

Year at a Glance – 5th Grade

Science Curriculum						Extensions
6 weeks	Science Topics	TEK Objective	Concepts to Learn	Vocabulary	Lab/ Activities	
1 st	Lab Safety/Scientific Tools Body Systems Animal life cycles	5.1a 5.4a,b 5.5a,b 5.9a	<ol style="list-style-type: none"> 1) In order to conduct field and laboratory investigations, one must follow school safety procedures and ethical practices. 2) Using a variety of tools and methods helps us to conduct science inquiry. 3) A system is a collection of cycles, structures, and processes that interact. 4) Many-celled organisms have specialized structures that transport materials. 5) The heart, blood, and lungs work together to help the body take in oxygen and give off carbon dioxide. 	Microscope, hand lenses, metric rulers, Celsius thermometers, prisms, pan balances, spring scales, cell, cell membrane, nucleus, cytoplasm, diffusion, osmosis, tissue, organ, capillaries, alveoli, villi, nephrons, tendons, ligaments, neurons, receptors, chromosome, mitosis, meiosis, metamorphosis, inherited trait	<ol style="list-style-type: none"> 1) Observing cells under a microscope. 2) Write a poem or design a poster about an animal's life cycle. 3) Pairs of Bears, inherited traits(AIMS) 4) Egg Osmosis 	
2 nd	Ecosystems Cycles in Nature	5.2b 5.3c 5.6.a,c 5.9a,b,c	<ol style="list-style-type: none"> 1) Change occurs in cycles. 2) A system is a collection of cycles, structures, and processes that interact 3) Changes can occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles. 4) Water is a limited resource that needs to be protected. 	Nitrogen cycle, carbon dioxide-oxygen cycle, water cycle, evaporation, condensation, precipitation, transpiration, individual, population, community, ecosystem, habitat, niche, producer, consumer, food chain, decomposer, food web, energy pyramid	<ol style="list-style-type: none"> 1) Design and build a terrarium including a fern, soil, and an organism. 2) Observe water cycle in a jar. 3) Dissecting owl pellets 4) Create a rainforest and desert biome in a jar. 	
3 rd	Renewable and Nonrenewable Resources Changes to Earth's Surface	5.11a,b 5.11c 5.6a 5.4a 5.12a,b 5.1b	<ol style="list-style-type: none"> 1) Past events can be identified that led to the formation of the Earth's renewable, non-renewable, and inexhaustible resources 2) Land forms are the result of a combination of constructive and destructive forces such as deposition of sediment and weathering. 3) Earth's crust is broken down into soil. 4) The three layers of the earth are: crust, mantle and the core. 5) The three major types of fossil fuels are: coal, oil, and natural gas. 	Succession, pioneer plants, climax community, pollution, acid rain, conserving, reducing, reuse, recycle, reclamation, wetlands, landforms, weathering, erosion, deposition, crust, mantle, core, plate, magma, volcano, earthquake, fault, continental drift, pangea, natural resource, renewable, non renewable, reusable, fossil fuels, peat, lignite, bitumen, anthracite, recycling	<ol style="list-style-type: none"> 1) Candy Quakes 2) Measuring pH of tap water 3) PLT: Renewable of not? Lesson 14 4) Make paper out of recycled paper scraps. 	
4 th	Weather/Climate Oceans Sun, Moon, Stars	5.10b 5.12c,d	<ol style="list-style-type: none"> 1) The natural world includes earth materials and objects in the sky. 2) Physical characteristics of the Earth can be compared to the physical characteristics of the moon. 3) The moon phases include: New Moon, First Quarter, Waxing Gibbous, Full Moon, Waning gibbous, Last Quarter, Waning Crescent 	Atmosphere, air pressure, humidity, precipitation, evaporation, condensation, local winds, prevailing winds, climate, microclimate, greenhouse effect, global warming, wave, current, tide, shore, estuary, tide pool, jetty, sonar, desalination, revolve, orbit, rotate, axis, eclipse, telescope, satellite, space probe, photosphere, corona, sunspot, solar flare, magnitude, universe, galaxy, light-year	<ol style="list-style-type: none"> 1) Graph weather station information. 2) Desalination activity 3) Construct pinecone hygrometers and observe. 4) Oreo Moon Phases 	
5 th	Forces and Motion Matter 3 Forms of Energy Inertia, Gravity	5.7a,b,c,d 5.8a,b,c,d	<ol style="list-style-type: none"> 1) Energy occurs in many forms such as light, heat, electrical, and solar energy; 2) Matter has physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound. 3) Gravity is the force that keeps planets in orbit around the Sun and the moon in orbit around the Earth. 	Matter, physical properties, mass, weight, volume, density, solubility, solid, liquid, gas, evaporation, hydroelectric energy, tidal energy, nuclear energy, geothermal energy, solar energy, fusion energy, biomass	<ol style="list-style-type: none"> 1) Seven Layer density column (Steve Spangler) 2) FOSS- Electricity and Magnetism 3) Inertia demonstration 	

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6 th	Plant Structures and Adaptations Science Fair	5.10a,b 5.2a,b,c,d	<ol style="list-style-type: none"> 1) Likenesses between offspring and parents can be inherited or learned. 2) Nutrients can be transported in plants through the xylem and phloem. 3) Plants use carbon dioxide and energy from sunlight to build molecules of sugar for growth and maintenance, and plants release oxygen into the air. 4) The scientific method includes: Determining the problem, forming a hypothesis, gathering materials, listing the steps or the procedure, communicating the results, and forming a conclusion. 	Inherited trait, dominant trait, recessive trait, gene, xylem, phloem, chlorophyll, nonvascular, vascular, spore, gymnosperm, pollen, angiosperm, grain, fiber, photosynthesis, tropism, phototropism, gravitropism, stamens, pistil, embryo, cotyledon, seedling, vegetative propagation, grafting	<ol style="list-style-type: none"> 1) Look Alike Journal (AIMS) Students observe plants at various stages and compare the sprouts to the adult plants 2) Seed Soak: Soak lima beans, then study the inside parts of a seed 3) Gravitropism experiment