Readorium Alignment with 6th Grade Amplify NYC Scope and Sequence		
Unit 1: Electricity and Magnetism		
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**
NGSS: MS-PS2-3. Forces and Interactions: Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.		
• Sea Floor Spreading	• The Many Uses of Submarines (A)	•
NGSS: MS-PS2-5. Forces and Interactions: Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.		
• Sea Floor Spreading • Total Lunacy • Scientific Method	•	•
NGSS: MS-PS3-6. Electric Circuits: Make observations to provide evidence that energy can be transferred by electric currents.		
• Lights Sound Action • Sports Physics	• Weapons Older than Dirt: The History of Some of the World's Most Ancient Weapons (A) • Machines of Ancient War: The Physics and History of Siege Engines (A) • Sounds and Hearing • Cool Beams (A)	•
Unit 2: Engineering and Energy Transformation		
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**
NGSS: MS-PS1-6: Chemical Reactions: Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy during a chemical and/or physical process		
• The Formation of Volcanoes	• The Science of Movie Stunts (A)	•
NGSS: MS-PS3-3: Energy: Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.		
• Lights Sound Action	• Hot Stuff: Heat on the Move (A)	•
NGSS: MS-PS3-4: Energy: Plan and conduct an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the temperature of the sample of matter.		
• Lights Sound Action	• Space Junk: Are We Trashing our Solar System? (A)	•
Unit 3: Ecosystems		
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**
NGSS: MS-LS2-1: Interdependence: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.		
• The Importance of Coral Reefs • Desert Biomes • Arctic Tundra: A Harsh Place to Live • Prairie Ecosystems • The Scientific Method	• Why Some Animals Eat their Own Kind? A • Invasive Species (A) • Pirate Spiders(A) • Animal Cannibals (A) • A Spider with Deadly Aim (A) • Spitting Spiders (A) • Looks like an Ant... Or Does It? (A) • The Venomous Sea Wasp (A)	• Making Connections & • Synthesizing (CL-3, A-1 The Lynx and the Hare: Predator-Prey Relationships) • Context Clues CL-3 A-2, What Happens When Something Goes Extinct?)

	• The Hagfish (A) • Keeping an Aquarium} (A) • A Weird Animal: The Binturong (A) • Carnivorous Dinosaurs (A) • Bones Tell the Story (A) • Getting DNA Out of Ancient Fossils (A) • Selective Breeding, Genetic Engineering, and Pedigrees (A) • Ant Activists (V) • Birds Strut their Stuff(V) • Make Way for Ducklings(V) • Orangutans See, Orangutans Do?(V) • Snaking Around(V) • Squid: Underwater Masters of Disguise (V) • Taking the Bite Out of Mosquito Bites (V) • Totally Batty(V)	• Graphic Features (CL-1, A-1 What is Happening to the Bluefin Tuna?) • Inferring (CL-1, A-2 Animal Cannibals) • Print Features CL-3 A-1 Home Sweet Home: Dens and Other Shelters) • Monitor for Meaning (CL-1, A-1 Lizard Lifestyles) • Monitor for Meaning CL-2, A-1 Great Barrier Reef) • Monitor for Meaning (CL-2, A-2 Is that Popcorn? No, it's a Binturaong! • Inferring (CL-3 A-1 Meet a Scientist)
NGSS: MS-LS2-2: Interdependent Relationships in Ecosystems: Construct an explanation that predicts patterns of interactions among organisms in a variety of ecosystems.		
• Arctic Tundra: A Harsh Place to Live • Prairie Ecosystems • Surviving in Nature	•	• Print Features (CL-1, A-1 Symbiosis: Living Together and Loving It) • Monitor for Meaning CL-2, A-1 Great Barrier Reef) • Monitor for Meaning (CL-2, A-2 Is that Popcorn? No, it's a Binturong!
NGSS: MS-LS2-3: Matter and Energy in Organisms and Ecosystems: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.		
• Prairie Ecosystems	• Artificial Reefs: How and Why We Build Them (A) • Garbage Island (A)	• Determining Importance (CL-2, A-2 Garbage Island) • Monitor for Meaning (CL-1, A-2 Reflections on Dead Wood)
NGSS: MS-LS2-4: Matter and Energy in Organisms and Ecosystems: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.		
• Desert Biomes • Prairie Ecosystems • Rainforests	• Artificial Reefs: How and Why We Build Them (A) • Crime-Solving Insects (A) • Garbage Island (A) • How Plants Trick Animals (A) • Life Inside Deep Caves (A) • Parasites: Nature's Thieves (A) • The Illegal Wildlife Trade (A) • What Happens When Something Goes Extinct? (A) • Shrimp Farming: A Shocking Environment (A) • Evolution of the Peppered Moth (A)	• Context Clues (CL-1, A-1 Life Inside Deep Caves) • Context Clues CL-3 A-2 When Something Goes Extinct) • Determining Importance • (CL-2, A-2 Garbage Island) • Graphic Features (CL-1, A-1 What is Happening to the Bluefin Tuna?) • Making Connections & Synthesizing (CL-3, A-1 The Lynx and the Hare: Predator-Prey Relationships) • Monitor for Meaning (CL-3 A-2 A Wildlife Trade) • Print Features CL-2, A-1 Bats)

		• Print Features (CL-2, A-2 Plants that Trick Animals!) (CL-2, A-2 Garbage Island)
NGSS: MS-LS2-5: Interdependent Relationships in Ecosystems: Evaluate competing design solutions for maintaining biodiversity and protecting ecosystem stability.		
• Surviving in Nature	•	•
Unit 4: Investigating Weather and Climate		
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**
NGSS: MS-PS1-7: Matter and Energy in Organisms and Ecosystems: Use evidence to illustrate that density is a property that can be used to identify samples of matter.		
• Chemical and Physical Properties of Matter 1 • Our Bodies: The Most Marvelous Machines	• Artificial Blood! (A) • Deadly Mushrooms (A) • The Science of Jelly Beans(A) • All About Recycling(A) • A Sweet Treat(A)	•
NGSS: MS-ESS2-4: Earth's Systems: Develop a model to describe the cycling of water through Earth's systems driven by energy from the Sun and the force of gravity.		
• Weather • Total Lunacy	•	•
NGSS: MS-ESS2-5: Interdependence: Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.		
• Weather • Form Mountains and Deserts	•	•
NGSS: MS-ESS2-6: Weather and Climate: describe how unequal heating and rotation of Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.		
• Desert Biomes • Earth in Motion • Life in the Tundra • Rainforests • Weather	•	•
Unit 5: Human Impact on Earth's Climate		
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**
NGSS: MS-ESS3-2: Human Impact: Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.		
• Coral Reefs • Learning from Natural Disasters • Weather	• Space Junk: Are We Trashing our Solar System? (A)	• Print Features CL-3 A-2 Flying Into a Hurricane)
NGSS: MS-ESS3-3: Human Impact: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.		
• Pollution • Prairie Ecosystems • Rainforests • Scientific Method	• Bones Tell the Story (A) • Greenhouse Gases (A) • Global Temperatures (A) • Let's Save Our Planet!(A)	• Graphic Features (CL-1, A-2 What Happened to the Blue Whale?)
NGSS: MS-ESS3-5: Human Impact: Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century		

• Earth in Motion • Weather • Pollution • Rainforests •	• Global Temperatures (A) • Chilling Facts about a Burning Issue: Climate Change Quiz- Pt. 1 • Chilling Facts about a Burning Issue: Climate Change Quiz- Pt. 2 • It's Too Hot! (A)	•

Readorium Alignment with 7th Grade Amplify NYC Scope and Sequence		
Unit 1: Structure and Properties of Matter		
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**
NGSS: MS-PS1-1. Structure and Properties of Matter: Develop models to describe the atomic composition of simple molecules and extended structures.		
• Chemical and Physical Properties of Matter 1 • Chemical and Physical Properties of Matter 2	• Matter Matters(A) • Crime Scene Science(A)	• Determining Importance (CL-3, A-2 Crystals)
NGSS: MS-PS1-4. Structure and Properties of Matter: Develop a model that predicts and describes changes in particle motion, temperature, and phase (state) of a substance when thermal energy is added or removed.		
• Chemical and Physical Properties of Matter 1 • Chemical and Physical Properties of Matter 2 • Formation of Volcanoes • Lights Sound Action • Plate Tectonics • Weather	• Splash (A) • The Water Cycle (A)	•
NGSS: MS-PS1-7. Density of Matter: Use evidence to illustrate that density is a property that can be used to identify samples of matter.		
• Chemical and Physical Properties of Matter 1 • Chemical and Physical Properties of Matter 2 • Formation of Volcanoes • Lights Sound Action • Plate Tectonics • Weather	• Splash (A) • The Water Cycle (A)	•
NGSS: MS-PS1-8. Substances and Mixtures: Plan and conduct an investigation to demonstrate that mixtures are combinations of substances		
• Chemical and Physical Properties of Matter 1 • Chemical and Physical Properties of Matter 2 • Formation of Volcanoes • Lights Sound Action • Plate Tectonics • Weather	• Splash (A) • The Water Cycle (A)	•
Unit 2: Changing Properties of Matter		
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**
NGSS: MS-PS1-2: Structure and Properties of Matter: Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.		
• Chemical and Physical Properties of Matter 1	• Cafeteria Chemistry: Play with Your Food & Astound Friends (A)	• Creating Sensory Images (CL-1, A-2 Kitchen Chemistry)

• Chemical and Physical Properties of Matter 2	• Crystals (A) • Kitchen Chemistry (A) • The Cool World of Chemistry (A) • Excuse me, Burping is Natural (A)	• Determining Importance (CL-3, A-2 Crystals)
NGSS: MS-PS1-3: Structure and Properties of Matter: Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.		
• Pollution	•	•
NGSS: MS-PS1-5: Chemical Reactions: Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.		
•	• Gold - The Magnificent Metal (A) • Crystals (A)	•
NGSS: MS-PS1-6: Chemical Reactions: Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.		
• The Formation of Volcanoes	• The Science of Movie Stunts(A)	•
NGSS: MS-LS1-7: Matter and Energy in Organisms and Ecosystems: Develop a model to describe how food is rearranged through chemical reactions to release energy during cellular respiration and/or forming new molecules that support growth and/or release energy as this matter moves through an organism.		
• Chemical and Physical Properties of Matter 1 • Our Bodies: The Most Marvelous Machines	• Artificial Blood! (A) • Deadly Mushrooms (A) • The Science of Jelly Beans(A) • All About Recycling(A) • A Sweet Treat(A)	•
Unit 3: Structures of Life		
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**
NGSS: MS-LS1-1: Structure, Function, and Information Processing: Plan and conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.		
• Microscopes: Seeing the Tiny World • Nature's Weird Surprises • Our Bodies • Genetics: Why We Look the Way We Do • The Formation and Growth of Human Life - Mitosis and Meiosis	• Biotechnology(A) • The Brain.. What's in There (A) • Cancer: Cells Out of Control(A) • Twin Fascination(A) • The Tiny World of Cells(A) • Cells and Smells (A)	•
NGSS: MS-LS1-2: Structure, Function, and Information Processing: Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.		
• Genetics: Why We Look the Way We Do • Microscopes: Seeing the Tiny World	• I'm Squished (An Argument by Cell Organelles) (A) • The Inside Story- Plant and Animal Cells and Organelles (A)	•
NGSS: MS-LS1-3: Structure, Function, and Information Processing: Construct an explanation supported by evidence for how the body is composed of interacting systems consisting of cells, tissues, and organs working together to maintain homeostasis.		
• Becoming and Staying Healthy • Nature's Weird Surprises • Our Bodies: The Most Marvelous Machines	• Hair Time(A) • Raise Your Voice(A) • Cells and Smells (A) • The Tiny World of Cells(A) • Cells and Smells (A)	•

NGSS: MS-LS1-8: Structure, Function, and Information Processing: Gather and synthesize information that sensory receptors respond to stimuli, resulting in immediate behavior and/or storage as memories.		
• Our Bodies: The Most Marvelous Machines	•	• Making Connections/ Synthesizing (CL-3, A-2 The Limits of the Human Body) • Context Clues (CL-1, A-2 Making Memories) • Creating Sensory Images (CL-2, A-1 The Call of the Tinamou) • Inferring (CL-2, A-2 Video Games)
Unit 4: Geology		
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**
NGSS: MS-ESS1-4: History of Earth: Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-yearold history		
• Big Delicious Earth	•	•
NGSS: MS-ESS2-1: Earth's Systems: Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.		
• Prairie Ecosystems • Rainforests • Weather	• Crazy Careers in Science (garbologist) • Inventor of the Toughest Stuff (A) • Icy Evidence in the Core(V)	•
NGSS: MS-ESS2-2: History of Earth: Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying temporal and spatial scales.		
• Big Delicious Earth • Caves • Continental Drift • Earthquakes • Formation of Mountains and Deserts • Plate Tectonics • Sea Floor Spreading	• Crystals(A) • Icy Evidence in the Core (V) • Science on Ice (V) • Hurricane Hunting (V) • Twist and Shout: Tornado Trouble (V) • A River of Ice(A)	• Determining Importance (CL-3, A-2 Crystals)
NGSS: MS-ESS2-3: History of Earth: Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.		
• Continental Drift • Earthquakes • Mountains • Plate Tectonics • Sea Floor Spreading	• Getting DNA Out of Ancient Fossils	•
Unit 5: Minimizing Human Impact Through Engineering Design		
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**
NGSS: MS-ESS3-1: Earth's Systems: Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geologic processes.		
• Big Delicious Earth • Formation of Volcanoes	•	•
NGSS: MS-ESS3-2: Human Impacts: Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.		

• Coral Reefs • Learning from Natural Disasters • Weather	• Space Junk: Are We Trashing our Solar System? (A)	• Print Features CL-3 A-2 Flying Into a Hurricane)
NGSS: MS-ESS3-3: Human Impacts: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.		
• Pollution • Prairie Ecosystems • Rainforests • Scientific Method	• Bones Tell the Story (A) • Greenhouse Gases (A) • Global Temperatures (A) • Let's Save Our Planet!(A)	• Graphic Features (CL-1, A-2 What Happened to the Blue Whale?)
NGSS: MS-ESS3-4: Human Impacts: Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.		
• Coral Reefs • Pollution • Prairie Ecosystems • Rainforests	• Global Temperatures (A)	•

Readorium Alignment with 8th Grade Amplify NYC Scope and Sequence		
Unit 1: Energy, Forces, and Motion		
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**
NGSS: MS-PS2-1. Forces and Interactions: Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.		
• Newton's Laws • Scientists who Changed the World • Sports Physics	• A Titanic Collision: The Science Behind the Sunken Ship (A)	•
NGSS: MS-PS2-2. Forces and Interactions: Plan and conduct an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.		
• Newton's Laws • Scientists who Changed the World • Space Rocks!	• A Titanic Collision: The Science Behind the Sunken Ship (A)	•
NGSS: MS-PS2-4. Forces and Interactions: Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects and the distance between them		
• Lives of Stars • Scientists who Changed the World • Total Lunacy	• Gravity- The Evil Basketball Player (A)	•
NGSS: MS-PS3-1. Energy: Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.		
• Lights Sound Action • Sports Physics • Newton's Laws	•	•
NGSS: MS-PS3-2. Energy: Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.		
• Sports Physics	• Weapons Older than Dirt: The History of Some of the World's Most Ancient Weapons (A) • Things That Go BOOM!: The History and Chemistry of Explosives (A)	•
Unit 2: Earth's Place in the Universe		
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**
NGSS: MS-PS2-4: Forces and Interactions: Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects and the distance between them.		
• Lives of Stars • Scientists who Changed the World • Total Lunacy	• Gravity- The Evil Basketball Player (A)	•
NGSS: MS-ESS1-1: Space Systems: Develop and use a model of the Earth-Sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the Sun and moon, and seasons.		
• Total Lunacy • Earth in Motion • Inner and Outer Planets	• The Surface and Eclipses of the Moon (A)	•
NGSS: MS-ESS1-2: Space Systems: Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.		

• Total Lunacy • Lives of Stars • Space Rocks!	• Space Junk: Are We Trashing our Solar System?(A) • The Deep Mystery of Black Holes (A) • Sparkling Sunspots(V) • Gaps in the Galaxies(V)	•
NGSS: MS-ESS1-3: Space Systems: Analyze and interpret data to determine scale properties of objects in the solar system.		
• Inner and Outer Planets	• Let's Save Our Planet!(A)	• Context Clues (CL-2, A-2, The Search for Life on Mars)
Unit 3: Growth, Development, and Reproduction of Organisms		
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**
NGSS: MS-LS1-4: Growth, Development, and Reproduction of Organisms: Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants, respectively.		
• Desert Biomes • Arctic Tundra: A Harsh Place to Live • Nature's Weird Surprises • Prairie Ecosystems • Scientists who Changed the World • Surviving in Nature	• Bones Tell the Story (A) • How Plants Trick Animals (A) • Rocks Rock (A) • Animal Magnetism! (V)	• Creating Sensory Images (CL-1, A-1 The Rainforest Awakens My Senses) • Creating Sensory Images (CL-3 A-2, An Afternoon Rain) • Determining Importance (CL-2, A-1 Dragonflies: Flying Aces) • Determining Importance (CL-3, A-1 An Anchor in the Storm) • Making Connections/ Synthesizing (CL-3, A-1 The Lynx and the Hare: Predator-Prey Relationships) • Print Features (CL-2, A-2 Plants that Trick Animals!) • Print Features CL-2, A-1 Bats) • Inferring (CL-2, A-1 Sloth Stories) • Print Features CL-3 A-1 Home Sweet Home: Dens and Other Shelters) • Monitor for Meaning CL-3 A-1 Sharing the Sun)
NGSS: MS-LS1-5: Growth, Development, and Reproduction of Organisms: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.		
• Why We Look the Way We Do	• The Teenage Brain - Why Teens Act so Twisted! (A) • The Tiniest Killers (A) • How Video Games Affect Personality (A) • Pimples, Whiteheads, and Blackheads, Oh No! (A) • The Warrior Gene (A) • The Brain!...What's in There? (A) • Strange Medical Conditions (A) • The Black Death (A) • Life Near Undersea Vents (A)	• Determining Importance (CL-1, A-1, A Place with Many Levels) • Graphic Features (CL-1, A-1 What is Happening to the Bluefin Tuna?) • Making Connections & Synthesizing (CL-1, A-1 A Marsupial for Every Occasion) • Making Connections/ Synthesizing (CL-3, A-2 The Limits of the Human Body) • Print Features CL-2, A-1 Bats)

	• Cloning: The More the Merrier (A) • Animal Magnetism! (V) • Bird Brains (V) • Fascinating Flights (V) • Insects and Team Work (V) • Mysteries of The Common Cold (A) • Breathe Easier: Understanding Asthma-A • How Do We Think? (A) • Evolution of the Peppered Moth (A)	
NGSS: MS-LS3-1: Growth, Development, and Reproduction of Organisms: Develop and use a model to explain structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.		
• Desert Biomes • Surviving in Nature	• How Video Games Affect Personality (A) • Strange Medical Conditions (A) • Why Are Some Hands more "Handy"(A)	•
NGSS: MS-LS3-2: Growth, Development, and Reproduction of Organisms: Develop and use a model to describe how asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.		
• Mitosis and Meiosis • Genetics	•	•
Unit 4: Evolution, Natural Selection, and Adaptations		
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**
NGSS: MS-LS4-1: Natural Selection and Adaptations: Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and changes of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.		
• Surviving in Nature	•	• Context Clues (CL-1, A-1 Life Inside Deep Caves) • Context Clues CL-2, A-1 Life at the Top) • Context Clues CL-3 A-2, What Happens When Something Goes Extinct) • Creating Sensory Images (CL-2, A-1 The Call of the Tinamou)
NGSS: MS-LS4-2: Natural Selection and Adaptations: Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between model and fossil organisms to infer evolutionary relationships.		
• Desert Biomes • Nature's Weird Surprises • Scientists who Changed the World • Surviving in Nature	• From Blinking to Thinking: The Amazing Human Brain (A)	• Context Clues (CL-1, A-1 Life Inside Deep Caves •
NGSS: MS-LS4-3: Natural Selection and Adaptations: Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy		
• Surviving in Nature	• The Very Peculiar Anglerfish (A)	•
NGSS: MS-LS4-4: Natural Selection and Adaptations: Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.		

• Caves • Desert Biomes • Life in the Tundra • Prairie Ecosystems • Scientists who Changed the World • Surviving in Nature	• Teeth (A) • The Limits of the Human Body (A) • Girl Powered Science (V)	• Context Clues (CL-1, A-1 Life Inside Deep Caves) • Making Connections/ Synthesizing (CL-1, A-1, A Marsupial for Every Occasion) • Making Connections/ Synthesizing (CL-2, A-1 Tamarins Make a Great Day in the Forest)
NGSS: MS-LS4-6: Natural Selection and Adaptations: Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.		
• Scientists who Changed the World • Surviving in Nature	• Survival Of The Fittest (A)	• Context Clues (CL-1, A-1 Life Inside Deep Caves)
Unit 5: Evolution of Technology in Science		
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**
NGSS: MS-PS4-1: Waves and Electromagnetic Radiation: Develop a model and use mathematical representations to describe waves that includes frequency, wavelength, and how the amplitude of a wave is related to the energy in a wave.		
•	• Sounds and Hearing	•
NGSS: MS-PS4-2: Waves and Electromagnetic Radiation: Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.		
• Lights Sound Action • Space Rocks!	• Look, A Rainbow! Where Did That Come From (A) • Cool Beams (A)	•
NGSS: MS-PS4-3: Waves and their applications in Technologies for Information Transfer: Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.		
• Lights Sound Action • Space Rocks!	• Look, A Rainbow! Where Did That Come From (A) • Cool Beams (A) • Sounds and Hearing	•
NGSS: MS-LS4-5: Natural Selection and Adaptations Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.		
• Genetics • Surviving in Nature • Pollution	• Designer Dogs (A)	• Making Connections & • Synthesizing (CL-3, A-2 The Limits of the Human Body)