul style="list-style-type: none"> <li>• Changing Face of Earth</li> <li>• Earth's Systems</li> <li>• Exploring the Ocean's Depths</li> <li>• Invasive Species</li> <li>• Natural Hazards that Shape the Earth</li> <li>• Our Planet Earth</li> <li>• Polluting Our Earth</li> <li>• Powering Our Lives with Energy</li> </ul>		<ul style="list-style-type: none"> <li>• A Trip to Mars</li> <li>• Aurora Borealis: The Glowing Lights</li> <li>• Biggest Shadow of All: A Solar Eclipse</li> <li>• Catching a Comet</li> <li>• Challenge of Gravity, The</li> <li>• Future of the Sun, The</li> <li>• Our Galactic Neighborhood</li> <li>• Our Own Star, the Sun</li> <li>• Spirit &amp; Opportunity on Mars</li> <li>• Strange Stars</li> <li>• Treasures in the Sky</li> <li>• Voyager Space Probes</li> <li>• Where Did the Planets Come From?</li> </ul> <p style="text-align: center;"><b>Videos</b></p> <ul style="list-style-type: none"> <li>• Black Holes</li> </ul>		<ul style="list-style-type: none"> <li>• Click or Clunk (CL-1, A-1 Why Save Rainforests?)</li> <li>• Click or Clunk (CL-2, A-1 Illegal Wildlife Trade)</li> <li>• Click or Clunk (CL-2, A-2 Garbage Island)</li> </ul>
<ul style="list-style-type: none"> <li>• <b>NGSS 5-PS2-1:</b> Support an argument that the gravitational force exerted by Earth on objects is directed down.</li> </ul>				
<b>Readorium Chapter Books</b>		<b>Videos</b>		<b>Readorium Class Lessons</b>
<ul style="list-style-type: none"> <li>• Amusement Park Physics</li> <li>• Living in Space</li> </ul>		<ul style="list-style-type: none"> <li>• Amazing Teen Scientist</li> <li>• The Science of Movie Stunts</li> </ul>		

<ul style="list-style-type: none"> <li>• Making Movie Magic</li> <li>• Our Planet Earth</li> </ul>	<ul style="list-style-type: none"> <li>• Making Hovercrafts</li> <li>• How to Make a Cartesian Diver</li> <li>• Treasures in the Sky</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>NGGS 3-5-ETS1-2:</b> Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</li> </ul>		
<p style="text-align: center;"><b>Readorium Chapter Books</b></p> <ul style="list-style-type: none"> <li>• Computer Revolution</li> <li>• Improving Lives with Assistive Technology</li> <li>• Living in Space</li> <li>• Making Movie Magic</li> <li>• Olympic Champs: It's Not Just Luck – It's Physics!</li> <li>• On the Move with Transportation Technology</li> <li>• Powering Our Lives with Energy</li> <li>• Science - What's it All About?</li> <li>• Solving Crime with Forensics</li> <li>• Technology Changes Medicine</li> </ul>	<p style="text-align: center;"><b>Readorium Articles</b></p> <ul style="list-style-type: none"> <li>• Amazing Teen Scientist</li> <li>• Computer's Best Friend</li> <li>• Cool Beams!</li> <li>• All About Recycling</li> <li>• Shrimp Farming: A Shocking Tale</li> <li>• Why Are Some Hands More "Handy" Than Others?</li> </ul> <p style="text-align: center;"><b>Videos</b></p> <ul style="list-style-type: none"> <li>• RoboBees</li> <li>• Robotic Arms</li> <li>• SpelBots. The</li> <li>• Virtual Reality Scientists</li> </ul>	<p style="text-align: center;"><b>Readorium Class Lessons</b></p> <ul style="list-style-type: none"> <li>• Graphic Features (CL-2, A-1 -Siege Engines)</li> </ul>