Standards	1st GRADE SCIENCE
Engineering Design	**(SA)** **K-2.ETS1**
Process of science	1. Ask questions, predict, observe, describe, measure, classify, make generalizations, infer, and communicate 2. Observe and describe their world to answer simple questions **Videos:** Defined Demonstrated: Bananas Sound Waves Introduction/Song Introduction Rocks are Different Classifying and Identifying The Scientific Method The Scientific Method Basic Measures **Audio:** Teacher and the Rockbots: Scientific Method Music Makes it Memorable: The Scientific Method
Attitudes and approaches to scientific inquiry	3. Answer "how do you know?" questions with reasonable answers with teacher guidance **Videos:** Defined Demonstrated: Bananas Sound Waves Review The Scientific Method The Scientific Method **Audio:** Teacher and the Rockbots: Scientific Method Music Makes it Memorable: The Scientific Method
Interactions with the environment provide an opportunity for understanding scientific concepts	4. Observe local conditions that impact animals **Videos:** How Can Air Become Polluted? How Can the Water Become Polluted? How Can the Land Become Polluted? Pollution Humans and the Forest How Human Activity Affects the Diversity of Life on Earth

	Three Types of Diversity Threatened by Human Activity How Habitats Become Threatened **Images:** Fish kill caused by acid rain pollution Water pollution; debris Water Pollution Smokestack emitting pollutants **E-Books:** Populations and Pollution Human Effects on Ecosystems **Reading Passages:** Populations and Pollution Human Effects on Ecosystems

PHYSICAL SCIENCE	**(SB)** 1.PS4-1; 1.PS4-2; 1.PS4-3; 1.PS4-4
Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate **Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated** **Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light** **Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance**	1. Classify matter according to color, size, shape and texture **Videos:** What is Matter? Properties of Matter Introduction Five Senses Identifying Properties of Matter A Closer Look at Matter The Basic Structure of Matter **Images:** Matter_so1318_PAW **E-Books:** Crystals of all Shapes and Sizes What is Matter? Properties of Matter **Reading Passages:** Crystals of all Shapes and Sizes What is Matter? Properties of Matter **Fundamentals:** What's the Matter

	Animation: Matter
Energy can be transformed, transferred, and conserved	2. Identify the materials that help people or animals stay warm or cool **Videos:** Movement Animal Body Coverings **Explorations:** Thermal Energy
Interactions between matter and energy and the effects of these interactions on systems	3. Recognize that seasonal temperatures cause changes in the land, air and water **Videos:** Thinking About the Seasons Spring Summer Autumn Winter Summer Begins Summer Ends Winter Begins Daylight in Winter Spring Begins Spring Ends Fall Begins Why Leaves Change Color in Fall Fall Ends Weather and Seasons The Sun and the Seasons The Four Seasons **Images:** Weather and Seasons Same Location Weather and Seasons Same Location Weather and Seasons Same Location Weather and Seasons Same Location Season Countryside **Fundamentals:** Cycles in the Sky **Explorations:** The Seasons **Animation:**

	Season
	4. Describe how movement can be changed with a push or pull **Videos:** What is Motion Making Things Move **E-Books:** Force May the Force be With You It's Game Time **Reading Passages:** Force May the Force be With You It's Game Time **Fundamentals:** Making Things Move **Explorations:** About Force
LIFE SCIENCE	**(SC)** 1.LS1-1; 1.LS1-2; 1.LS1-3
Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs **Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.**[**Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.**	1. Sort animals based on physical characteristics 2. Describe traits of animals **Videos:** A B C D E F G H I J K L M Common Characteristics of Land Mammals Common Characteristics of Fish **Images:** Animal, Giraffe Horse Swishing Tail American Alligator, Palm Beach County, Florida. Polar Bears play fighting

	Elephant Close Up **Animation:** Animal
Structure, function, behavior, development, life cycles, and diversity of living organisms	3. Sort animals into groups based on appearances 4. Identify external features of animals **Videos:** N O P Q R S T U V W Y Z Common Characteristics of Reptiles How are Insects Different from other Animals? **Images:** Lizard Red-headed Animal, Giraffe Horse Swishing Tail American Alligator, Palm Beach County, Florida. Polar Bears play fighting Elephant Close Up **Animation:** Animal
All organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy	5. Describe a simple animal habitat 6. Describe a simple predator / prey relationship **Videos:** Introduction Physical Features The Three Types of Forests What is a Habitat? What is a Desert? Rain Forest Habitat

	Introduction Forest Habitat Desert Habitat Rainforest Habitat Ocean Habitat Pond Habitat Arctic Habitat Prey and Predators Prey and Predators A Moose's Predators **Images:** Habitat, Definition Waterfowl habitat near Elmvale, Ontario, Canada. Harlequin quail habitat, Gardner Canyon, Arizona. Fresh water_Rain_forest_stream__1___large Predator, definition **Skill Builders:** Animal Universe: Amazon Rainforest Animal Universe: Bamboo Forest in China Animal Universe: The Serengeti Animal Universe: Florida Everglades Animal Universe: Kelp Forest Animal Universe: Arctic Tundra Animal Universe: Pennsylvania Forest Animal Universe: Australian Grasslands Animal Universe: Canada Rockies Animal Universe: Sonoran Desert Animal Universe: The Great Plains Animal Universe: Bangladesh Mangrove Forest **Games:** The Whaddaya Know Quiz Show: Animal Habitats **E-Books:** Habitat **Reading Passages:** Habitat **Interactive Labs:** Save the Black-Footed Ferret **Explorations:** Habitat Characteristics

	Organism Needs Predators and Prey **Brief-Constructed Responses:** Habitat Characteristics **Animation:** Habitat Predator

EARTH SCIENCE	**(SD)** **1.ESS1.1; 1.ESS1.2**
Use observations of the sun, moon, and stars to describe patterns that can be predicted **Make observation sat different times of year to relate the amount of daylight to the time of year.**	1. Sort, classify, and compare rocks by color, size, shape, and texture 2. Describe how water moves on different earth surfaces (e.g., waves) **Videos:** What are Rocks? Rocks are Different Rocks: An Introduction Rocks are Different Sizes Identifying Rocks Where is the Earth's Water? The Water Cycle Water Can Change Earth Rivers **Images:** Kissing Rocks Rock Formations and Water Cascades Rocks on Beach Water and Rocks Rocks Surrounded by Water Colorado River near Moab, Utah. Boundary House on Stikine River, Alaska. Loreley on Rhein River , Germany.

	Waterfall Waterfall **E-Books:** By the Side of the Road **Reading Passages:** By the Side of the Road **Explorations:** Water Cycle Waters on the Earth **Animation:** Boulder
Forces that shape Earth	3. Identify land and water features in Alaska **Videos:** Alaska's Rivers, The Last Great Frontier Icy Bay Glacier Bay Welcome to Alaska's National Parks Volcanoes Glaciers Alaska Alaska **Images:** Glacier Bay, Alaska Atigan pass of the Brooks Range, Alaska. Near Cantwell, a view of the Alaska Range. Mt. McKinley, Alaska. A lake near Juneau, Alaska. Volcano eruption; Augustine, Alaska Waterfall descending from cliff Fog covers waterfalls
Cycles influenced by energy from the sun and by Earth's position and motion in our solar system	4. Describe the changes that occur during the four seasons **Videos:** Thinking about the Seasons Spring Summer

	Autumn (Fall) Winter Introduction Fall Winter Spring is Here Joys of Spring Summer is Here Joys of Summer Fall is Here Why do We Have Seasons? Winter is Here Summer Begins Summer Ends Winter Begins Daylight in Winter Spring Begins Spring Ends Fall Begins Why Leaves Change Color in Fall Fall Ends Weather and Seasons The Sun and the Seasons The Four Seasons **Images:** Weather and Seasons Same Location Weather and Seasons Same Location Weather and Seasons Same Location Weather and Seasons Same Location Season Countryside **E-Books:** Organisms and Seasonal Change **Reading Passages:** Organisms and Seasonal Change **Fundamentals:** Cycles in the Sky **Explorations:** The Seasons **Animation:** Season

Theories regarding the origin and evolution of the universe	5. Recognize that objects at a distance can be made to look larger 6. Recognize that change in objects (e.g., sun, moon, stars) can be observed and described 7. Recognize and use a spotting scope or binocular **Videos:** Magnifying Glass Galileo's Telescope Far Away Objects in Space Science in Our World Seeing the Planets in the Night Sky Astronomy and Technology Used to Explore Space Learning about Our Universe Stargazing: Stars, Falling Stars, and Constellations **Images:** optical_S02187_SDD Binoculars Hubble Space Telescope Telescope_Galileo Magnifying Glass **E-Books:** Don't Try Counting Them **Reading Passages:** Don't Try Counting Them **Explorations:** Watching the Universe Astronomy **Animation:** Telescope

SCIENCE & TECHNOLOGY	(SE)
Solving problems involves different ways of thinking, perspectives, and curiosity	1. Recognize that tools help people do things better or more easily **Videos:** The Six Simple Machines Compound Machines Archimedes and his Simple Machines Video Quiz: Discovering Simple Machines: Compound Machines The Lever The Wheel and Axle The Pulley **Images:** Work Pulleys Pulley Lever, crowbar Lever, screwdriver **E-Books:** Simple Machines Work and Simple Machines Pencil Sharpening Machines Let's Play While We Work Simple but Important **Reading Passages:** Simple Machines Work and Simple Machines Pencil Sharpening Machines Let's Play While We Work Simple but Important **Explorations:** Types of Simple Machines About Simple Machines **Brief-Constructed Responses:** Types of Simple Machines **Animation:** Simple Machine Pulleys

CULTURAL, SOCIAL, PERSONAL PERSPECTIVES & SCIENCE	**(SF)**
Dynamic relationships among scientific, cultural, social, and personal perspectives	1. Explore local or traditional stories that explain a natural event (LOCAL) **Videos:** Why Mosquitoes Buzz in People's Ears Turkey Girl (Pueblo) Native American Mythology An Oral Tradition: Iroquois Story Telling The Thunderbird
HISTORY & NATURE OF SCIENCE	**(SG)**
Bases of the advancement of scientific knowledge	1. Compare the results of multiple observations of a single local event (LOCAL) **Videos:** Defined Demonstrated: Bananas Sound Waves Introduction/Song Introduction Rocks are Different Classifying and Identifying The Scientific Method The Scientific Method **Audio:** Teacher and the Rockbots: Scientific Method Music Makes it Memorable: The Scientific Method
Advancements in science depend on curiosity, creativity, imagination, and a broad knowledge base	2. Ask questions about the natural world **Videos:** The Question: the Starting Point for All Scientific Inquiry Defined Demonstrated: Bananas Sound Waves Review The Scientific Method The Scientific Method **Audio:** Teacher and the Rockbots: Scientific Method Music Makes it Memorable: The Scientific Method