Kenmore-Tonawanda Union Free School District
1500 Colvin Blvd
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Science - Grade 3

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Options	Standards	Essential Questions	Content	Skills	Suggested Resources	Assessment	Resources
		Unit A Life Science Suggested time-5 WEEKS (3-5 days per week) This unit involves the most assessed topics in the NYS standards.					
		How do the different parts of a plant help it live and grow?	Plants and how they grow: Compare and contrast plants. Main parts of a plant; leaves, roots, stems and flowers. Uses of roots and stems. Plants are grouped by roots, stems, leaves and flowers. Plants grow by scattering and releasing seeds, germinating and growing. Plants change over time but are similar to plants from the past. Some types of plants germinate faster than other kinds of plants.	Define the following: system pollinate seed leaf germinate seedling Compare and contrast observations. Classify and categorize plants and animals. Identify behavioral and structural adaptations necessary for survival. Identify similarities and differences among plants. Describe the life cycle of plants. Use sketches, diagrams and models to understand scientific needs.	Lesson 1 Lesson 2 Lesson 4 Review Parts of a Flower		Gr 2 - 4 Does Light Go Through opaq.trans.doc Gr 2 - 4 snow.doc Gr 2 - 4 Volume & Capacity Gr 2 -4 Bouncing Variables.doc Gr 2 -4 Shadow Length.doc Gr 2- 5 Solid, Liquid, Gas-orangebrew.doc Gr 2-4 Liquid lasagna.doc Gr 3 - 4 Absorbing Experiment.doc Gr 3 Conductors.doc Gr 3 Sink or float.doc Gr. 2 - 4 ball&ramp.doc Grouping Activity gr3 chart.doc GROUPING OBJECTS gr3.doc
		How do different animals live, grow and change.	How animals live:	Define the following:	Lesson 1		

			Make a model of a backbone to visual the vertebrae and how it works. Animals are grouped by needs, traits, vertebraes. Animals grow and change through predictable stages. Animal adaptations help animals to find food, protection, insticts, behaviors and learning. Fossils provide evidence as to how animals from the past are like today's animals. Fossils can be used to learn about animals that lived long ago.	trait larva pupa adaptation inherited migrate hibernate Identify needs of animals. Recognize that animals go through stages within life cycles. Identify characteristics of an organism are inherited and others are learned from interactions within the environments. Compare and contrast observations and results.	Lesson 2 Lesson 3		
		How are ecosystems different from each other.	Where Plants and Animals Live: Light, water and temperature affect how grass seeds grow best. The environment of an ecosystem, groupings of animals found within and changing ecosystems.	Define the following: environment ecosystem grassland desert tundra wetland Recognize that variations in light, temperature and soil are responsible for variety in an ecosystem. State why the sun provides energy in the form of heat	Lesson 1: Ecosystems (Broad Based Discussion- use information from Biomes in Social Studies)		

			Ecosystems with few trees; grassland, desert and tundra. Forest ecosystems; coniferous, deciduous and tropical forests. Water ecosystems; wetland and saltwater. Mold needs a specific type of ecosystem to stay alive and grow.	and light. Give examples of various ways that animals depend on plants for survival. Describe why the size of a population depends on resources within ecosystem. Recognize that some source of energy is needed for organisms to stay alive and grow.			
		How do plants interact and grow?	Plants and Animals Living Together: Behavioral and structural adaptations of pillbugs and how they stay safe. Interaction of living things, ways they interact, grouping, and helping one another. Living things get energy from the sun and other living things within a food web. Competition for resources and space. Predator-Prey relationships Natural events and living things cause change in an	Identify behavioral and structural adaptations that allow plants and animals to survive. Explain how plants and animals interact. Explain ways animals depend on plants for survival. Describe how energy is transferred to living organisms through the food they eat. Identify examples of producers, consumers, carnivores, herbivores and omnivores. Identify organisms with similar needs in the same region compete for limited resources. Describe how organisms grow, die and decay. State how changes in the	Lesson 1 Lesson 2 Lesson 3 Lesson 5 Guided Inquiry (May take more than one week for observation) Exposure to human body only.		

			environment. The environment affects how people live. People can do many things to keep their bodies healthy. Without predators, prey can starve.	environment may be beneficial or harmful. Recognize that the human body is made up of systems with structures and functions are related.			
		Unit B: Earth Science Suggested time -4 WEEKS (3-5 days per week) Please note that rocks and minerals are not stressed on the NYS assessment.					
		How does water change form?	Water is cycled from the from the surface to the atmosphere. Water is essential for drinking, food, crops, industry and electricity. The water cycle. Water changes form. Water can be cleaned. Make a model of a water cycle.	define: water vaper groundwater wetland evaporation condensation water cycle precipitation Use a variety of instruments to collect and analyze data, including thermometer, barometer. Identify the importance of water in living things. Identify how water changes form. Name and define the stages of the water cycle. Describe ways to clean water for reuse.	Lesson 1 Lesson 2 Guided Inquiry P. 162 (3 days)		

				Use charts and graphs to pattern change.			
		How does weather follow patterns?	The parts of weather and tools used to measure it. Weather patterns vary from place to place and severe weather.	define: weather atmosphere hurricane tornado Use tools for weather measurement: thermometer and barometer Describe changes that accompany weather patterns Identify the symbols on a weather map Identify the different types of weather associated with differerent weather patterns Distinguish between a tornado, hurricane and thunderstorm Given a weather map, forecast the weather for a particular city	Directed Inquiry: Wind Speed Lesson 1 Lesson 2 NO Guided Inquiry for this Chapter		
		How are rocks and soil used?	Water,wind and ice carry soil to form rock layers. Importance of soil and comparing types of soils.	Define and identify examples of the following terms: soil decay nutrient loam Use sketches,diagrams and models to understand scientific data. Identify changes in Earth's surface are caused by slow proceses and some are due to rapid processes. Compare properties of different soils.	Lesson 3: Soil, Types of Soil ONLY Background exposure only for rocks, minerals or rock formation		

				Predict and infer the speed of wind			
		How do natural forces cause changes on Earth's surface?	Weathering and erosion.	Know and identify: weathering erosion Use sketches,diagrams and models to understand scientific data. Recognize landforms change over time (volcanoes, earthquakes) Describe how smaller rocks come from breaking and weathering. Identify process of weathering and erosion.	Lesson 3: Erosion and Deposition		
		Unit C: Physical Science **Suggested time - 7 weeks (3-5 days per week)** **This unit will take the longest amount of time.**					
		What are the properties of matter?	Matter, what it is, its properties, forms and parts. Measuring mass, volume and density.	Define: matter property pressure mass volume density buoyancy Observe and describe properties of matter. Compare and contrast froms of matter. Explain and describe makeup of matter. Use tools to observe and study details.	Directed Inquiry (Omit Element,Atom and Periodic Table) Lesson 2: Measuring Matter Emphasize use of Balances,Graduated Cylinder and Metric Measurement (grams), mass and matter Review sink /float		Gr 3 Sink or float.doc Gr 2 - 4 Does Light Go Through opaq,trans.doc Gr 2 - 4 snow.doc Gr 2 - 4 Volume & Capacity Gr 2 -4 Bouncing Variables.doc Gr 2 -4 Shadow Length.doc Gr 2- 5 Solid, Liquid, Gas-orangebrew.doc Gr 2-4 Liquid lasagna.doc Gr. 2 - 4 ball&ramp.doc
		What are physical and chemical changes?	Physical	Define and	Directed Inquiry		

			changes and how they are caused. Combining and separating matter in mixtures and solutions. Chemical changes, how they are formed and uses for them.	identify: physical change states of matter mixture solution chemical change Describe features of matter involved in physical changes. Describe ways matter can undergo physical changes. Recognize that physical changes can be produced by heating and cooling. Explain that different materials are made by physically combining substances and different objects can be made by combining substances. State materials are made by chemically combining two or more substances. State uses of a chemical change.	Lesson 2 Lesson 3 Guided Inquiry		
		How do forces cause motion and get work done?	An objects position and motion can be changed; speed and relative position. Force on an object affects its motion. Simple machines affect work.	Know and identify: position motion relative position speed force friction gravity magnetism work Describe motions of various objects. List ways to view objects in relation to other objects. Describe ways to view motion of objects in relation to each other. Recognize that an	Directed Inquiry Lesson 2 Lesson 3 Guided Inquiry Take it to the Net SciLink Link- Gravity This site has related topics: levers, magnetism and force G Take it to the Net		

				object may move in a straight line, constant speed, speed up/down, change direction depending on net force acting on the object. Describe kind of forces that can cause motion. Explain how forces can be harnessed to perform work. Identify six types of simple machines.	Games - Physical Science Ch. 10 - Comparing Weight Ch.12 -Measuring Motion Transfer -Magnetic Fields		
		How does energy change form?	Sources of heat energy and its effects on matter. Sources, paths and changes of light energy. Electrical energy, charges, currents and circuits.	Explain and identify: reflect absorb electric charge electric current electric circuit Recognize objects give off heat and light. Describe different forms of energy. State that heat can be produced. Recognize when a warmer object comes in contact with a cooler one, the warm object loses heat. Express how changes in states of matter relate to changes in temperature. State that the Sun provides energy for the Earth in the form of heat and light. Recognize various forms of energy.	Directed Inquiry Lesson 2 Lesson 3 Lesson 4 Lesson 5 Guided Inquiry Take it to the Net Games - Physical Science Ch. 13 Parallel Circuit Scott Foresman Unit C Performance Test Investigating Physical Properties		
		Unit D: Space and Technology Suggested time- 2 weeks (3-5 days per week) Chapter 16 is optional and should be a broad overview only. Note-					

		technology is not a core curriculum topic.					
		Why do we use the word "pattern" when speaking of the Earth, Sun, Moon and stars?	Patterns repeat every day such as night and day and shadows. Patterns repeat every year such as the Earth's revolution and seasons. The Moon's shape changes and goes through phases. Star patterns such as constellations can be observed a variety of ways.	Identify and describe: star axis rotation revolution phase lunar eclipse telescope constellation Explain how the Sun provides energy for the Earth in the form of heat and light. Explain the movement of the Earth in relation to the Sun to determine the pattern of day and night. Explain patterns of change in shadows cast by Sun in terms of movement of Earth in relation to the Sun. Recognize that days and nights change in length throughout the year. Identify patterns of average temperatures throughout the year. State how the Moon and Earth interact. Describe the frequency of the lunar cycle. Describe ways to study stars.	Lesson 1 Lesson 2 Lesson 3 Directed Inquiry only		
		How are planets in the solar system alike and different?	Parts of the solar system including the sun, planets and asteroids. The inner and	Identify and describe: planet solar system State the Sun is a	CH. 16 BROAD OVERVIEW ONLY (if time)		

			outer planets.	star that is much nearer to the Earth than others. Recognize planets differ in size, characteristics and compostion as they orbit the Sun.			

Last updated: 8/8/2011