5th Grade / Science Unit #1			
Time Frame	**Content Focus**	**Skill Focus**	**Standards**
4 days	Properties of Matter	Develop Knowledge of the early alchemist	5-PS1-1 5-PS1-2
5 days	Properties of Matter	Test what substances change the appearance of copper	5-PS1-1 5-PS1-2
5 days	Properties of Matter	Investigate the alchemists' claim of transforming ordinary metals into gold.	5-PS1-1 5-PS1-2
5 days	Properties of Matter	Develop their own test for acids	5-PS1-3

Formative Assessment Plan	Summative Assessment Plan
● Class Discussion ● Mystery Science Quiz ● Categorize substances as either pure or mixture. ● Develop a method to categorize pure substances as either an element or compound ● Develop a method to categorize mixtures as either heterogeneous or homogeneous ● Create models to represent these substances on the atomic level	● Group Project ● Mystery Science end of Unit Assessment
Main Resources	**Supplementary Resources**
● BrainPop ● Mystery Science	● Science Studies Weekly ● Readworks (Readworks.org)

Unit 1 Appendix

5th Grade / Science Unit #2			
Time Frame	**Content Focus**	**Skill Focus**	**Standards**
3 days	Changes to Matter	Develops the idea that chemical reactions create new materials that have useful and interesting properties.	5-PS1-4
3 days	Changes to Matter	ınvestigate and model how gases cause explosions	5-PS1-1
3 days	Changes to Matter	Observe and measure different materials to determine their properties.	5-PS1-2 5-PS1-3

Formative Assessment Plan	Summative Assessment Plan
• Class Discussion • Mystery Science Quiz • Students who understand the concepts are able to: Contrast physical and chemical properties for substances • Contrast between physical and chemical changes for substances • Categorize substances based on their properties • Solve for the density of various objects by measuring their mass and volume and predict the type of matter for these objects through comparison to known densities	• Group Project • Mystery Science end of Unit Assessment
Main Resources	**Supplementary Resources**
• BrainPop • Mystery Science	• Science Studies Weekly • Readworks (Readworks.org)

Unit 1 Appendix

5th Grade / Science Unit #3			
Time Frame	**Content Focus**	**Skill Focus**	**Standards**
3 days	Energy and Matter in Ecosystems	Develop students thinking about the predator/prey relationships between living things.	5-LS2-1
3 days	Energy and Matter in Ecosystems	Discover the surprising nutrient which accounts for most of a plant's food.	5-LS2-1 5-LS1-1
3 days	Energy and Matter in Ecosystems	Combine what they have learned about plants, animals, and decomposers to see how they interact in an ecosystem.	5-LS2-1
3 days	Energy and Matter in Ecosystems	Investigate the hypothesis that an asteroid impact caused the extinction of the dinosaurs.	5-LS3-1

Formative Assessment Plan	Summative Assessment Plan
● Class Discussion ● Mystery Science Quiz ● Describe how matter is transported into, out of, and within systems. ● Support an argument with evidence, data, or a model. ● Support an argument that plants get the materials they need for growth chiefly from air and water. (Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.) ● Students who understand the concepts are able to: ● Describe a system in terms of its components and interactions. ● Develop a model to describe phenomena. ● Develop a model to describe the movement of matter among plants, animals,	● Group Project ● Mystery Science end of Unit Assessment

decomposers, and the environment. (Assessment does not include molecular explanations.) ● Emphasis is on the idea that matter that is not food—such as air, water, decomposed materials in soil—is changed into matter that is food. Examples of systems could include: Organisms Ecosystems Earth ● Describe how energy can be transferred in various ways and between objects. ● Use models to describe phenomena.	
Main Resources	Supplementary Resources
● BrainPop ● Mystery Science	● Science Studies Weekly ● Readworks (Readworks.org)

Unit 1 Appendix

5th Grade / Science Unit #4			
Time Frame	**Content Focus**	**Skill Focus**	**Standards**
5 days	Water on Earth	Use estimation and graphing to discover the surprising difference in	5-ESS2-2

		the amounts of fresh and salt water on Earth.	
5 days	Water on Earth	Construct an explanation about a surprising phenomenon: the existence of underground water.	5-ESS2-2 5-ESS3-1

Formative Assessment Plan	Summative Assessment Plan
● Class Discussion ● Mystery Science Quiz ● Describe physical quantities, such as weight and volume, in standard units. ● Describe and graph quantities such as area and volume to address scientific questions. ● Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. (Assessment is limited to oceans, lakes, rivers, glaciers, groundwater, and polar ice caps, and does not include the atmosphere.).	● Group Project ● Mystery Science end of Unit Assessment
Main Resources	**Supplementary Resources**
● BrainPop ● Mystery Science	● Science Studies Weekly ● Readworks (Readworks.org)

Unit 1 Appendix

5th Grade / Science Unit #5			
Time Frame	**Content Focus**	**Skill Focus**	**Standards**
5 days	Earth Systems	Develop a model to explain how water cycles from the Earth's surface to the atmosphere and back again.	5-ESS2-1

5 days	Earth Systems	Examine the causes of flooding using the real-world example of Hurricane Katrina. Students propose plans to prevent flooding and save historic buildings in a coastal town–all while staying within budget!	5-ESS2-1 5-ETS1-1 5-ETS1-2 5-ETS1-3

Formative Assessment Plan	Summative Assessment Plan
● Class Discussion ● Mystery Science Quiz ● Describe a system in terms of its components and interactions. ● Develop a model using an example to describe a scientific principle. ● Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. (The geosphere, hydrosphere, atmosphere, and biosphere are each a system. Assessment is limited to the interactions of two systems at a time.)	● Group Project ● Mystery Science end of Unit Assessment
Main Resources	**Supplementary Resources**
● BrainPop ● Mystery Science	● Science Studies Weekly ● Readworks (Readworks.org)

Unit 1 Appendix

5th Grade / Science Unit #6			
Time Frame	**Content Focus**	**Skill Focus**	**Standards**
3 days	Interactions Within the Earth, Sun, and Moon System	Analyze the Earth's orbital movement around the Sun, as a means of seeing why the constellations	5-ESS1-2

		change.	
3 days	Interactions Within the Earth, Sun, and Moon System	Explore why the Moon seems to change shape (phases) over the course of a month.	5-ESS1-2
3 days	Interactions Within the Earth, Sun, and Moon System	Analyze the “wandering stars.” Learn what it means to see them with their own eyes, and learn some interesting discoveries about each one.	5-ESS1-2
3 days	Interactions Within the Earth, Sun, and Moon System	Discover that gravity exists on all planets and moons, but the amount of gravity is different because it depends on how massive the object is.	5-PS2-1
3 days	Interactions Within the Earth, Sun, and Moon System	Discover that the Earth is in the “Goldilocks Zone” — a distance from the Sun with the right amount of light and heat for life to exist.	5-ESS1-1

Formative Assessment Plan	Summative Assessment Plan
● Class Discussion ● Mystery Science Quiz ● Identify cause-and-effect relationships in order to explain change. • Support an argument with evidence, data, or a model. • Support an argument that the gravitational force exerted by Earth on objects is directed down. (“Down” is a local description of the direction that points toward the center of the spherical Earth.) (Assessment does not include mathematical representation of gravitational force.). ● Support an argument with evidence, data, or a model. ● Support an argument that differences in the apparent brightness of the sun compared to that of other stars is due to their relative distances from Earth.	● Group Project ● Mystery Science end of Unit Assessment

(Assessment is limited to relative distances, not sizes, of stars, and does not include other factors that affect apparent brightness, such as stellar masses, age, or stage. ● Sort, classify, communicate, and analyze simple rates of change for natural phenomena using similarities and differences in patterns. ● Represent data in graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships. ● 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. (Assessment does not include causes of seasons.) Examples of patterns could include: The position and motion of Earth with respect to the sun. Selected stars that are visible only in particular months. ● Day and night Daily changes in the length and direction of shadows Different positions of the sun, moon, and stars at different times of the day, month, and year.	
Main Resources	Supplementary Resources
● BrainPop ● Mystery Science	● Science Studies Weekly ● Readworks (Readworks.org)

Unit 1 Appendix