Grade 3	Unit 1: Structure & Transformation of Matter		Suggested Length: 2 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
1. What are physical properties of matter? 2. How can matter be classified? 3. What are the states of matter? 4. What is a physical change of matter?	**Program of Studies** **Core Content** ❑ SC-EP-1.1.2 Students will understand that objects have many observable properties such as size, mass, shape, color, temperature, magnetism, and the ability to interact and/or to react with other substances. Some properties can be measured using tools such as metric rulers, balances, and thermometers. ❑ **SC-EP-1.1.1 Students will classify material objects by their properties providing evidence to support their classifications. Objects are made of one or more materials such as paper, wood, and metal. Objects can be described by the properties of the materials from which they are made. Those properties and measurements of the objects can be used to separate or classify objects or materials. DOK 3** ❑ **SC-EP-1.1.3 Students will describe the properties of water as it occurs as a solid, liquid or gas.** **Matter (water) can exist in different states--solid, liquid and gas. Properties of those states of matter can be used to describe and classify them. DOK 2**	❑ Matter ❑ Physical property ❑ Solid ❑ Liquid ❑ Gas ❑ Evaporation ❑ Mass ❑ Volume	❑ Observe the physical properties of matter by investigating various objects. Investigation #1 ❑ Classify objects according to physical properties. ❑ Identify physical properties of solid, liquid, and gas using a graphic organizer. ❑ Identify matter as solid, liquid, and gas using ice cubes. Investigation #2 ❑ Conduct "Marshmallow Melt" Experiment. ❑ Measure mass using scales and batteries by completing Investigation # 3. ❑ Measure volume by using liquid and different sized containers. ❑ Complete graphic organizer to review matter. ❑ Separate a mixture of items in Investigation #1 (E38). ❑ Change a piece of paper physically. ❑ **CATS – Like Assessment**

Grade 3	Unit 2: Motion & Forces		Suggested Length: 2 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
1. How do forces cause motion? 2. How do pushes and pulls affect position and motion?	**Program of Studies** **Core Content** ❑ SC-EP-1.2.4 Students will understand that the position of an object can be described by locating it relative to another object or the background. The position can be described using phrases such as to the right, to the left, 50 cm from the other object. ❑ **SC-EP-1.2.2 Students will describe the change in position over time (motion) of an object.** **An object's motion can be observed, described, compared and graphed by measuring its change in position over time.** **DOK 2** ❑ **SC-EP-1.2.3 Students will describe the position and motion of objects and predict changes in position and motion as related to the strength of pushes and pulls.** **The position and motion of objects can be changed by pushing or pulling, and can be explored in a variety of ways (such as rolling different objects down different ramps). The amount of change in position and motion is related to the strength of the push or pull (force). The force with which a ball is hit illustrates this principle. By examining cause and effect relationships related to forces and motions, consequences of change can be predicted.** **DOK 2** ❑ **SC-EP-1.2.1 Students will describe and make inferences about the interactions of**	❑ Force ❑ Motion ❑ Gravity ❑ Work ❑ Push ❑ Pull ❑ Magnet ❑ Attract ❑ Repel	❑ Use spring scales, spring, and 2 wooden blocks to investigate how forces are measured. Investigation #1 (p. F64) ❑ Complete graphic organizer to demonstrate understanding of motion. ❑ Identify cause and effect relationships of force and motion using transparency. F3-1. ❑ Describe the position/location of various items using directional words (left, right, ….) ❑ Use magnets and various objects to see what types of materials a magnet is attracted to. ❑ Use various sized magnets and paper clips to determine which is the strangest. ❑ Create a "temporary magnet". ❑ **CATS – Like Assessment**

Grade 3	Unit 2: Motion & Forces		Suggested Length: 2 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
	magnets with other magnets and other matter (e.g., magnets can make some things move without touching them). Magnets have observable properties that allow them to attract and repel each other and attract certain kinds of other materials (e.g., iron). Based on the knowledge of the basic properties of magnets, predictions can be made and conclusions drawn about their interactions with other common objects. DOK 3		

Grade 3	Unit 3: The Earth & The Universe		Suggested Length: 5 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
	Program of Studies **Core Content**		**Suggested Length: 2 weeks**
1. What are minerals and rocks? 2. How do rocks form? 3. How do soils form? 4. How do soils differ?	❑ **SC-EP-2.3.1 Students will describe earth materials (solid rocks, soils, water and gases of the atmosphere) using their properties.** **Earth materials include solid rocks and soils, water and the gases of the atmosphere. Minerals that make up rocks have properties of color, luster and hardness. Soils have properties of color, texture, the capacity to retain water and the ability to support plant growth. Water on Earth and in the atmosphere can be a solid, liquid or gas. DOK 2**	❑ Mineral ❑ Rock ❑ Crust ❑ Mantle ❑ Core ❑ Igneous rock ❑ Sedimentary rock ❑ Metamorphic rock ❑ Rock cycle	❑ Investigate the hardness of rocks. Investigation #1 C4 ❑ Observe properties of rocks and minerals. ❑ Complete graphic organizer to review rock properties, mineral uses, kinds of rocks, how rocks change, and uses of rock. ❑ Create a diagram of layers of Earth. ❑ Investigate how soils form. Investigation #1 p. C62 ❑ Investigate different types of soil. Investigation #2 p. C66 ❑ Compare soil properties. ❑ Conduct experiment with plants and different types of soil. ❑ **CATS – Like Assessment**
1. What is weather?	❑ **SC-EP-2.3.2 Students will describe patterns in weather and weather data in**	❑ Atmosphere ❑ Weather	**Suggested Length: 1 weeks** ❑ Understand properties of air by completing graphic

Grade 3	Unit 3: The Earth & The Universe		Suggested Length: 5 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
2. How are weather conditions measured? 3. What is a weather map?	**order to make simple predictions based on those patterns discovered.** **Weather changes from day to day and over seasons. Weather can be described using observations and measurable quantities such as temperature, wind direction, wind speed and precipitation. Simple predictions can be made by analyzing collected data for patterns. DOK 2**	❑ Temperature ❑ Front ❑ Wind ❑ Weather map	organizer. ❑ Make a barometer. ❑ Make daily weather predictions. ❑ Measure temperature using a thermometer. ❑ Interpret weather maps. ❑ **CATS – Like Assessment**
1. What causes Earth's seasons? 2. What causes day and night? 3. How so the moon and Earth interact?	❑ **SC-EP-2.3.3 Students will describe the properties, locations and real or apparent movements of objects in the sky (Sun, moon).** **Objects in the sky have properties, locations and real or apparent movements that can be observed and described. Observational data, patterns, and models should be used to describe real or apparent movements. DOK 2** ❑ **SC-EP-2.3.4 Students will describe the movement of the sun in the sky using evidence of interactions of the sun with the earth (e.g., shadows, position of sun relative to horizon) to identify patterns of movement.** **Changes in movement of objects in the sky have patterns that can be observed and described. The Sun appears to move across the sky in the same way every day, but the Sun's apparent path changes slowly over seasons. Recognizing relationships between movements of objects and resulting phenomena, such as shadows, provides information that can be used to make predictions and draw conclusions about**	❑ Rotation ❑ Axis ❑ Revolution	**Suggested Length: 2 weeks** ❑ Investigate how sun strikes Earth (p. D66) using flashlight. ❑ Complete a table to display data on 4 seasons. ❑ Use flashlights to investigate shadows. ❑ Use foam balls and globe to "act out" movement of sun, Earth, and moon. ❑ Investigate the moon's phases (p. D75) using lamp and foam ball. ❑ Create a diagram of the moon's phases. ❑ **CATS – Like Assessment**

Grade 3	Unit 3: The Earth & The Universe		Suggested Length: 5 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
	those movements. DOK 2 ❑ SC-EP-2.3.5 Students will understand that the moon moves across the sky on a daily basis much like the Sun. The observable shape of the moon can be described as it changes from day to day in a cycle that lasts about a month.		

Grade 3	Unit 4: Unity & Diversity		Suggested Length: 4 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
	Program of Studies **Core Content**		**Suggested Length: 2 weeks**
1. What are the parts of a plant? 2. What do plants need to survive?	❑ SC-EP-3.4.2 Students will understand that things in the environment are classified as living, nonliving and once living. Living things differ from nonliving things. Organisms are classified into groups by using various characteristics (e.g., body coverings, body structures). ❑ **SC-EP-3.4.1 Students will explain the basic needs of organisms. Organisms have basic needs. For example, animals need air, water and food; plants need air, water, nutrients and light. Organisms can survive only in environments in which their needs can be met. DOK 2**	❑ Root ❑ Stem ❑ Leaf ❑ Simple plant ❑ Seed ❑ Germinate ❑ Seedling ❑ Photosynthesis ❑ Chlorophyll	❑ Construct a plant model. ❑ Conduct an experiment using 3 plants (no water, no light, water and light) to determine plant needs. ❑ Label plant parts. ❑ Sort and classify leaves into groups. ❑ Conduct "seed in baggie" experiment to observe germination process. ❑ Draw and label the process of photosynthesis. ❑ Complete graphic organizer to review plant parts and needs. ❑ Compare plant life cycles. ❑ **CATS – Like Assessment** ❑ **Open Response – "Plant Parts"**
1. What do animals need to survive? 2. What traits do	❑ **SC-EP-3.4.3 Students will describe the basic structures and related functions of plants and animals that contribute to growth, reproduction and survival.**	❑ Inherit ❑ Trait ❑ Mammal ❑ Birds ❑ Amphibian	Suggested Length: 2 weeks ❑ Observe, compare, and classify habitats of organisms – Investigation #1. ❑ Complete graphic organizer to identify animal needs and traits.

Grade 3	Unit 4: Unity & Diversity		Suggested Length: 4 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment Student will:
animals have to help them survive?	**Each plant or animal has observable structures that serve different functions in growth, survival and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. These observable structures should be explored to sort, classify, compare and describe organisms. DOK 2** ❑ **SC-EP-3.4.4 Students will describe a variety of plant and animal life cycles to understand patterns of the growth, development, reproduction and death of an organism.** **Plants and animals have life cycles that include the beginning of life, growth and development, reproduction and death. The details of a life cycle are different for different organisms. Observations of different life cycles should by made in order to identify patterns and recognize similarities and differences. DOK 2**	❑ Reptile ❑ Instinct ❑ Camouflage ❑ Mimicry	❑ Investigate how fur helps animals – Investigation #2. ❑ Analyze how adaptive characteristics help a species survive – "Polar Bear Fur Experiment" ❑ Complete graphic organizer to review animal adaptations. ❑ Describe and draw animal life cycles. ❑ **CATS – Like Assessment**

Grade 3	Unit 5: Biological Change		Suggested Length: 2 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment *Student will:*
1. What are fossils?	**Program of Studies** **Core Content** **SC-EP-3.5.1 Students will describe fossils as evidence of organisms that lived long ago, some of which may be similar to others that are alive today.** **Fossils found in Earth materials provide**	❑ Fossil	❑ Investigate how fossils form (C18) by creating a model using clay and shells. ❑ **CATS – Like Assessment**

Grade 3	Unit 5: Biological Change		Suggested Length: 2 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment *Student will:*
	evidence about organisms that lived long ago and the nature of the environment at that time. Representations of fossils provide the basis for describing and drawing conclusions about the organisms and basic environments represented by them. DOK 3		

Grade 3	Unit 6: Energy Transformations		Suggested Length: 4 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment *Student will:*
	Program of Studies **Core Content**		
1. Ho do animals get food? 2. What are food webs?	❑ **SC-EP-4.6.1 Students will describe basic relationships of plants and animals in an ecosystem (food chains).** **Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. Basic relationships and connections between organisms in food chains can be used to discover patterns within ecosystems. DOK 2**	❑ Interact ❑ Producer ❑ Consumer ❑ Decomposer ❑ Food chain ❑ Energy pyramid ❑ Food web ❑ Predator ❑ Prey	Suggested Length: 2 weeks ❑ Observe animal teeth and record characteristics that describe the teeth – Investigation # 1. ❑ Compare producers and consumers. ❑ Make a model food chain. ❑ Make a food web. ❑ Find out about energy in a food chain by playing "How Do Animals Get Their Food?" (p. B69) ❑ Explore energy flow by playing "How Does Energy Flow Through a Food Chain?" (p. B69) ❑ **CATS – Like Assessment**
1. What is energy? 2. How is energy stored? 3. How does energy move?	❑ **SC-EP-4.6.2 Students will describe evidence of the sun providing light and heat to the Earth.** **Simple observations and investigations begin to reveal that the Sun provides the light and heat necessary to maintain the temperature of Earth. Based on those experiences, the conclusion can be drawn that the Sun's light and heat are necessary to sustain life on Earth. DOK 2**	❑ Energy ❑ Potential energy ❑ Kinetic energy ❑ Electricity ❑ Fossil fuel ❑ Vibrate ❑ Circuit	Suggested Length: 2 weeks ❑ Investigate how energy can be stored using clothespins and rubber bands – Investigation (p. F4). ❑ Determine the ways energy can e stored using a graphic organizer. ❑ Investigate how energy moves in waves using jump ropes in Investigation # 2 (p. F14). ❑ Use batteries, bulb, and wire to make a complete circuit in Investigation # 3 (p. F22). ❑ Complete graphic organizer to show understanding of energy.

Grade 3	Unit 6: Energy Transformations		Suggested Length: 4 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment *Student will:*
	❑ **SC-EP-4.6.3 Students will analyze models of basic electrical circuits using batteries, bulbs and wires, in order to determine whether a simple circuit is open or closed. Electricity in circuits can produce light. Describing and comparing models demonstrates basic understanding of circuits. DOK 2** ❑ **SC-EP-4.6.4 Students will describe light as traveling in a straight line until it strikes an object.** **Light can be observed and described as it travels in a straight line until it strikes an object. DOK 2**		❑ Use flashlights and paper puppets to show that light travels in straight lines. ❑ **CATS – Like Assessment** ❑ Other Resources: 1. Simple Science Fun With Light 2. The Science Book of Light (p. 8-9) 3. Sun Up Sun Down

Grade 3	Unit 7: Interdependence		Suggested Length: 2 weeks
Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment *Student will:*
1. What are ecosystems?	**Program of Studies** **Core Content** ❑ **SC-EP-4.7.1 Students will describe the cause and effect relationships existing between organisms and their environments. The world has many different environments. Organisms require an environment in which their needs can be met. When the environment changes some plants and animals survive and reproduce and others die or move to new locations. DOK 2**	❑ Environment ❑ Ecosystem ❑ Population ❑ Community ❑ Habitat	❑ Observe an environment and find out what kinds of things live there – Investigation #1. ❑ Complete a graphic organizer to review parts of an ecosystem. ❑ Complete a cause and effect graphic organizer; describe how ecosystems change because of other living things. ❑ Conduct an Investigation to compare different types of forests – Investigation # 2. ❑ Construct murals of different types of environments. ❑ **CATS – Like Assessment**

Grade 3 Unit 7: Interdependence Suggested Length: 2 weeks

Essential Questions	*Program of Studies* and Core Content	Key Terms and Vocabulary	Classroom Instruction and Assessment *Student will:*