

| Readorium Alignment with 3 <sup>rd</sup> Grade Amplify NYC Scope and Sequence   |   |  |
|---|---|--|
| Unit 1: Inheritance and Variation   |   |  |
| Readorium Books<br>By Standard  | Magazine Articles (A) and Science Alive<br>Videos (V) By Standard   | Teacher Resource Center<br>Classroom Strategy Lessons (CL)<br>with Articles (A) by Standard  |
| <b>NGSS: 3-LS1-1. From Molecules to Organisms: Structures and Processes:</b> Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.                       |   |  |
| <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> </ul>                                     | <ul style="list-style-type: none"> <li>• Bee Bee-havior (A)</li> <li>• Tigers and Lions! (A)</li> <li>• Why Dandelions Are Dandy (A)</li> <li>• Antarctic Krill (V)</li> <li>• Beluga Whales (V)</li> <li>• Emperor Penguins (V)</li> <li>• Make Way for Ducklings (V)</li> <li>• Polar Bears (V)</li> <li>• Sea Turtles (V)</li> </ul> | <ul style="list-style-type: none"> <li>• Inferring (CL-2, A-2 The Marabou Stork)</li> </ul>  |
| <b>NGSS: 3-LS2-1. Ecosystems: Interactions, Energy, and Dynamics:</b> Construct an argument that some animals form groups that help members survive.  |   |  |
| <ul style="list-style-type: none"> <li>• Buzzing About Bees and Wasps</li> <li>• The Secret Languages of Animals</li> </ul>   | <ul style="list-style-type: none"> <li>• Bee Bee-havior (A)</li> <li>• Antarctic Krill (V)</li> <li>• Monkey Business (V)</li> <li>•</li> </ul>   | <ul style="list-style-type: none"> <li>• Main Idea/Details (CL-1, A-1 Mantled Howler Monkeys)</li> <li>• Questioning (CL-1, A-1 White-Throated Capuchins)</li> </ul> |
| <b>NGSS: 3-LS3-1. Heredity: Inheritance and Variation:</b> Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. |   |  |
| <ul style="list-style-type: none"> <li>• Inheritance, It's All in the Genes</li> </ul>  | <ul style="list-style-type: none"> <li>• Biotechnology (A)</li> <li>• Hair Time! (A)</li> </ul>   | <ul style="list-style-type: none"> <li>• Main Idea/Details (CL-4, A-3 Why Does Hair Turns Grey?)</li> </ul>  |
| <b>NGSS: 3-LS3-2. Heredity: Inheritance and Variation:</b> Use evidence to support the explanation that traits can be influence by the environment.   |   |  |
| •   | •   | •  |
| <b>NGSS: 3-ESS2-1. Inheritance and Variation:</b> Represent data tables and graphical displays to describe typical weather conditions expected during a particular season.  |   |  |
| <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>• Weird and Wonderful Plants</li> </ul>             | <ul style="list-style-type: none"> <li>• Breathe Easier - Understanding Asthma (A)</li> <li>• Monkey Business (V)</li> <li>• Orangutan Copycats (V)</li> <li>• Evolution of the Peppered Moth (A)</li> </ul>  | •  |
| Unit 2: Interdependence   |   |  |
| Readorium Books<br>By Standard  | Magazine Articles (A) and Science Alive<br>Videos (V) By Standard   | Teacher Resource Center<br>Classroom Strategy Lessons (CL)<br>with Articles (A) by Standard  |
| <b>NGSS: 3-LS2-1. Ecosystems: Interactions, Energy, and Dynamics:</b> Construct an argument that some animals form groups that help members survive.  |   |  |
| <ul style="list-style-type: none"> <li>• Buzzing About Bees and Wasps</li> <li>• The Secret Languages of Animals</li> </ul>   | <ul style="list-style-type: none"> <li>• Bee Bee-havior (A)</li> <li>• Antarctic Krill (V)</li> <li>• Monkey Business (V)</li> </ul>  | <ul style="list-style-type: none"> <li>• Main Idea/Details (CL-1, A-1 Mantled Howler Monkeys)</li> </ul>   |

|  |  |  |
|--|--|--|
|  |  | <ul style="list-style-type: none"> <li>• Questioning (CL-1, A-1 White-Throated Capuchins)</li> </ul>   |
| <p><b>NGSS: 3-LS4-2: Biological Evolution: Unity and Diversity:</b> Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</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>• 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>• Why Are Some Hands More "Handy" Than Others? (A)</li> <li>• Weird Animal Defense Mechanisms (A)</li> <li>• Monkey Business (V)</li> <li>• Orangutan Copycats (V)</li> <li>• Beluga Whales (V)</li> <li>• Polar Bears (V)</li> <li>• Walruses (V)</li> <li>• Babies and Learning (V)</li> <li>• Antlers, Shells, and Beaks (V)</li> <li>• Evolution of the Peppered Moth (A)</li> </ul>  | <ul style="list-style-type: none"> <li>• Main Idea/Details (CL-3, A-1 How Much Water Does a Camel's Hump Hold?)</li> <li>• Main Idea/Details (CL-3, A-2 Can You Tell the Temperature by Listening to a Cricket Chirp?)</li> <li>• Main Idea/Details (CL-3, A-3 Why Do Geese Fly in a V-Shape?)</li> <li>• Word Learning (CL-2, A-1 What Makes a Bird a Bird?)</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>NGSS: 3-LS4-3: Biological Evolution: Unity and Diversity:</b> Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p>  |  |  |
| <ul style="list-style-type: none"> <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 Plants</li> </ul>   | <ul style="list-style-type: none"> <li>• How Spiders Catch Prey (A)</li> <li>• Living or Non-Living: You Decide (A)</li> <li>• Rocks Rock (A)</li> <li>• Weird Animal Defense Mechanisms (A)</li> <li>• Make Way for Ducklings (V)</li> <li>• Antarctic Krill (V)</li> <li>• Sea Turtles (V)</li> <li>• Beluga Whales (V)</li> <li>• Emperor Penguins (V)</li> <li>• Walruses (V)</li> <li>• Polar Bears (V)</li> <li>• Walruses (V)</li> <li>• Shrimp Farming- Shocking Tale (A)</li> </ul> | <ul style="list-style-type: none"> <li>• Inferring (CL-2, A-1 Invasive Species)</li> <li>• Questioning (CL-1, A-3 Sloths)</li> <li>• Word Learning (CL-2, A-3 Webbed Wonders)</li> <li>• Text Organization (CL-2, A-1 Inside Your Body)</li> <li>• Text Organization (CL-2, A-2 Disease Database )</li> <li>• Text Organization (CL-2, A-3 All About Asthma)</li> </ul>  |
| <p><b>NGSS: 3-ESS2-1: Earth's Systems:</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p>   |  |  |
| <ul style="list-style-type: none"> <li>• Weather Around the World</li> </ul>   | <ul style="list-style-type: none"> <li>• Aurora Borealis: The Glowing Lights (A)</li> <li>• Biggest Shadow of All: A Solar Eclipse (A)</li> <li>• When Lightning Strikes (V)</li> </ul>  | <ul style="list-style-type: none"> <li>• Author's Purpose (CL-1, A-1 Weather Scientist)</li> <li>• Inferring (CL-1, A-1 What Causes Seasons?)</li> </ul>   |
| <p><b>NGSS: 3-ESS3-1: Earth and Human Activity:</b> Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</p>  |  |  |
| <ul style="list-style-type: none"> <li>• Natural Hazards</li> </ul>  | <ul style="list-style-type: none"> <li>• Too Much Water! (A)</li> </ul>  | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <p><b>Unit 3: Change Over Time</b></p>   |  |  |
| <p><b>Readorium Books<br/>By Standard</b></p>  | <p><b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b></p>   | <p><b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b></p>  |

|  |  |  |
|--|--|--|
| <b>NGSS: 3-LS4-1: Biological Evolution: Unity and Diversity:</b> Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.                             |  |  |
| <ul style="list-style-type: none"> <li>• Birds of a Feather</li> <li>• Dependency of Life, The</li> <li>• Powering Our Lives with Energy</li> </ul>  | <ul style="list-style-type: none"> <li>• Rocks Rock (A)</li> <li>• Core on the Floor(V)</li> </ul>   | •  |
| <b>NGSS: 3-LS4-4: Biological Evolution: Unity and Diversity:</b> Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. |  |  |
| <ul style="list-style-type: none"> <li>• Invasive Species</li> </ul>   | <ul style="list-style-type: none"> <li>• Shrimp Farming-A Shocking Environmental Tale (A)</li> </ul>   | •  |
| <b>NGSS: 3-ESS2-1: Earth Systems:</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.  |  |  |
| <ul style="list-style-type: none"> <li>• Weather Around the World</li> </ul>   | <ul style="list-style-type: none"> <li>• Aurora Borealis: The Glowing Lights (A)</li> </ul>  | •  |
| <b>NGSS: 3-ESS2-2: Earth Systems:</b> Obtain and combine information to describe climates in different regions of the world  |  |  |
| <ul style="list-style-type: none"> <li>• Exploring the Ocean's Depths</li> <li>• Weather Around the World</li> </ul>   | <ul style="list-style-type: none"> <li>• Our Own Star, the Sun (A)</li> </ul>  | <ul style="list-style-type: none"> <li>• Graphic Features (CL_1, A-3 Climate Changing)</li> </ul>    |
| <b>NGSS: 3-ESS2-3: Earth Systems:</b> Plan and conduct an investigation to determine the connections between weather and water processes in Earth systems.   |  |  |
| <ul style="list-style-type: none"> <li>• Exploring the Ocean's Depths</li> <li>• Weather Around the World</li> </ul>   | <ul style="list-style-type: none"> <li>• Our Own Star, the Sun (A)</li> <li>• Aurora Borealis: The Glowing Lights (A)</li> </ul>                         | <ul style="list-style-type: none"> <li>• Graphic Features (CL_1, A-3 Climate Changing)</li> </ul>    |
| <b>Unit 4: Interacting Forces</b>  |  |  |
| <b>Readorium Books<br/>By Standard</b>   | <b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b>  | <b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b> |
| <b>NGSS: 3-PS2-1: Motion and Stability: Forces and Interactions:</b> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.                      |  |  |
| <ul style="list-style-type: none"> <li>• Amusement Park Physics</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>• Making Hovercrafts (A)</li> <li>• Simple Machines: Fun Facts and Riddles (A)</li> </ul>                         | •  |
| <b>NGSS: 3-PS2-2: Motion and Stability: Forces and Interactions:</b> Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.                    |  |  |
| <ul style="list-style-type: none"> <li>• Amusement Park Physics</li> <li>• Changing Face of Earth, The</li> <li>• Olympic Physics!</li> <li>• Unbalanced Forces</li> </ul>   | <ul style="list-style-type: none"> <li>• A River of Ice (A)</li> </ul>   | •  |
| <b>NGSS: 3-PS2-3: Motion and Stability: Forces and Interactions:</b> Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.      |  |  |
| <ul style="list-style-type: none"> <li>• Unbalanced Forces</li> <li>• Deep Space</li> </ul>  | <ul style="list-style-type: none"> <li>• Adventures of Messy Magnet (A)</li> <li>• Magnificent Magnets (A)</li> <li>• A Magnet Experiment (A)</li> </ul> | •  |
| <b>NGSS: 3-PS2-4: Motion and Stability: Forces and Interactions:</b> Define a simple design problem that can be solved by applying scientific ideas about magnets.   |  |  |
| <ul style="list-style-type: none"> <li>• Unbalanced Forces</li> </ul>  | <ul style="list-style-type: none"> <li>• Fishing for Staples: A Magnetic Drama</li> </ul>  | •  |

| Readorium Alignment with 4 <sup>th</sup> Grade Amplify NYC Scope and Sequence   |   |  |
|---|---|--|
| Unit 1: The Structure and Functions of Organisms  |   |  |
| Readorium Books<br>By Standard  | Magazine Articles (A) and Science Alive<br>Videos (V) By Standard   | Teacher Resource Center<br>Classroom Strategy Lessons (CL)<br>with Articles (A) by Standard  |
| <p><b>NGSS: 4-PS4-2. Waves and their Applications in Technologies for Information Transfer:</b> Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.</p>  |   |  |
| <ul style="list-style-type: none"> <li>• Good Vibes - Making Waves with Sound</li> <li>• The Science of Music</li> </ul>  | <ul style="list-style-type: none"> <li>• A River of Ice (A)</li> <li>• Tsunami Research (V)</li> </ul>  | <ul style="list-style-type: none"> <li>• Inferring (CL-1, A-3 Why Is the Sky Blue?)</li> <li>• Text Organization (CL-1, A-1 What Is a Satellite?)</li> </ul>   |
| <p><b>NGSS: 4-LS1-1. From Molecules to Organisms: Structures and Processes:</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</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>• Invasive Species</li> <li>• Exploring Ecosystems</li> <li>• How We Learn</li> <li>• Life and Death in the Wild</li> <li>• Our Gross World</li> <li>• The Secret Languages of Animals</li> <li>• Smarter than you think</li> <li>• Spider Stories</li> <li>• Weird and Wonderful Plants</li> </ul> | <ul style="list-style-type: none"> <li>• Amazing Water Bear (A)</li> <li>• Bee Bee-havior (A)</li> <li>• Beneath the Fin (A)</li> <li>• Carnivorous Dinosaurs (A)</li> <li>• Cicada Swarm (A)</li> <li>• Friendship of a Goby and a Shrimp (A)</li> <li>• Hair Time! (A)</li> <li>• How Spiders Catch Prey (A)</li> <li>• Science of Jelly Beans (A)</li> <li>• Venus Flytrap: A Meat-Eating Plant (A)</li> <li>• Walruses (V)</li> <li>• Wonder Fabrics - Things that Can't get Wet!(A)</li> <li>• Why Dandelions Are Dandy (A)</li> <li>• Batty for Bats (V)</li> <li>• Emperor Penguins (V)</li> <li>• Sea Turtles (V)</li> <li>• Bird Brains (V)</li> <li>• Antlers, Shells, &amp; Beaks (V)</li> <li>• Leaf Cutter Ants (V)</li> <li>• Social Insects (V)</li> <li>• Picking Your Brain (V)</li> <li>• How Do We Think?(V)</li> <li>• Just by a Whisker (V)</li> <li>• Antarctic Krill (V)</li> <li>• Polar Bears (V)</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>• Word Learning (CL-2, A-1 What Makes a Bird a Bird)</li> <li>• Word Learning (CL-2, A-2 What is a Waterfowl?)</li> <li>• Word Learning (CL-2, A-3 Webbed Wonders)</li> <li>• Text Organization (CL-2, A-1 Inside Your Body)</li> <li>• Text Organization (CL-2, A-2 Disease Database )</li> <li>• Text Organization (CL-2, A-3 All About Asthma)</li> </ul> |
| <p><b>NGSS: 4-LS1-2. From Molecules to Organisms: Structures and Processes:</b> Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.</p>   |   |  |
| <ul style="list-style-type: none"> <li>• Birds of a Feather</li> <li>• Buzzing About Bees and Wasps</li> <li>• How We Learn</li> <li>• Improving Lives with Assistive Technology</li> <li>• Making Movie Magic</li> </ul>   | <ul style="list-style-type: none"> <li>• Bee Bee-havior (A)</li> <li>• Beneath the Fin (A)</li> <li>• Brain (The)! (A)</li> <li>• Fireflies of the Ocean (A)</li> <li>• How Do We Think? (A)</li> </ul>   | <ul style="list-style-type: none"> <li>• Main Idea and Details (CL-4, A-1, Does Your Heart Stop When You Sneeze?)</li> <li>• Main Idea and Details (CL-4, A-2, Why Do We Yawn?)</li> </ul>   |

|  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• Secret Languages of Animals</li> <li>• Smarter Than You think</li> <li>• Weird and Wonderful Plants</li> </ul>  | <ul style="list-style-type: none"> <li>• Interesting and Funny Animal Relationships (A)</li> <li>• Raise Your Voice (A)</li> <li>• Invasion of Earthworms! (V)</li> <li>• Sweet Treat (A)</li> <li>• Twin Fascination (A)</li> <li>• Tigers and Lions! (A)</li> <li>• Why Are Some Hands More "Handy" Than Others? (A)</li> <li>• Venus Flytrap: A Meat-Eating Plant (The) (A)</li> <li>• Babies and Learning (V)</li> <li>• Picking Your Brain (V)</li> <li>• Leaf Cutter Ants (V)</li> <li>• Sea Turtles (V)</li> <li>• Social Insects (V)</li> <li>• Batty for Bats (V)</li> <li>• Beluga Whales (V)</li> <li>• Bird Brains (V)</li> <li>• Robo Bees (V)</li> <li>• The SpelBots (V)</li> </ul> |  |
| <b>Unit 2: Transfer of Energy and Information</b>  |  |  |
| <b>Readorium Books<br/>By Standard</b>   | <b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b>  | <b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b>   |
| <b>NGSS: 4-PS3-2: Energy:</b> Make observations to provide evidence that energy is conserved as it is transferred and/or converted from one form to another.   |  |  |
| <ul style="list-style-type: none"> <li>• Good Vibes – Making Waves with Sound</li> <li>• Improving Lives with Assistive Technology</li> <li>• Making Movie Magic</li> <li>• On the Move with Transportation Technology</li> <li>• Powering Our Lives with Energy</li> <li>• Science of Music, The</li> </ul> | <ul style="list-style-type: none"> <li>• Computer's Best Friend (A)</li> <li>• Cool Beams! (A)</li> <li>• The Science of Movie Stunts (A)</li> <li>• The Water Cycle (A)</li> <li>• Why Are Some Hands More "Handy" Than Others? (A)</li> <li>• Aurora Borealis: The Glowing Lights (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 Satellites in Outer Space)</li> <li>• Text Organization (CL-1, A-3 How Satellites Work)</li> </ul>    |
| <b>NGSS: 4-PS3-4: Energy:</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.   |  |  |
| <ul style="list-style-type: none"> <li>• Good Vibes – Making Waves with Sound</li> </ul>   | <ul style="list-style-type: none"> <li>• Raise Your Voice (A)</li> <li>• Making Hovercrafts (A)</li> <li>• Pig Poop Fuel (V)</li> </ul>  | <ul style="list-style-type: none"> <li>• Main Idea and Details (CL-2, A-1, The History of Flight)</li> <li>• Graphic Features (CL-2, A-1 War Machines-Siege Engines)</li> <li>• Questioning (CL-2, A1 Crazy Careers in Science)</li> </ul> |
| <b>NGSS: 3-LS4-3: Heredity: Inheritance and Variation:</b> Generate and compare multiple solutions that use patterns to transfer information.  |  |  |
| <ul style="list-style-type: none"> <li>• Beetlemania</li> <li>• Birds of a Feather</li> <li>• Dependency of Life, The</li> <li>• Exploring Ecosystems</li> </ul>   | <ul style="list-style-type: none"> <li>• How Spiders Catch Prey (A)</li> <li>• Living or Non-Living: You Decide (A)</li> <li>• Rocks Rock (A)</li> <li>• Weird Animal Defense Mechanisms (A)</li> </ul>  | <ul style="list-style-type: none"> <li>• Inferring (CL-2, A-1 Invasive Species)</li> <li>• Questioning (CL-1, A-3 Sloths)</li> </ul>   |

|   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>• Invasive Species</li> <li>• Spider Stories</li> <li>• Weird and Wonderful Plants</li> </ul>  | <ul style="list-style-type: none"> <li>• Make Way for Ducklings (V)</li> <li>• Antarctic Krill (V)</li> <li>• Sea Turtles (V)</li> <li>• Beluga Whales (V)</li> <li>• Emperor Penguins (V)</li> <li>• Walruses (V)</li> <li>• Polar Bears (V)</li> <li>• Walruses (V)</li> <li>• Shrimp Farming- Shocking Tale (A)</li> </ul> | <ul style="list-style-type: none"> <li>• Word Learning (CL-2, A-3 Webbed Wonders)</li> <li>• Text Organization (CL-2, A-1 Inside Your Body)</li> <li>• Text Organization (CL-2, A-2 Disease Database )</li> <li>• Text Organization (CL-2, A-3 All About Asthma)</li> </ul>                       |
| <b>Unit 3: Energy, Motion, and Collisions</b>   |   |   |
| <b>Readorium Books<br/>By Standard</b>  | <b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b>   | <b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b>  |
| <b>NGSS: 4-PS3-1: Energy:</b> Use evidence to construct an explanation relating the speed of an object to the energy of that object.  |   |   |
| <ul style="list-style-type: none"> <li>• Amusement Park Physics</li> <li>• Olympic Champs: It's Not Just Luck – It's Physics!</li> </ul>  | <ul style="list-style-type: none"> <li>•</li> </ul>   | <ul style="list-style-type: none"> <li>• Main Idea and Details (CL-2, A-1, The History of Flight)</li> <li>• Text Organization (CL-1, A-1, Satellites)</li> <li>• Text Organization (CL-1, A-2 Satellites in Outer Space)</li> <li>• Text Organization (CL-1, A-3 How Satellites Work)</li> </ul> |
| <b>NGSS: 4-PS3-3: Energy:</b> Ask questions and predict outcomes about the changes in energy that occur when objects collide.   |   |   |
| <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> </ul>  | <ul style="list-style-type: none"> <li>•</li> </ul>   | <ul style="list-style-type: none"> <li>•</li> </ul>   |
| <b>Unit 4: Changes on Earth's Surface</b>   |   |   |
| <b>Readorium Books<br/>By Standard</b>  | <b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b>   | <b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b>  |
| <b>NGSS: 4-PS4-1: Waves and their Applications in Technologies for Information Transfer:</b> Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. |   |   |
| <ul style="list-style-type: none"> <li>• Good Vibes - Making Waves with Sound</li> <li>• The Science of Music</li> </ul>  | <ul style="list-style-type: none"> <li>• A River of Ice (A)</li> <li>• Tsunami Research (V)</li> </ul>  | <ul style="list-style-type: none"> <li>• Inferring (CL-1, A-3 Why Is the Sky Blue?)</li> <li>• Text Organization (CL-1, A-1 What Is a Satellite?)</li> </ul>  |
| <b>NGSS: 4-ESS1-1: Earth's Place in the Universe:</b> Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.                       |   |   |
| <ul style="list-style-type: none"> <li>• Changing Face of Earth, The</li> </ul>   | <ul style="list-style-type: none"> <li>• Rocks Rock! (A)</li> <li>• Earthquakes (V)</li> <li>• Tsunami Research (V)</li> <li>• Core on the Floor(V)</li> </ul>  | <ul style="list-style-type: none"> <li>• Word Learning (CL-1, A-1 Introduction to Archeology)</li> </ul>  |
| <b>NGSS: 4-ESS2-1: Earth's Systems:</b> Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.                                 |   |   |
| <ul style="list-style-type: none"> <li>• Changing Face of Earth,</li> <li>• Earth's Systems</li> </ul>  | <ul style="list-style-type: none"> <li>• Core on the Floor(V)</li> <li>• Our Debris Filling the Ocean(V)</li> </ul>   | <ul style="list-style-type: none"> <li>• Word Learning (CL-1, A-2 How Archeologists Work)</li> </ul>  |

| Unit 5: Impacts of Natural Processes   |  |  |
|--|--|--|
| Readorium Books By Standard  | Magazine Articles (A) and Science Alive Videos (V) By Standard   | Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard  |
| <b>NGSS: 4-PS4-1: Waves and their Applications in Technologies for Information Transfer:</b> Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.                                      |  |  |
| <ul style="list-style-type: none"> <li>• Good Vibes - Making Waves with Sound</li> <li>• The Science of Music</li> </ul>   | <ul style="list-style-type: none"> <li>• A River of Ice (A)</li> <li>• Tsunami Research (V)</li> </ul>   | <ul style="list-style-type: none"> <li>• Inferring (CL-1, A-3 Why Is the Sky Blue?)</li> <li>• Text Organization (CL-1, A-1 What Is a Satellite?)</li> </ul>   |
| <b>NGSS: 4-ESS2-2: Earth's Systems:</b> Analyze and interpret data from maps to describe patterns of Earth's features.   |  |  |
| <ul style="list-style-type: none"> <li>• Changing Face of Earth,</li> <li>• The Invasive Species</li> <li>• Weather Around the World</li> </ul>  | <ul style="list-style-type: none"> <li>• How Can You Become an Astronaut? (A)</li> <li>• Catching a Comet (A)</li> <li>• Spirit &amp; Opportunity on Mars (A)</li> <li>• The Challenge of Gravity (A)</li> <li>• Earthquakes (V)</li> </ul>  | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <b>NGSS: 4-ESS3-1: Earth and Human Activity:</b> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.  |  |  |
| <ul style="list-style-type: none"> <li>• Earth's Systems</li> <li>• Exploring the Ocean's Depths</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>• The Water Cycle (A)</li> <li>• All about Recycling (A)</li> <li>• Biotechnology (A)</li> <li>• Science of Movie Stunts (A)</li> <li>• A Sweet Treat (A)</li> <li>• Pig Poop Fuel (V)</li> <li>• Just by a Whisker (V)</li> <li>• Robo Bees (V)</li> <li>• Robotic Arms (V)</li> </ul> | <ul style="list-style-type: none"> <li>• Text Organization (CL-1, A-1, Satellites)</li> <li>• Text Organization (CL-1, A-2 Satellites in Outer Space)</li> <li>• Text Organization (CL-1, A-3 How Satellites Work)</li> <li>•</li> </ul> |
| <b>NGSS: 4-ESS3-2: Earth and Human Activity</b> Generate and compare multiple solutions to reduce the impacts of natural Earth processes.  |  |  |
| <ul style="list-style-type: none"> <li>• Buzzing About Bees and Wasps</li> <li>• Changing Face of Earth, The</li> <li>• Invasive Species</li> <li>• Natural Hazards that Shape the Earth</li> <li>• Our Planet Earth</li> <li>• Polluting Our Earth</li> </ul> | <ul style="list-style-type: none"> <li>• Earthquakes (V)</li> <li>• Tsunami Research (V)</li> <li>• Pig Poop Fuel (V)</li> </ul>   | <ul style="list-style-type: none"> <li>•</li> </ul>  |

| Readorium Alignment with 5 <sup>th</sup> Grade Amplify NYC Scope and Sequence  |  |   |
|--|--|---|
| Unit 1: Physical and Chemical Changes  |  |   |
| Readorium Books By Standard  | Magazine Articles (A) and Science Alive Videos (V) By Standard   | Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard         |
| <b>NGSS: 5-PS1-1. Matter and Its Interactions:</b> Develop a model to describe that matter is made of particles too small to be seen.  |  |   |
| <ul style="list-style-type: none"> <li>• Good Vibes – Making Waves with Sound</li> <li>• Food Chemistry</li> <li>• Making Movie Magic</li> </ul>   | <ul style="list-style-type: none"> <li>• Matter Matters! (A)</li> <li>• Science of Jelly Beans (A)</li> <li>• Biotechnology (A)</li> <li>• A Sweet Treat (A)</li> <li>• How to Make a Volcano out of Coke and Mentos (A)</li> <li>• How to Make Your Own Slime (A)</li> <li>• How to Make Elephant Toothpaste (A)</li> <li>• Virtual Reality Scientists (V)</li> </ul> | <ul style="list-style-type: none"> <li>•</li> </ul>   |
| <b>NGSS: 5-PS1-2. Matter and Its Interactions:</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 amount of matter is conserved. |  |   |
| <ul style="list-style-type: none"> <li>• There are no Readorium books on this topic</li> </ul>   | <ul style="list-style-type: none"> <li>• Make Your Own Rock Candy (A)</li> <li>• Matter Matters! (A)</li> <li>• All About Recycling (A)</li> <li>• Rocks Rock!(A)</li> </ul>   | <ul style="list-style-type: none"> <li>• Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul> |
| <b>NGSS: 5-PS1-3. Matter and Its Interactions:</b> Make observations and measurements to identify materials based on their properties  |  |   |
| <ul style="list-style-type: none"> <li>• Food Chemistry</li> <li>• Solving Crimes with Forensics</li> </ul>  | <ul style="list-style-type: none"> <li>• Crime Scene Science (A)</li> <li>• Matter Matters! (A)</li> <li>• Wonder Fabrics (A)</li> <li>• Cool Beams! (A)</li> <li>• How Do We Think? (A)</li> <li>• How to Make a Volcano (Coke and Mentos) (A)</li> <li>• How to Make Your Own Slime (A)</li> </ul>   | <ul style="list-style-type: none"> <li>•</li> </ul>   |
| <b>NGSS: 5-PS1-4. Matter and Its Interactions:</b> Conduct an investigation to determine whether the mixing of two or more substances results in new substances.   |  |   |
| <ul style="list-style-type: none"> <li>• Food Chemistry</li> <li>• Solving Crimes with Forensics</li> </ul>  | <ul style="list-style-type: none"> <li>• Excuse Me, But Burping is Natural (A)</li> <li>• Making a Potato Battery (A)</li> <li>• Make Your Own Rock Candy (A)</li> <li>• How to Make Elephant Toothpaste (A)</li> <li>• The Science of Movie Stunts (A)</li> <li>• How to Make a Volcano (Coke and Mentos) (A)</li> <li>• How to Make Your Own Slime(A)</li> </ul>     | <ul style="list-style-type: none"> <li>• Inferring (CL-2, A-3 Cafeteria Chemistry)</li> </ul> |
| Unit 2: Matter and Energy in Ecosystem   |  |   |
| Readorium Books By Standard  | Magazine Articles (A) and Science Alive Videos (V) By Standard   | Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard         |



|   |  |  |
|---|--|--|
| <b>NGSS: 5-PS1-1: Matter and Its Interactions:</b> Develop a model to describe that matter is made of particles too small to be seen.   |  |  |
| <ul style="list-style-type: none"> <li>• Good Vibes – Making Waves with Sound</li> <li>• Food Chemistry</li> <li>• Making Movie Magic</li> </ul>  | <ul style="list-style-type: none"> <li>• Matter Matters! (A)</li> <li>• Science of Jelly Beans (A)</li> <li>• Biotechnology (A)</li> <li>• A Sweet Treat (A)</li> <li>• How to Make a Volcano out of Coke and Mentos (A)</li> <li>• How to Make Your Own Slime (A)</li> <li>• How to Make Elephant Toothpaste (A)</li> <li>• Virtual Reality Scientists (V)</li> </ul> | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <b>NGSS: 5-PS3-1: Energy:</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.   |  |  |
| <ul style="list-style-type: none"> <li>• Dependency of Life, The</li> <li>• Weird and Wonderful World of Plants</li> </ul>  | <ul style="list-style-type: none"> <li>• Biotechnology (A)</li> <li>• A Sweet Treat (A)</li> </ul>   | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <b>NGSS: 5-LS1-1: From Molecules to Organisms: Structures and Processes:</b> Support an argument that plants get the materials they need for growth chiefly from air and water.   |  |  |
| <ul style="list-style-type: none"> <li>• Dependency of Life, The</li> <li>• Weird and Wonderful World of Plants</li> </ul>  | <ul style="list-style-type: none"> <li>• Splash (A)</li> <li>• How Plants Survive: Part 1(A)</li> <li>• How Plants Survive: Part 2 (A)</li> </ul>  | <ul style="list-style-type: none"> <li>• Graphic Features (CL-1, A-2 Greenhouse Effect)</li> </ul>   |
| <b>NGSS: 5-LS2-1: Ecosystems: Interactions, Energy, and Dynamics:</b> Develop a model to describe the movement of matter among plants (producers), animals (consumers), decomposers, and the environment.   |  |  |
| <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(A)</li> <li>• Splash (A)</li> <li>• Leaf Cutter Ants (V)</li> <li>• Invasion of the Earthworms! (V)</li> <li>• Virtual Reality Scientists (V)</li> <li>• Core on the Floor(V)</li> <li>• Just by a Whisker (V)</li> </ul>  | <ul style="list-style-type: none"> <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> |
| <b>Unit 3: Earth Systems Science</b>  |  |  |
| <b>Readorium Books<br/>By Standard</b>  | <b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b>  | <b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b>   |
| <b>NGSS: 5-PS1-1: Matter and Its Interactions</b> Develop a model to describe that matter is made of particles too small to be seen.  |  |  |
| <ul style="list-style-type: none"> <li>• Good Vibes – Making Waves with Sound</li> <li>• Food Chemistry</li> <li>• Making Movie Magic</li> </ul>  | <ul style="list-style-type: none"> <li>• Matter Matters! (A)</li> <li>• Science of Jelly Beans (A)</li> <li>• Biotechnology (A)</li> <li>• A Sweet Treat (A)</li> <li>• How to Make a Volcano out of Coke and Mentos (A)</li> <li>• How to Make Your Own Slime (A)</li> <li>• How to Make Elephant Toothpaste (A)</li> <li>• Virtual Reality Scientists (V)</li> </ul> | <ul style="list-style-type: none"> <li>•</li> </ul>  |

|  |   |  |
|--|---|--|
| <p><b>NGSS: 5-PS2-1: Motion and Stability: Forces and Interactions:</b> Support an argument that the gravitational force exerted by Earth on objects is directed down.</p>   |   |  |
| <ul style="list-style-type: none"> <li>• Amusement Park Physics</li> <li>• Living in Space</li> <li>• Making Movie Magic</li> <li>• Our Planet Earth</li> </ul>  | <ul style="list-style-type: none"> <li>• Amazing Teen Scientist (A)</li> <li>• The Science of Movie Stunts (A)</li> <li>• Making Hovercrafts (A)</li> <li>• How to Make a Cartesian Diver (A)</li> <li>• Treasures in the Sky (A)</li> </ul>  | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <p><b>NGSS: 5-ESS2-1: Earth's Systems:</b> Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</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>• All about Recycling (A)</li> <li>• Rocks Rock! (A)</li> <li>• When Lightning Strikes (V)</li> <li>• What is Sea Ice and Why is it Shrinking?(V)</li> <li>• Earthquakes (V)</li> </ul>   | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <p><b>NGSS: 5-ESS2-2: Earth's Systems:</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.</p>  |   |  |
| <ul style="list-style-type: none"> <li>• Earth's Systems</li> </ul>  | <ul style="list-style-type: none"> <li>• Amazing Water Bear (A)</li> <li>• The Water Cycle (A)</li> </ul>   | <ul style="list-style-type: none"> <li>•</li> </ul>  |
| <p><b>NGSS: 5-ESS3-1: Earth and Human Activity:</b> Obtain and combine information about ways individual communities use science ideas to protect Earth's resources and environment.</p>   |   |  |
| <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>• All About Recycling (A)</li> <li>• A Computer's Best Friend (A)</li> <li>• Earthquakes (V)</li> <li>• Robotic Arms (V)</li> <li>• Debris Filling the Ocean(V)</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> |
| <p><b>Unit 4: Stars and the Solar System</b></p>   |   |  |
| <p><b>Readorium Books<br/>By Standard</b></p>  | <p><b>Magazine Articles (A) and Science Alive<br/>Videos (V) By Standard</b></p>  | <p><b>Teacher Resource Center<br/>Classroom Strategy Lessons (CL)<br/>with Articles (A) by Standard</b></p>  |
| <p><b>NGSS: 5-ESS1-1: Earth's Place in the Universe:</b> Support an argument that differences in the apparent brightness of the Sun compared to other stars is due to their relative distances from Earth</p>  |   |  |
| <ul style="list-style-type: none"> <li>• Deep Space</li> </ul>   | <ul style="list-style-type: none"> <li>• A Trip to Mars (A)</li> <li>• Spirit &amp; Opportunity on Mars (A)</li> <li>• Aurora Borealis: The Glowing Lights (A)</li> <li>• Catching a Comet (A)</li> <li>• The Biggest Shadow of All: A Solar Eclipse (A)</li> <li>• Our Own Star, the Sun (A)</li> <li>• Strange Stars (A)</li> <li>• Where Did the Planets Come From?(A)</li> <li>• Treasures in the Sky(A)</li> <li>• Our Galactic Neighborhood(A)</li> <li>• The Future of the Sun(A)</li> </ul> | <ul style="list-style-type: none"> <li>•</li> </ul>  |

|  |   |   |
|--|---|---|
|  | <ul style="list-style-type: none"> <li>• The Challenge of Gravity(A)</li> <li>• Voyager Space Probes(A)</li> <li>• Black Holes (V)</li> </ul>   |   |
| <p><b>NGSS: 5-ESS1-2: Earth's Place in the Universe:</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.</p> |   |   |
| •  | <ul style="list-style-type: none"> <li>• Our Own Star, the Sun (A)</li> <li>• Treasures in the Sky (A)</li> <li>• Our Galactic Neighborhood (A)</li> <li>• The Future of the Sun (A)</li> </ul> | • |