








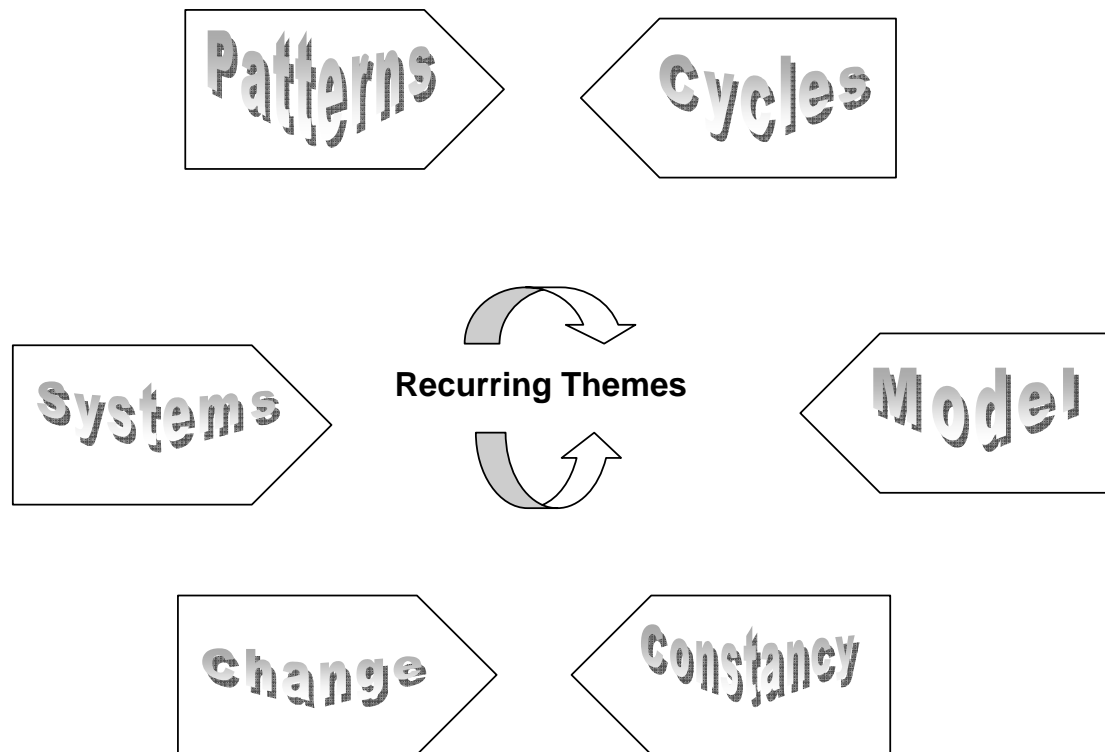
3rd Grade Science Scope and Sequence Overview 2009-2010: 60% Hands-On!						
	1st 6wks Aug 24- Oct 2	2nd 6wks Oct 5 - Nov 6	3rd 6weeks Nov 9- Dec 18	4th 6 weeks Jan 5-Feb19	5th 6 weeks Feb 22 - April 16	6th 6 weeks April 19 - June 4
						
Week One	★ Safety Show Safety PowerPoint (3.1A) (3.4 AB) Aug 24- 28 	Life cycles of Plants (3.10 C) Oct. 5 -9	Life Science Review and Assessment Matter and Energy (Properties) Magnetism (3.5A) Nov 9-13	Mixtures (3.5D) Jan 5-8	Solar System (3.8D) Feb 22-Feb 26	Conserve/Reuse/ Recycle Earth Day Activities (3.1B) Apr 19-23 
Week Two	★ THEMES (Intro 2) Aug 31 - Sept 4	Life cycles of Animals (3.10C) Oct 12-16	Temperature and Mass (3.5A) Nov 16-20	Force and Motion: (Magnets and Gravity) (3.6C) Jan 11-15	Weather (3.8A) Mar 1-5	Work with Science Fair Math/Reading TAKS Apr 26-30 
Week Three	Organisms and Environments: Ecosystems (3.9 A) Sept 7 - 18	Survival and Inherited Characteristics of Animals (3.10B) Oct 19-23	Sink or Float (3.5A) Nov 30-Dec 4	Change in Position and Motion (3.6B) Jan 18-22	Physical Science Review and Assessment View Science Fair PowerPoint Mar 8-12	Science Fair May 3 -7 
Week Four		Learned Behaviors of Animals (3.10B) Oct. 26-30	States of Matter (3.5B) Dec 7-11	Forms of Energy (Light) (3.6A) Jan 25-29	Soil Formation (3.7A) Mar 22-26	Science Fair Campus Science Fair May 10 -14 
Week Five	Environmental Changes (3.9 C) Sept 21- 25	Flow of Energy (Food Chain) (3.9 B) Nov 2-6	Changes in Matter (Heating and Cooling) (3.5C) Dec 14 -18	Forms of Energy (Heat/Thermal) (3.6A) Feb 1-5	Rapid changes in Earths surface (3.7B) Mar 29-Apr 2	Investigation 1 District Science Fair May 21st @ RSE May 17-21 
Week Six	Survival of Plants (3.10 A) Sept 28-Oct 2			Forms of Energy (Sound) (3.6A) Feb 8-12	Landforms (3.7C) April 5-9	Investigation 1 Earth Science Assessment May 24-28
Week seven				Earth and Space: Sun, Earth, Moon (3.8BC) Feb 15-19	Natural Resources (3.7D) Apr 12-16	Review Recurring Themes May 31- June 4
★	Recurring Themes: Patterns, Cycles, Systems, Models, Change and Constancy					
	Ongoing TEKS: Scientific Investigation and Reasoning (3.1) (3.2) (3.3) (3.4) Day-to-day weather changes (3.8A)					

Recurring Themes



Recurring Themes are pervasive in science, mathematics and technology. These ideas transcend disciplinary boundaries and include patterns, cycles, systems, models, change and constancy.

Posters have been provided for all teachers to place in their classrooms with the purpose to connect these themes to their daily instruction in science. Teachers can also create different posters with their students if they desire.



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First Six Weeks - **Week One** -August 24-28 **Safety**

Standards	New Standard	Processes/ Skills/ Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.1) Conduct field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. A. Demonstrate safe practices during field and laboratory investigations; B. Make wise choices in the use and conservation of resources.</p> <p>(3.4) Know how to use tools and methods to conduct science inquiry. A. Collect information using tools: calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses B. Demonstrate that repeated investigations may increase the reliability of results.</p> <div data-bbox="174 1015 321 1144" style="text-align: center;"> </div> <div data-bbox="111 1154 380 1317" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Give examples of desired and undesired behavior in the classroom while conducting a science experiment </div>	<p>(3.1) Scientific investigation and reasoning. The student for at least 60% of instructional time conducts classroom and outdoor investigations following school and home safety procedures and environmentally appropriate practices. The student is expected to: (A) demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations including observing a schoolyard habitat; and (B) make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics.</p> <p>(3.4) Scientific investigation and reasoning. The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to: (A) collect, record, and analyze information using tools including microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, pan balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, timing devices including clocks and stop watches, magnets, collecting nets, notebooks, sound recorders, Sun/Earth/Moon system models, and materials to support observation of habitats of organisms such as terrariums and a (B) use safety equipment as appropriate including safety goggles and gloves.</p>	<p>► Be safe during experiments. Follow lab rules and talk to the teacher if there is a problem. ► Conserve resources and materials in the science lab when possible.</p> <div data-bbox="795 505 1129 602" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Emphasis on SAFETY and tools Make connection between both of them. </div> <div data-bbox="879 643 1039 927" style="border: 1px solid black; padding: 5px; margin-top: 10px; background-color: #ffffcc;"> Scientific processes should be taught and reinforced throughout the curriculum instead of as an isolated unit. </div> <div data-bbox="779 963 1131 1133" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Clear Expectations: With student input, create a criteria chart that lists characteristics of quality</p> </div> <div data-bbox="774 1159 1278 1386" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Clear Expectations: The teacher will introduce and model the use of an interactive notebook. Collectively, the classroom teacher and students will develop a criteria chart of what makes a "quality" or "good" interactive notebook.</p> </div>	<p>scientific process independent variable observe measure predict communicate conclude models investigate</p>	<p>Grade 2 (2.1) Scientific processes. The student conducts classroom and field investigations following home and school safety procedures. The student is expected to: (A) demonstrate safe practices during classroom and field investigations; and (B) learn how to use and conserve resources and materials.</p> <p>Grade 4 (4.1) Scientific processes. The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to: (A) demonstrate safe practices during field and laboratory investigations; and (B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.</p>	<p>Internet Activities: ► Balance Scale Online Tutorial www.ohaus.com/products/education/tutorials.asp?source+2 ► Virtual Microscope http://www.udel.edu/biology/ketcham/microscope [Click on virtual microscope] ► Aims mag - Vol II No. 3 "Wick Watchers"</p> <div data-bbox="1635 654 1921 737" style="border: 1px solid black; padding: 5px; margin-top: 10px; background-color: #90ee90;"> Show District Power Point Presentation. </div> <div data-bbox="1661 899 1990 1393" style="border: 1px solid black; padding: 5px; margin-top: 10px; background-color: #add8e6;"> <p>Set up Interactive Notebook </p> <p>Right side of Interactive Notebook: Students record vocabulary, lab notes, concepts,</p> <p>Left side of Interactive Notebook: Students create brainstorming, mind-mapping, questioning, and other synthesis strategies to make sense of the content.</p> </div>



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First Six Weeks - **Week Two- Aug 31 -Sept 4- Themes**

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>Introduction (4) A system is a collection of cycles, structures, and processes that interact. Students should understand a whole in terms of its components and how these components relate to each other and to the whole. All systems have basic properties that can be described in terms of space, time, energy, and matter. Change and constancy occur in systems and can be observed and measured as patterns. These patterns help to predict what will happen next and can change over time.</p>	<p>Introduction (2) Recurring themes are pervasive in sciences, mathematics, and technology. These ideas transcend disciplinary boundaries and include patterns, cycles, systems, models, and change and constancy.</p> <div data-bbox="464 824 726 984" style="border: 2px solid green; padding: 5px; text-align: center;"> <p>Recurring Themes</p> </div>	<ul style="list-style-type: none"> ▶ A system is a collection of cycles, structures, and processes that interact. ▶ All systems have basic properties that can be described in terms of space, time, energy, and matter. ▶ Change and constancy occur in systems and can be observe and measured as patterns. ▶ Patterns help predict what will happen next and can change over time. 	<p>systems change Constancy pattern cycles models</p>	<p>These concepts are part of Kinder through 5th grade.</p>	<p>Create poster for each main idea. An example is attached to this document. Posters need to be displayed for the rest of the year to make easy reference to the concepts.</p> <div data-bbox="1671 613 1950 816" style="border: 1px solid black; background-color: yellow; padding: 5px;"> <p>These five concepts will be our BIG IDEAS for this year. Teachers will relate the rest of the content to these areas.</p> </div>



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First Six Weeks - **Week Three and Four** - September 7-18 - Organisms and Environments

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.8) Science concepts. The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:</p> <p>(A) Observe and describe the habitats of organisms within an ecosystem</p> <div data-bbox="79 829 394 1166" style="border: 1px solid blue; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot: Make a water ecosystem with plants, such as elodea, and small animals, such as guppies and snails. Observe and describe the habitat within that system.</p> </div>	<p>(3.9) Organisms and environments. The student knows that organisms have characteristics that help them survive, and can describe patterns, cycles, systems, and relationships within the environments. The student is expected to:</p> <p>(A) observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem;</p> <div data-bbox="457 959 751 1295" style="border: 1px solid blue; padding: 5px; margin-top: 10px; text-align: center;">  <p>Write several examples of how a tree supports a bird.</p> </div>	<p>► Living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live.</p> <p>► Some animal’s adaptations are better suited to specific environments, which makes them more likely to survive and reproduce</p> <div data-bbox="779 699 1087 1076" style="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> <p>Have students identify and describe the parts of each of the ecosystems (rain forest, ocean, wetland, desert) Identify the parts of the habitats that correlate to an animals assigned to them. Example: The desert includes sandy soil, cacti and other dry weather plants, and animals. The kangaroo rat lives in a hole in the ground.</p> </div> <div data-bbox="806 1133 1129 1312" style="border: 1px solid orange; padding: 5px; margin-top: 10px;"> <p>Guiding Questions: What are the physical characteristics of a desert?</p> </div>	<p>habitat ecosystem environment organism population community biome wet lands tundra savanna prairie taiga marsh polar species adaptations survival</p>	<p>This TEK is introduced and master in 3rd Grade.</p> <div data-bbox="1346 500 1581 1214" style="border: 1px solid orange; border-radius: 50%; padding: 10px; margin-top: 20px; text-align: center;"> <p>Arrange this week and the rest of the following weeks for this six weeks according to your preference!</p> </div>	<p>Internet Activities:</p> <ul style="list-style-type: none"> ► www.sfscience.com ► http://www.unitedstreaming.com ► <i>The Magic School Bus in the Rain Forest</i> http://www.unitedstreaming.com ► <i>Elementary Video Adventures: Habitats of the World</i> http://www.unitedstreaming.com ► <i>Hábitats del mundo</i> http://www.unitedstreaming.com ► <i>Habitats: Homes for Living Things</i> ► Habitat Maker online http://mrnussbaum.com/habitatmaker/desert.html <p>AIMS Magazine vol 18 nov 10 "Habitat Changes" Critters: "Biome Boxes" Magazine- vol 22, no 4 Readers theater; We need each other Magazine Vol 18, No 8 "Build a Bog"</p> <div data-bbox="1633 1068 1997 1222" style="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> <p>Recommended Field Trip: Rio Bosque (Free of Charge) See for more information: www.cerm.utep.edu/riobosque/</p> </div>

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First Six Weeks - Week Five - Sept 21 - 25 -Environmental Changes - Themes

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.8) Science concepts. The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:</p> <p>(C) Describe environmental changes in which some organisms would thrive, become ill, or perish</p> <p>(D) Describe how living organisms modify their physical environment to meet their needs such as beavers building a dam or humans building a home</p>	<p>(3.9) Organisms and environments. The student knows that organisms have characteristics that help them survive, and can describe patterns, cycles, systems, and relationships within the environments. The student is expected to:</p> <p>(C) describe environmental changes such as floods and droughts where some organisms thrive and others perish, or move to new locations;</p>	<p>► Living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live.</p> <p>► Beavers build dams, which can create a new lake</p> <p>► The dam provides the beaver with a home and protection from enemies</p> <div data-bbox="737 889 1171 1198" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Guiding Questions: How can environments change? How do organisms adapt to change in their environment? How do environmental changes affect the habitat of organisms? How can human interactions affect plants and animals? How has the environment around our school changed?</p> </div>	<p>survival adaptation environment thrive perish living org. physical envi. Population community environmental changes floods droughts</p>	<p>This TEK is introduced and master in 3rd Grade.</p> <div data-bbox="1316 699 1598 1117" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>► Have students write down three reasons why some seeds are able to sprout after a fire.</p> <p>► Have students obtain a list of endangered species in the Central Texas area by visiting the FWS website at http://www.fws.gov/endangered/kids/index.html</p> <p>Have students make a poster with drawing and text about why the species is endangered and what</p> </div>	<p>Internet Activities:</p> <p>► <i>Changing How Things Look</i> http://www.utdanacenter.org/sciencetoolkit/instruction/snapshots/4.php</p> <p>AIMS Critters: "Missing Moths" Magazine- Vol 18, no 10: "Habitat Changes"</p> <div data-bbox="1759 678 1839 760" style="text-align: center;">  </div> <p>Idea for Interactive Notebook</p> <p>Take students for a Nature walk Possible prompt: Describe changes you observed during your nature walk that people, plants, and animals made to the environment so that they can survive. (Example of a student response: A bird built a nest in a tree so that it could lay its eggs, protect its babies, and have shelter.)</p>

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First Six Weeks - *Week Six* - September 28-Oct 2 - Survival of Plants

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.9) Science concepts. The student knows that species have different adaptations that help them survive and reproduce in their environment. The student is expected to:</p> <p>(A) observe and identify characteristics among species that allow each to survive and reproduce</p> <p>(B) Analyze how adaptive characteristics help individuals within a species to survive and reproduce.</p> <div data-bbox="75 997 394 1214" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot: Make a small terrarium containing an animal that is difficult to see because of its use of camouflage. Have students brainstorm why it is difficult to see the animal.</p> </div>	<p>(3.10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:</p> <p>(A) explore how structures and functions of plants and animals allow them to survive in a particular environment;</p> <div data-bbox="436 927 835 1239" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>► Have students draw pictures of their favorite wild animal. The picture should include everything the animal needs to survive.</p> <p>► Using pictures of animals, discuss how animals adapt to seasons, to the dark, and to people by using pictures of bears, sharks, bats, deer, coyotes etc, Discuss hibernation, echolocation, and relocation.</p> </div>	<p>► The student knows that species have different adaptations that help them survive and reproduce in their environment</p> <p>► Adaptations are special features such as body structures, coverings, or coloration, that help an organism survive in its environment</p> <p>► Some animal’s adaptations are better suited to specific environments, which makes them more likely to survive and reproduce</p>	<p>coloration camouflage reproduction inherited characteristics species survive reproduce adaptation adaptive structures analyze functions</p>	<p>Grade 2 (2.9) Science concepts. The student knows that living organisms have basic needs. The student is expected to: (A) identify the external characteristics of different kinds of plants and animals that allow their needs to be met. (B) compare and give examples of the ways living organisms depend on each other and on their environments.</p> <p>Grade 4 (4.8) Science concepts. The student knows that adaptations may increase the survival of members of a species. The student is expected to: (A) identify characteristics that allow members within a species to survive and reproduce; (B) compare adaptive characteristics of various species; and (C) identify the kinds of species that lived in the past and compare them to existing species</p>	<p>Internet Activities: ► <i>From Egg to Frogs</i> <i>Sticky Tongue</i> http://www.utdanacenter.org/sciencetoolkit/instruction/snapshots/4.php</p> <p>AIMS "Budding Botanist" "Cactus" "New Plant Discovery"</p> <div data-bbox="1633 683 2003 1068" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot: Use one cup of dry cat food that has three or more different color of kibble. Spread the cat food over a 5 meter area. The food represents predators. Give the students 20 seconds to pick up as many of the pieces of cat food as possible. Discuss why certain colors of food were more easily gathered.</p> </div>

Guiding Questions:
How are organisms adapted to their environments?
What are adaptive characteristics of animals?
How do adaptations help organisms?


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Second Six Weeks - **Week One and Two**- October 5-16- Life Cycle of Plants and Life Cycle of Animals

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>New TEKS</p> <div data-bbox="86 337 338 418" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Week one: Plants Week two: Animals </div> <div data-bbox="65 618 396 899" style="border: 1px solid black; padding: 5px;"> <p>Guiding Questions: What are the differences and similarities of the life cycle of a plant and of an animal?</p> </div>	<p>(3.10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:</p> <p>(C) investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles, such as tomato plants, mealworms and lady bugs.</p>	<p>► Organisms undergo similar life processes and have structures that help them survive within their environment,</p> <div data-bbox="793 626 1138 1016" style="text-align: center;">  <div data-bbox="806 786 1125 980" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Draw the life cycle of a tomato plant, bean plant, butterfly and describe each step. </div> </div>	<p>diverse life cycle investigate compare seed bulb sprout seedling sapling adult</p>	<p>Grade 4 4.10B</p> <p>Grade 2 2.10C</p>	<p>Aims Plants <u>Cycle of Knowing and Growing</u> " Golden House" "Just a little Sprout" "Season-O" "Growing Bulbs" "A Snap of Time" "What a Corny Life" Animals <u>Cycle of Knowing and Growing</u> "A Time of their Own" "Silk Worms" Critters "This is your Life Tad Pole" Magazine Vol. 19 No1 "A Frog's Life"</p>


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Second Six Weeks - **Week Three** - October 19 - 23 Survival and Characteristics of Animals

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.10) Science concepts. The student knows that many likenesses between offspring and parents are inherited from the parents. The student is expected to:</p> <p>(A) Identify some inherited traits of plants.</p> <p>(B) Identify some inherited traits of animals</p> <div data-bbox="79 716 409 1177" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Guiding Questions: What do organisms inherit from their parents? What do organisms learn from their parents? How does the beaver use tools to build its home? Is the elephants trunk a tool, why or why not?</p> </div>	<p>(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:</p> <p>(B) explore that some characteristics of organisms are inherited, such as the number of limbs on an animal or flower color, and recognize some behaviors are learned from the environment, such as animals using tools to get food; and</p>	<p>► Many likenesses between offspring and parents are inherited from the parents.</p> <p>► Traits are special features of an animal, such as wings of birds and long necks of giraffes</p> <p>► Traits are special features of a plant, which may be types of leaves, color of flowers, or seeds in pine cones.</p> <p>► Animals resemble others of their species because of inherited traits</p> <div data-bbox="779 1073 1173 1370" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshots: On a filed investigation, have students observe plants or animals and their offspring, Identify traits that the offspring have in common with adults.</p> </div>	<p>traits inherited traits offspring parent characteristics environment</p>	<p>Grade 2 (8) Science concepts. The student distinguishes between living organisms and nonliving objects. The student is expected to: (A) identify characteristics of living organisms; and (B) identify characteristics of nonliving objects.</p> <p>Grade 4 (4.9) Science concepts. The student knows that many likenesses between offspring and parents are inherited or learned. The student is expected to: (A) distinguish between inherited traits and learned characteristics; and (B) identify and provide examples of inherited traits and learned characteristics</p>	<p>Aims Magazine: Vol. 21 No 4 'ETS' <u>Sensational Springtime</u> "Who's My Mom" "Meet the Guppy Family" <u>Critters</u> "Hide n Seek" "Table Manners" Magazine Vol 18, No 4 "Isn't It interesting: Family ties"</p> <div data-bbox="1703 711 2024 1036" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot: Show students pictures of young animals and their parents. Identify traits that the offspring have in common with the parents.</p> </div> <div data-bbox="1690 1073 2024 1393" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Have students create a chart that shows the behaviors that baby animals know how to do when they are born and behaviors that adult animals know how to do. Have them categorize the behaviors as inherited or learned</p> </div>


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Second Six Weeks - **Week Four** - October 26- 30 Learned Behavior

Standards		Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>NEW part of TEKS</p> <div data-bbox="71 493 394 980" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Guiding Questions: What is the difference between learned behavior and inherited traits? How does a seal adapt when moving on the rocks? Compare it when it is moving in the water?</p> </div>	<p>(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:</p> <p>(B) explore that some characteristics of organisms are inherited, such as the number of limbs on an animal or flower color, and recognize some behaviors are learned from the environment, such as animals using tools to get food; and</p>	<p>► Organisms undergo similar life processes and have structures that help them survive within their environment,</p>	<p>Characteristics organisms behavior learned b. recognize</p>	<p>Grade 4 4.10B</p> <p>Grade 2 2.10A</p>	<p>AIMS Magazine: Vol. 23 No 3 "Bunches of Bats" <u>Critters</u> "Hot Foot, Cool Feet"</p> <div data-bbox="1688 711 2024 1114" style="border: 1px solid blue; padding: 10px; margin-top: 20px;">  <p>How does a human being adapt to their environment.</p> </div>

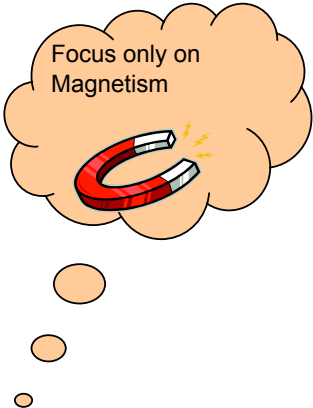



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Second Six Weeks - **Week Five** - Nov. 2-6 Flow of Energy (Food Chain)

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.8) Science concepts. The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:</p> <p>(B) Observe and identify organisms with similar needs that compete with one another for resources such as oxygen, water, food, or space</p> <p>(C) Describe environmental changes in which some organisms would thrive, become ill, or perish</p> <div data-bbox="65 1060 443 1385" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Guiding Questions: How do organisms get their food? How does deforestation effect both meat eaters and plant eaters?</p> </div>	<p>(3.9) Organisms and environments. The student knows that organisms have characteristics that help them survive, and can describe patterns, cycles, systems, and relationships within the environments. The student is expected to:</p> <p>(B) identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond, or bees from a field;</p>	<p>► Living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live.</p> <p>► Living organisms in an ecosystem must compete with other living things for limited resources</p> <p>► Grazing animals compete with each other for grass, or snakes and owls may compete with each other for mice</p> <div data-bbox="808 805 1171 1203" style="border: 1px solid blue; padding: 5px; margin-top: 20px;"> <p>Dana Center Snapshot: Set up an aquarium with three different types of fish to observe how they compete for resources. Check with pet store to make sure the fish are compatible.</p> </div>	<p>competition food chain predators prey consumers producers omnivore herbivore carnivore</p>	<p>Grade 2 (2.9) The student knows that living organisms have basic needs. The student is expected to:</p> <p>B. Compare and give examples of the ways living organisms depend on each other and on their environments</p> <p>Grade 5 (5.9) Science concepts. The student knows that adaptations may increase the survival of members of a species. The student is expected to:</p> <p>(A) compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem</p> <div data-bbox="1394 1141 1675 1271" style="border: 1px solid black; padding: 2px; margin-top: 10px;"> <p>Notice that this concept is not covered in 4th grade.</p> </div>	<p>Internet Activities:</p> <p>► <i>But I Need This</i> ► <i>From Eggs to Frogs</i> http://www.utdanacenter.org/sciencetoolkit/instruction/snapshots/4.php</p> <p>► www.wtaide.com/png/foodchains.htm</p> <p>AIMS Critters "Catch me If you can" "Chain Games"</p> <p>Magazine Vol 19, No 8 "Sea Food" Magazine Vol 19 No 6 "The Kapok Tree"</p> <p>Literature: The Great Kapok Tree by Lynne Cherry</p> <div data-bbox="1707 1049 1997 1289" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Have students connect cards with pictures of plants and animals into long chains. Draw arrows to show the flow of energy</p> </div>

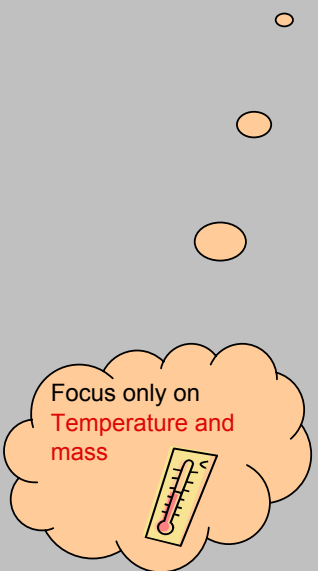
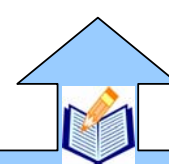
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Third Six Weeks - **Week One**-Nov 9-13 Magnetism

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.7) Science concepts. The student knows that matter has physical properties. The student is expected to:</p> <p>(A) Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter</p> <div data-bbox="73 862 394 1203" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Warning Safety Note: Warn students to keep magnets away from audio cassettes, video tapes and computer disks. Remember to keep magnets away from your computer and discs or other data storage devices!</p> </div>	<p>(3.5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed and used. The student is expected to:</p> <p>(A) measure test, and record physical properties of matter including temperature, mass, magnetism, and the ability to sink or float;</p> <div data-bbox="506 737 816 1143" style="text-align: center;">  <p>Focus only on Magnetism</p> </div>	<p>► matter has physical properties.</p> <p>► Matter can be described by properties such as hardness, color, smell, shape, density, magnetism, or melting point</p> <p>► Metal objects made of iron, nickel, cobalt, and steel are attracted to magnets, and nonmetals are not magnetic</p> <div data-bbox="842 699 1188 1143" style="border: 1px solid blue; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot: Test various metal objects- such as a penny, aluminum foil, brass screws, metal thimble, metal bottle caps or steel paper clips- with a magnet. Gather information about which object respond to the magnet.</p> </div> <div data-bbox="867 1162 1173 1365" style="border: 1px solid blue; padding: 5px; margin-top: 10px; text-align: center;">  <p>Make a list of magnetic and non-magnetic objects</p> </div>	<p>magnet iron steel magnetic non-magnetic iron poles repel attract magnetic field</p>	<p>Concept introduce at Grade 3 Not very specific at Grade 4</p> <p>Grade 5  (7) Science concepts. The student knows that matter has physical properties. The student is expected to: (A) classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound;</p> <div data-bbox="1392 764 1692 902" style="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> <p>Use Venn Diagram or Double Bubble to compare magnetic and non magnetic objects.</p> </div> <div data-bbox="1262 1057 1570 1317" style="border: 1px solid orange; padding: 5px; margin-top: 10px;"> <p>Guiding Questions: What are magnets? What happens when two objects with magnetic fields are brought near each other?</p> </div>	<p>Science Textbook Pages B42 - B43</p> <p>Internet resources: www.school-for-champions.com/science/magnetism.htm www.coolmagnetman.com/magnetindex.htm</p> <p>AIMS Magazine: vol 14, no 1 "A-maze-ing magnets" <u>Primary Science</u> "We can sort"</p> <p>Literature Connections <u>What Magnets can do</u> by Jennings, terry <u>Magnets</u> by Olien Becky and Olien, Rebeca Magnets all aboard science reader: Level 3 by Anne Schreiber</p> <div data-bbox="1717 976 2028 1341" style="text-align: center;">  <p>Remember that you are to review the material covered during the last six weeks and connected to our BIG IDEAS:</p> </div>



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Third Six Weeks - **Week Two**- Nov 16-20- Temperature and Mass

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.7) Science concepts. The student knows that matter has physical properties. The student is expected to:</p> <p>(A) Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter</p> 	<p>(3.5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed and used. The student is expected to:</p> <p>(A) measure test, and record physical properties of matter including temperature, mass, magnetism, and the ability to sink or float;</p>	<p>► matter has physical properties.</p> <p>► Matter can be described by properties such as hardness, color, smell, shape, density, magnetism, or melting point</p> <p>► Matter has mass and takes up space, and can exist in three states</p> <p>► Matter can change from one state to another by adding or taking away heat energy</p>  <div data-bbox="861 990 1176 1250" style="border: 1px solid blue; padding: 5px; text-align: center;"> <p>Using a thermometer measure the temperature every hour of the school day and make a graph showing the rise and fall of the temperature.</p> </div>	<p>mass temperature thermometer grams</p>	<p>Grade 2 (2.7) The student knows that many types of changes occur. A. Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement</p> <p>Grade 4 (4.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (A) observe and record changes in the states of matter caused by the addition or reduction of heat; and</p> <p>Grade 5 (5.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (D) observe and measure characteristic properties of substances that remain constant such as boiling points and melting points</p>	<p>Internet Resources:</p> <p>► Balance Scale Online Tutorial www.ohaus.com/products/education/tutorials.asp?source+2</p> <p>► www.Kids-science-experiments.com/cat_temperature.html</p> <p>► www.teach-nology.com/teacherslesson-plans/science/basic</p> <p>AIMS Magazine: vol 16, no3 "Cools Colors" <u>Primary Physics</u> "Heat energy and temperature"</p> <div data-bbox="1722 974 2026 1112" style="border: 1px solid black; background-color: yellow; padding: 5px;"> <p>Measure temperature of water: Room temperature, salt water, freezing water</p> </div>

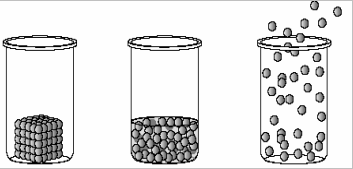


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Third Six Weeks - **Week Three** - Nov 30 - Dec 4- Sink or Float

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.7) Science concepts. The student knows that matter has physical properties. The student is expected to:</p> <p>(A) Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter</p> <div data-bbox="94 1071 409 1307" style="border: 1px solid black; border-radius: 50%; padding: 10px; width: fit-content; margin-top: 20px;"> <p>Focus only on Sink or float</p> </div>	<p>(3.5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed and used. The student is expected to:</p> <p>(A) measure test, and record physical properties of matter including temperature, mass, magnetism, and the ability to sink or float;</p>	<p>▶ matter has physical properties. ▶ Matter can be described by properties such as hardness, color, smell, shape, density, magnetism, or melting point ▶ Matter has measurable physical properties and those properties determine how matter is classified, changed and used.</p> <div data-bbox="840 868 1165 1193" style="border: 1px solid blue; padding: 10px; text-align: center; margin: 20px auto; width: 150px;">  <p>Why does a large ocean borge not sink even though it is very heavy.</p> </div>	<p>bouyancy shape volume density mass displacement</p>	<p>Grade 2 (2.7) The student knows that many types of changes occur. A. Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement</p> <p>Grade 4 (4.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (A) observe and record changes in the states of matter caused by the addition or reduction of heat; and</p> <p>Grade 5  (5.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (D) observe and measure characteristic properties of substances that remain constant such as boiling points and melting points</p>	<p>AIMS <u>Off the Wall Science</u> "Floating and Sinking"</p>

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Third Six Weeks - **Week Four**- Dec 7-11 -State of Matter

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.7) Science concepts. The student knows that matter has physical properties. The student is expected to:</p> <p>(B) Identify matter as liquids, solids, and gases</p>  <div data-bbox="86 764 1003 1317" style="border: 1px solid black; background-color: yellow; padding: 10px; margin-top: 10px;"> <p>All matter has mass and takes up space. Matter in the solid state has tightly packed particles and does not change shape when moved from one container to the next. Matter in liquid state has loosely packed particles, flows when poured and takes the shape of its container. Matter in the gaseous state has widely spaced energetic particles that bounce against container walls and each other until they are completely spread out to fill the entire container.</p> </div>	<p>(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed and used. The student is expected to:</p> <p>(B) describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape, and liquids and gases take the shape of their container;</p>	<p>► matter has physical properties.</p> <ul style="list-style-type: none"> ► Solids keep their own shape when placed in a new container ► Solids can be further classified by their hardness, which determines how much effort it might take to shape it into a new form ► Liquids flow and take the shape of their container ► Gases have no definite shape or volume ► Matter has mass and takes up space, and can exist in three states 	<p>solid, liquid, gas, vapor evaporation condensation container definite shape</p> <div data-bbox="1041 1081 1367 1344" style="border: 1px solid blue; background-color: lightblue; padding: 5px; margin-top: 20px; text-align: center;">  <p>Describe the different states of matter.</p> </div>	<p>Introduced in 3rd grade</p> <p>Grade 4 (4.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (B) conduct tests, compare data, and draw conclusions about physical properties of matter including states of matter, conduction, density, and buoyancy</p> <p>Grade 5  (5.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (A) classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound</p>	<p>Internet Resources:</p> <ul style="list-style-type: none"> ► http://home.howstuffworks.com/science-projects-for-kids-state-of-matter.htm <p>AIMS Magazine: vol 19, no7 "A matter of state" Chemistry Matters "Oh Dear What can this matter be" "Making sense of solids" "Looking at Liquids" "Gas stations"</p> <p>Literature Connection: State of Matter by Suzanne Slade</p> <div data-bbox="1734 834 1997 1235" style="border: 1px solid orange; background-color: lightorange; padding: 10px; margin-top: 10px;"> <p>Guiding Questions:</p> <p>What is matter?</p> <p>What are the physical states of matter?</p> <p>How are the molecules arranged in matter and how?</p> </div>

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Third Six Weeks - **Week Five**- Dec 14-18 - Changes in Matter: heating and cooling

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.7) Science concepts. The student knows that matter has physical properties. The student is expected to:</p> <p>(B) Identify matter as liquids, solids, and gases</p> <p><i>This Standard was expanded to include changes in state of matter</i></p> <div data-bbox="92 846 359 1117" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Guiding Questions: How does heating and cooling affects humans?</p> </div>	<p>(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed and used. The student is expected to:</p> <p>(C) predict, observe and record changes in the state of matter caused by <i>heating or cooling</i>;</p>	<ul style="list-style-type: none"> ▶ matter has physical properties. ▶ Matter can be described by properties such as hardness, color, smell, shape, density, magnetism, or melting point ▶ Matter has measurable physical properties and those properties determine how matter is classified, changed and used. ▶ The state of matter can be changed by heating and cooling. 	<p>heating cooling predict observe vapor condensation evaporation</p>	<p>Introduced in 3rd grade</p> <p>Grade 4 (4.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (B) conduct tests, compare data, and draw conclusions about physical properties of matter including states of matter, conduction, density, and buoyancy</p> <p>Grade 5 (5.7) Science concepts. The student knows that matter has physical properties. The student is expected to: (A) classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound</p>	<p>Internet Resources: www.fossweb.com AIMS <u>Chemistry Matters</u> "Watch It Burn" "Kool Kups" <u>Winter Wonders</u> "Room for Change"</p>

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Fourth Six Weeks - **Week One**- Jan 5-8 - Mixtures

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>New TEKS</p> <div data-bbox="128 829 390 1118" style="border: 1px solid black; background-color: yellow; padding: 5px; width: fit-content;"> <p>It is important for students to realize that solutions are a type of mixture. A mixture does not chemically change and it can be physically separated into its original components.</p> </div>	<p>(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed and used. The student is expected to:</p> <p>(D) explore and recognize that a mixture is created when two materials are combined such as gravel/sand and metal/plastic paper clips.</p> <p>This is new for third grade, introduces the concept of mixture.</p>	<p>► Matter has measurable physical properties and those properties determine how matter is classified, changed and used.</p> <div data-bbox="869 680 1104 1005" style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Guiding Questions: What are the limitations of this model? Why are models important? How do scientist use models?</p> </div>	<p>mixture solution dissolve decrease increase evaporate</p>	<p>Grade 5 5.7B Demonstrate that some mixtures maintain the physical properties of their ingredients</p> <p>5.7 C Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving sugar in water</p> <div data-bbox="1373 846 1696 1252" style="border: 1px solid blue; background-color: lightblue; padding: 5px; width: fit-content;"> <p>Dana Center Snapshot: Have students make a mixture of salt and water in a plastic cup. Pour a small amount of the salt water into a pie pan so that it forms a thin layer. Allow the water to evaporate. Have students record observations before and after the water evaporates.</p> </div>	<p>AIMS Physical Science Notebook p.35-37, p.38-46, p.47-55, p.67-73</p> <p>Online resources: http://www.eduref.org/Virtual/Lessons/Science/Chemistry/CHM0013.html</p> <div data-bbox="1730 764 1969 987" style="border: 1px solid black; background-color: yellow; padding: 5px; width: fit-content;"> <p>Students should experiment with different types of mixtures, such as liquid with liquid, liquid with solids, and solids with solids.</p> </div>

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Fourth Six Weeks - Week Two- Jan 11-15 - Forces: Magnetism and Gravity

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.6) The students knows that forces cause change. The student is expected to:</p> <p>(A) Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied</p> <p>Basic force, motion and energy concepts have been expanded in the adopted 2009 TEKS.</p>	<p>(3.6) Force, motion and energy. The student knows that forces cause change, and that energy exists in many forms. The student is expected to:</p> <p>(C) observe forces such as magnetism and gravity acting on objects.</p>	<ul style="list-style-type: none"> ▶ Forces cause change. ▶ A force is a push or pull ▶ Forces can cause objects to change direction or speed ▶ Objects with more mass require more force to move them ▶ Gravity is a force. ▶ An object can move when a force is applied to it. ▶ Inertia keeps objects in motion or still until a force acts upon the object. ▶ Friction is how rough or smooth something is. The more friction, the harder it is to move. ▶ Newton's Laws of Motion: An object at rest stays at rest until a force acts upon it. An object in motion stays in motion until a force acts upon it. ▶ Gravity on the Moon is 1/6 the force of gravity on Earth 	<p>force motion gravity magnetism</p>	<p>Grade 2 (2.7) The student knows that many types of changes occur. The student is expected to:</p> <p>C. Demonstrate a change in the motion of an object by giving the object a push or a pull</p> <p>This TEK is not specifically mention in Grade 4 and 5</p> <p>Grade 4 (4.6) Science concepts. The student knows that change can create recognizable patterns. The student is expected to: (B) illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface</p>	<p>Online resources: Interactive Forces Game http://www.bbc.co.uk/schools/scienceclips/ages/10_11/forces_action.shtml</p>



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Fourth Six Weeks - Week Three - Jan 18-22- Changes in position and motion

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.6) The students knows that forces cause change. The student is expected to:</p> <p>(A) Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied</p> <p>Basic force, motion and energy concepts have been expanded in the adopted 2009 TEKS.</p>	<p>(3.6) Force, motion and energy. The student knows that forces cause change, and that energy exists in many forms. The student is expected to:</p> <p>(B) demonstrate and observe that position and motion can be changed by pushing and pulling objects such as swings, cars, and balls; and</p>	<ul style="list-style-type: none"> ▶ Forces cause change. ▶ A force is a push or pull ▶ Forces can cause objects to change direction or speed ▶ Objects with more mass require more force to move them 	<p>push pull force mass movement</p>	<p>Grade 2 (2.7) The student knows that many types of changes occur. The student is expected to:</p> <p>C. Demonstrate a change in the motion of an object by giving the object a push or a pull</p> <p>This TEK is not specifically mention in Grade 4 and 5</p> <p>Grade 4 (4.6) Science concepts. The student knows that change can create recognizable patterns. The student is expected to: (B) illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface</p>	<p>Internet Activities:</p> <ul style="list-style-type: none"> ▶ <u><i>Toys and Forces</i></u> http://www.utdanacenter.org/sciencetoolkit/instruction/snapshots/4.php <p>One investigation per week to reinforce this concept has been provided.</p> <ol style="list-style-type: none"> 1. Defying Gravity 2. Toys: Forces 3. Friction Shoes <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot: Use a launcher to push with the same force toy cars with different masses and record the distance the toy cars move. Have students brainstorm the relationship between the mass of the toy car and the distance it moves.</p> </div>


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Fourth Six Weeks - **Week Four**- Jan 25-29 -Forms of Energy: light

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.6) The students knows that forces cause change. The student is expected to:</p> <p>(A) Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied</p> <p>Basic force, motion and energy concepts have been expanded in the adopted 2009 TEKS.</p>	<p>(3.6) Force, motion and energy. The student knows that forces cause change, and that energy exists in many forms. The student is expected to:</p> <p>(A) explore different forms of energy including, light, sound, and heat/thermal in everyday life;</p>	<p>▶ Light travels in rays.</p> <p>▶ Light can be reflected (bounce back) or refracted (bend). ▶ A mirror, water, and tinted windows reflect light.</p> <p>▶ energy exists in many forms.</p> <p>▶ Lenses in glasses (cameras and telescopes) and water refract light. ▶ Have students illustrate reflection & refraction.</p> <div style="text-align: center;">  <p>Have students illustrate reflection and refraction.</p> </div>	<p>light reflection refraction</p>	<p>Grade 4 (4.6) Science concepts. The student knows that change can create recognizable patterns. The student is expected to:</p> <p>(B) illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface</p>	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> ●Out of Darkness An Intro to Light ●Exploring Light and Color <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px; margin-top: 10px;"> <p>The concept of light and sound tested at grade 5 are based on students' having hands-on-experiences that explore reflection, refractions, and vibrations. These investigations are the basis for understanding frequency, pitch, wavelength, and amplitude, which will be studied at the middle and high school levels.</p> </div>

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Fourth Six Weeks - Week Five- Feb 1-5- Forms of Energy: Heat/Thermal

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.6) The students knows that forces cause change. The student is expected to:</p> <p>(A) Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied</p> <p>Basic force, motion and energy concepts have been expanded in the adopted 2009 TEKS.</p>	<p>(3.6) Force, motion and energy. The student knows that forces cause change, and that energy exists in many forms. The student is expected to:</p> <p>(A) explore different forms of energy including, light, sound, and heat/thermal in everyday life;</p>	<p>►Energy can change from one form to another.</p> <p>►Types of energy include chemical, electrical, magnetic, light, heat, sound, and solar energy.</p> <p>►Heat is energy produced by the movement of charged particles.</p>	<p>energy solar energy kinetic energy potential energy chemical electrical magnetic light heat sound solar</p>	<p>Grade 4 (4.7) Science concepts. The student knows that matter has physical properties. The student is expected to:</p> <p>(A) observe and record changes in the states of matter caused by the addition or reduction of heat; and</p> <div data-bbox="1394 878 1961 1049" style="border: 1px solid black; background-color: #ffffcc; padding: 5px; margin-top: 10px;"> <p>Students should have the opportunity to experiment with different forms of energy in the classroom, laboratory, and field. Students should be able to identify different forms of energy such as light, electricity, and heat.</p> </div>	<p>AIMS Physical Science Notebook</p>  <ul style="list-style-type: none"> ●Exploring Energy ●Heat Temperature and Energy ●Exploring Heat ●Measuring and Using Electricity



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Fourth Six Weeks - Week Six- Feb 8 -12 - Forms of Energy: Sound

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.6) The students knows that forces cause change. The student is expected to:</p> <p>(A) Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied</p> <p>Basic force, motion and energy concepts have been expanded in the adopted 2009 TEKS.</p>	<p>(3.6) Force, motion and energy. The student knows that forces cause change, and that energy exists in many forms. The student is expected to:</p> <p>(A) explore different forms of energy including, light, sound, and heat/thermal in everyday life;</p>	<ul style="list-style-type: none"> ▶ Sound travels in waves. ▶ Sound is made from vibrations. Vibrations make sound. ▶ Vibrations can be felt. ▶ Sound travels through a medium; such as air or water. ▶ Sound does not travel through space. 	<p>sound vibrate waves frequency</p>	<p>Grade 3 and 4 did not touch the topic of sound</p> <p>Grade 2 (2.7) Science concepts. The student knows that many types of change occur. The student is expected to:</p> <p>(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement</p>	<div data-bbox="1016 915 1360 1224" style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Dana Center Snapshot: Explain and demonstrate how sound is produced using homemade instruments that vibrate when manipulated.</p> </div> <div data-bbox="1404 1000 1766 1195" style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto; background-color: #ffffcc;"> <p>Vibrating objects create sound waves that can be conducted by solids, liquids, and gases. Sound waves travel fastest through solid matter and slowest in gaseous matter</p> </div>



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Fourth Six Weeks - **Week Seven**- Feb 15 - 19- Earth Science: SUN

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.11) The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</p> <p>D. Describe the characteristics of the Sun</p> <p>(3.3) The student uses critical thinking and scientific problem solving to make informed decisions</p> <p>C. Represent the natural world using models and identify their limitations;</p> <div data-bbox="109 928 394 1295" style="border: 1px solid orange; padding: 5px; margin-top: 20px;"> <p>Guiding Questions: What are the limitations of this model? Why are models important? How do scientist use models?</p> </div>	<p>(3.8) Earth and space. The student knows there are recognizable patterns in the natural world and among the Earth, Sun, and Moon system. The student is expected to:</p> <p>(B) describe and illustrate the Sun as a star composed of gases which provides light and heat energy for the water cycle; and</p> <p>(C) construct models that demonstrate the relationship of the Sun, Earth, and Moon system including orbit and position,</p> <p>8B expands role of Sun into Water System</p>	<p>► The Natural world includes earth materials and objects in the sky.</p> <p>► The Sun is a star that releases huge amounts of light and heat energy because it is a gigantic ball of extremely hot gases</p> <p>► The Sun’s surface has small dark sunspots that are slightly cooler</p> <p>► The sun is 93 million miles away from the Earth</p> <p>► The Sun’s heat and light provides energy for the water cycle, warms the Earth, and provides sunlight for plants to grow and produce food</p> <p>► Sunlight energy can cause changes in matter</p> <div data-bbox="856 1159 1142 1247" style="border: 1px solid gray; padding: 5px; margin-top: 20px;"> <p>Emphasis on Creating Models</p> </div>	<p>star solar system planet axis rotates orbit revolution gas solar energy model</p>	<p>Introduced in Grade 3</p> <p>Grade 4 </p> <p>(4.11) Science concepts. The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</p> <p>(C) identify the Sun as the major source of energy for the Earth and understand its role in the growth of plants, in the creation of winds, and in the water cycle</p>	<p>AIMS:</p> <ul style="list-style-type: none"> ► Our Star, the Sun p.33 ► Sun Prints p. 40 <p>Create a Model that demonstrate the relationship of the Sun, Earth and Moon (include orbit and position)</p> <div data-bbox="1717 779 2011 1247" style="border: 1px solid blue; padding: 5px; margin-top: 20px;"> <p>Dana Center Snapshot: Using a variety of pictures of the sun, have students record their observations about the sun's characteristics. Make sure to include pictures that show sunspots and solar flares.</p> </div>

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Fifth Six Weeks - **Week One**- Feb 22 - Feb 26 - Solar System

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.11) The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</p> <p>C. Identify the planets in our solar system and their position in relation to the Sun</p>	<p>(3.8) Earth and space. The student knows there are recognizable patterns in the natural world and among the Earth, Sun, and Moon system. The student is expected to:</p> <p>(D) Identify the planets in Earth's solar system and their position in relation to the Sun.</p>	<p>► The Natural world includes earth materials and objects in the sky.</p> <p>► Our solar system consists of eight planets and their moons, which rotate on their axis as they revolve around the Sun</p> <p>► The eight planets in order from the closest to the sun are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, & Neptune</p> <p>► Weather (climate) is different in different places on the Earth. It is warmer near the equator. It is colder near the North and South Poles. It rains more near oceans and mountains.</p>	<p>planet solar system relation inner planets outer planets</p> <div data-bbox="1220 678 1581 943" style="border: 2px solid blue; padding: 10px; text-align: center;">  <p>Draw your favorite planet with specific details.</p> </div> <div data-bbox="1266 1130 1537 1239" style="border: 1px solid black; padding: 5px; text-align: center; background-color: yellow;"> <p>Remember that Pluto is now classified as a dwarf planet.</p> </div>	<p>This concept is only taught in 3rd Grade</p>	<p>AIMS:</p> <p>► The Spaces in Our System p.20</p> <p>Internet Activities:</p> <div data-bbox="1696 613 2018 971" style="border: 2px solid blue; padding: 10px; text-align: center;"> <p>Dana Center Snapshot:</p> <p>Create models of the solar system to show the order of the planets from the sun.</p> </div>

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Fifth Six Weeks - Week Two- March 1-5 - Weather Changes

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
New TEKS	<p>(3.8) Earth and space. The student knows there are recognizable patterns in the natural world and among the Earth, Sun, and Moon system. The student is expected to:</p> <p>(A) observe, measure, record and compare day-to-day weather changes that include air temperature, wind direction and precipitation in different locations at the same time;</p>	<p>► Weather (Climate) is different in different places on the Earth. It is warmer near the equator. It is colder near the North and South Poles. It rains more near oceans and mountains</p>	<p>climate precipitation weather weather map wind direction temperature</p>	<p>Grade 4 (4.6) Science concepts. The student knows that change can create recognizable patterns. The student is expected to:</p> <p>(A) identify patterns of change such as in weather, metamorphosis, and objects in the sky</p> <p>Grade 2 (2.7) Science concepts. The student knows that many types of change occur. The student is expected to:</p> <p>(D) observe, measure, and record changes in weather, the night sky, and seasons.</p> <p>Grade 1 (1.7) Science concepts. The student knows that many types of change occur. The student is expected to:</p> <p>(C) observe and record changes in weather from day to day and over seasons;</p>	<p>Internet Resources www.uen.org/3-6interactives/science.shtml</p> <ul style="list-style-type: none"> ●Interactive Weather Maker ●Weather Flash <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Dana Center Snapshot Assign student groups an area of the United States. Have them research the climate for that area (temperature, rainfall, etc.) for the past five years and create a chart to organize data and record trends.</p> </div>


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Fifth Six Weeks - Week Three - March 8-12- Science Fair Project

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.2) Use scientific inquiry methods during field and laboratory investigations.</p> <p>(A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;</p> <p>(B) collect information by observing and measuring;</p> <p>(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;</p> <p>(D) communicate valid conclusions; and</p> <p>(E) construct simple graphs, tables, maps, and charts to organize, examine and evaluate information.</p>	<p>(3.2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:</p> <p>(A) plan and implement descriptive investigations including asking and answering questions, making inferences, and selecting and using equipment or technology needed to solve a specific problem in the natural world;</p> <p>(B) collect data by observing and measuring using the metric system and recognize differences between observed and measured data;</p> <p>(C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data;</p> <p>(D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations;</p> <p>(E) demonstrate that repeated investigations may increase the reliability of results; and</p> <p>(F) communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.</p>	<p>▶ repeated investigations may increase the reliability of results.</p> <div data-bbox="814 462 1123 592" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Students start working with their Science Fair Project. District Science Fair @ RSE on May 22nd.</p> </div> <div data-bbox="856 657 1354 1177" style="border: 2px solid orange; padding: 10px; margin: 10px 0;"> <p>Guiding Questions: Why do Scientists complete experiments? How do scientists develop a hypothesis for their experiment? How do they identify which definitions to operationally define? How do scientists plan their experiment? How do scientists complete an experiment? How do scientists document an experiment?</p> </div> <div data-bbox="982 1234 1228 1315" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Emphasis on Scientific Method</p> </div>	<p>scientific process independent variable observe measure predict communicate conclude models investigate</p>	<p>Grade 2 (2.2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to: (A) ask questions about organisms, objects, and events; (B) plan and conduct simple descriptive investigations; (C) compare results of investigations with what students and scientists know about the world; (D) gather information using simple equipment and tools to extend the senses; (E) construct reasonable explanations and draw conclusions using information and prior knowledge; and (F) communicate explanations about investigations.</p> <p>Grade 4 The TEKS at Grade 3 read the same in Grade 4.</p>	<p>Science Fair</p> <p>▶ http://www.freesciencefairproject.com/index.html ▶ http://www.all-science-fair-projects.com/category0.html ▶ http://sciencefairproject.virtualave.net/</p> <div data-bbox="1724 649 2016 958" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>SCIENCE FAIR REMINDERS:</p> <ul style="list-style-type: none"> • No names on front of board • Identify who took the pictures- names not important – just say, “taken by student” “taken by teacher” “taken by parent” • No soil, water, glass, or sharp objects • No live animals or plants – take pictures instead! </div>

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Fifth Six Weeks - **Week Four**- March 22 - 26- Soil Formation

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.11) The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</p> <p>B. Identify and record properties of soils such as color and texture, capacity to retain water, and ability to support the growth of plants</p> <div data-bbox="96 776 344 974" style="border: 1px solid black; background-color: #ffffcc; padding: 5px; margin-top: 20px;"> <p>Soils:</p> <ol style="list-style-type: none"> 1. Color 2. Texture 3. Capacity to retain water 4. Ability to support life </div>	<p>(3.7) Earth and space. The student knows that the Earth consists of natural resources and its surface is constantly changing. The student is expected to:</p> <p>(A) explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains;</p> <div data-bbox="457 789 760 1269" style="border: 1px solid blue; padding: 5px; margin-top: 20px;"> <p>Dana Center Snapshot: Plant bean seeds in samples of soil from various sites around the community. Observe the color and texture of the soil samples, the amount of water that appears in the bottom of the flower pot tray, and the number of seeds that germinate.</p> </div>	<p>► The Natural world includes earth materials and objects in the sky</p> <p>► Soil is formed when rock is weathered by wind, water, and temperature changes, and carried to new places by erosion</p> <p>► Soil texture is determined by the size of particles in the soil</p> <p>► Sand has large particles and does not retain water, while clay soil with tiny particles and does not allow plant roots to grow because it is sticky and packed when wet</p> <p>► Soils with humus are rich in nutrients, and support plant life and retain water better than sandy soils</p>	<p>humus fossils minerals weathering decomposition decay formation</p> <div data-bbox="1171 1052 1533 1279" style="border: 1px solid blue; padding: 5px; margin-top: 20px; text-align: center;">  <p>Have students explain how soils are formed.</p> </div>	<p>Grade 2 (2.10) The student knows that the natural world includes rocks, soil, water and gases of the atmosphere. The student is expected to:</p> <p>B. Identify uses of natural resources</p> <p>Grade 4 (4.11) Science concepts. The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</p> <p>(A) test properties of soils including texture, capacity to retain water, and ability to support life;</p>	<p>AIMS:</p> <ul style="list-style-type: none"> ► Soil Study p.160 ► What Makes Soil p.170 ► Soil Shakes p.179 ► Soil Soakers p.187 ► Which Soil Works Best? p.194 ► Don't Mix Me Up p. 200


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Fifth Six Weeks - Week Five- march 29 - April 2- Rapid Changes in Earths surface

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.6) The students knows that forces cause change. The student is expected to:</p> <p>(B). Identify that the surface of the Earth can be changed by forces such as earthquakes and glaciers</p>	<p>(3.7) Earth and space. The student knows that the Earth consists of natural resources and its surface is constantly changing. The student is expected to:</p> <p>(B) investigate rapid changes in the earth’s surface such as volcanic eruptions, earthquakes, and landslides;</p> <div data-bbox="514 938 674 1024" data-label="Image"> </div> <div data-bbox="443 1036 751 1166" data-label="Text"> <p>What type of building structure can withstand an earthquake best?</p> </div>	<ul style="list-style-type: none"> ▶ Forces cause change. ▶ Destructive natural forces include moving water, wind, rain, glaciers, earthquakes ▶ The Earth has a solid inner core covered by a mantle layer and a very thin top crust layer ▶ Earthquakes can move the plates of the Earth’s crust 	<p>surface earthquakes glaciers tornadoes weathering erosion landslide magma lava eruption</p> <div data-bbox="1287 748 1707 1214" data-label="Complex-Block" style="border: 2px solid blue; padding: 5px;"> <p>Dana Center Snapshot: Place a handful of sand or soil on a sheet of paper on which a 6-inch diameter circle has been drawn. Move the set-up to the center of a flat student desk or lab table. Have students pound on the table and record how the sand or soil behaves. Have the students repeat this activity by pounding on the desk with different amounts of force.</p> </div>	<p>This concept is only taught in 3rd Grade</p>	<p>AIMS:</p> <ul style="list-style-type: none"> ▶ Glaciers Come and Glaciers Go p.95 ▶ Shakes and Quakes p. 105 ▶ Weathering Away p. 101 <p>Refer to materials provided at the end of document</p> <p>Internet Resources</p> <ul style="list-style-type: none"> ▶ Virtual Earthquake: http://vcourseware4.calstatela.edu/ ▶ Use seismographs to chart earthquakes. www.calvin.edu/~molnar/moon/index.html www.umbra.mascom.nasa.gov/sdac.html



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Fifth Six Weeks - Week Six- April 5-9 - Landforms

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>New TEKS</p> <div data-bbox="58 667 405 971" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Guiding Questions: How do landforms develop? What forces of nature cause the formation of landforms? How does rain and flowing water change the land? How are all landforms similar?</p> </div>	<p>(3.7) Earth and space. The student knows that the Earth consists of natural resources and its surface is constantly changing. The student is expected to:</p> <p>(C) identify and compare different landforms including mountains, hills, valleys, and plains;</p>	<p>► Earth surface is constantly changing</p>	<p>landform mountains hills valleys plains</p>		<p>Internet Resources www.fossweb.com www.geography.mrdonn.org/landforms.html</p> <p>AIMS Earth Features page 45</p> <p>Textbook Making a model of a landform C-18, C-19 (Scott Foresman T.E)</p> <div data-bbox="1713 854 2024 1193" style="border: 1px solid blue; padding: 10px; margin-top: 20px; text-align: center;">  <p>Draw maps for different purposes using a key including the different landforms.</p> </div>




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Fifth Six Weeks - **Week Seven**- April 12 - 16 - Natural Resources

Standards 	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.11) The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</p> <p>A. Identify and describe the importance of earth materials including rocks, soil, water, and gases of the atmosphere in the local area and classify them as renewable, nonrenewable, or inexhaustible resources</p>	<p>(3.7) Earth and space. The student knows that the Earth consists of natural resources and its surface is constantly changing. The student is expected to:</p> <p>(D) explore the characteristics of natural resources that make them useful in products and materials such as clothing and furniture, and how resources may be conserved.</p> <div data-bbox="451 846 800 1166" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Guiding Questions: What materials make up the Earth? How are rocks and minerals used as resources in everyday life? What is a natural resource?</p> </div>	<ul style="list-style-type: none"> ▶ The Natural world includes earth materials and objects in the sky. ▶ Natural resources are materials on Earth that are used by humans and other living things ▶ Renewable resources, such as freshwater, plants, and animals can be replaced in short amounts of time ▶ Sunlight, wind, and tides are inexhaustible resources 	<p>natural resource conservation rocks soil water gases atmosphere classify</p> <p>renewable nonrenewable inexhaustible</p> <div data-bbox="1291 706 1690 1153" style="border: 1px solid black; border-radius: 50%; padding: 10px; margin-top: 20px; background-color: #ffffcc;"> <p>Notice that the new TEKS does not require 3rd graders to classify the natural resources.</p> </div>	<p>Grade 2 (2.10) The student knows that the natural world includes rocks, soil, water and gases of the atmosphere. The student is expected to:</p> <p>B. Identify uses of natural resources</p> <p>This concept needs to be mastered at grade 3</p>	<p>AIMS</p> <ul style="list-style-type: none"> ▶ Where is Water p.73 ▶ Treasures from the Earth p.121 ▶ Rock Minerals as Resources p.125 ▶ The Earth has what we need p. 133 ▶ Earth's Resources p. 210 ▶ Renewable Resources p. 211 ▶ Non-renewable Resources p. 213 ▶ Inexhaustible Resources p. 214 ▶ Resourceful Thinking p. 215 ▶ Concentrating on Resources p. 223 <div data-bbox="1717 917 2026 1258" style="border: 1px solid black; padding: 10px; margin-top: 20px; text-align: center;">  <p>After studying solar and wind mill power which do you prefer for your home and why?</p> </div>

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Sixth Six Weeks - **Week One**- April 19-23 - Earth Day Activities

 Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>1.1) Scientific processes. The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:</p> <p>(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.</p> <div data-bbox="75 954 380 1224" style="border: 1px solid orange; padding: 5px; margin-top: 20px;"> <p>Guiding Questions: What is conservation? How do people conserve natural resources?</p> </div>	<p>(1.1) Scientific investigation and reasoning. The student for at least 60% of instructional time conducts classroom and outdoor investigations following school and home safety procedures and environmentally appropriate practices. The student is expected to:</p> <p>(B) make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics.</p> <div data-bbox="464 954 783 1255" style="border: 1px solid blue; padding: 10px; text-align: center; margin-top: 20px;">  <p>40th Anniversary of Earth Day</p> </div>		<p>use reusing conservation recycling</p>	<p>These expectations are part of all grade levels from kindergarten to fifth grade.</p>	<p>AIMS <u>Cycles of Knowing and Growing</u> "Paper- A pressing issue" "A sign of the Times" "Waste Watchers" <u>Sensational Springtime</u> "Just a Little Drip" "Waste Not, Want Not" Magazine: Vol 18, No 10 "Isn't It Interesting:Down the Drain"</p> <div data-bbox="1692 954 2003 1295" style="border: 1px solid blue; padding: 10px; text-align: center; margin-top: 20px;">  <p>Have students draw or explain how they conserve and use natural resources in their everyday life.</p> </div>

Earth Day Resources
www.earthday.net
<http://holidays.kaboose.com/earth-day/>
www.planetpals.com
www.epa.gov/teachers/
www.seussville.com/games/lorax/

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Sixth Six Weeks - Week Two, Three, Four - April 26 - May 14 - Weather Changes

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.2) Use scientific inquiry methods during field and laboratory investigations.</p> <p>(A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;</p> <p>(B) collect information by observing and measuring;</p> <p>(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;</p> <p>(D) communicate valid conclusions; and</p> <p>(E) construct simple graphs, tables, maps, and charts to organize, examine and evaluate information.</p>	<p>(3.2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:</p> <p>(A) plan and implement descriptive investigations including asking and answering questions, making inferences, and selecting and using equipment or technology needed to solve a specific problem in the natural world;</p> <p>(B) collect data by observing and measuring using the metric system and recognize differences between observed and measured data;</p> <p>(C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data;</p> <p>(D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations;</p> <p>(E) demonstrate that repeated investigations may increase the reliability of results; and</p> <p>(F) communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.</p>	<p>▶ repeated investigations may increase the reliability of results.</p> <p>Students start working with their Science Fair Project. District Science Fair @ RSE on May 22nd.</p> <div data-bbox="856 667 1352 1367" style="border: 2px solid orange; padding: 10px; margin: 10px 0;"> <p>Guiding Questions:</p> <p>Why do Scientists complete experiments?</p> <p>How do scientists develop a hypothesis for their experiment? How do they identify which definitions to operationally define?</p> <p>How do scientists plan their experiment?</p> <p>How do scientists complete an experiment?</p> <p>How do scientists document an experiment?</p> </div>	<p>scientific process independent variable observe measure predict communicate conclude models investigate</p>	<p>Grade 2 (2.2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to: (A) ask questions about organisms, objects, and events; (B) plan and conduct simple descriptive investigations; (C) compare results of investigations with what students and scientists know about the world; (D) gather information using simple equipment and tools to extend the senses; (E) construct reasonable explanations and draw conclusions using information and prior knowledge; and (F) communicate explanations about investigations.</p> <p>Grade 4 The TEKS at Grade 3 read the same in Grade 4.</p> <div data-bbox="1415 1182 1656 1261" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Emphasis on Scientific Method</p> </div>	<p>Science Fair</p> <ul style="list-style-type: none"> ▶ http://www.freesciencefairproject.com/index.html ▶ http://www.all-science-fair-projects.com/category0.html ▶ http://sciencefairproject.virtualave.net/ <div data-bbox="1730 662 2018 993" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>SCIENCE FAIR REMINDERS:</p> <ul style="list-style-type: none"> • No names on front of board • Identify who took the pictures-names not important – just say, “taken by student” “taken by teacher” “taken by parent” • No soil, water, glass, or sharp objects • No live animals or plants – take pictures instead! </div>

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Sixth Six Weeks - Week Five and Six - March 17 - 28 Science Investigations

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>(3.2) Use scientific inquiry methods during field and laboratory investigations.</p> <p>(A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology</p> <div data-bbox="138 724 653 1182" style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>Guiding Questions: Why do Scientists complete experiments? How do scientists develop a hypothesis for their experiment? How do they identify which definitions to operationally define? How do scientists plan their experiment? How do scientists complete an experiment? How do scientists document an experiment?</p> </div>	<p>(3.2) Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations. The student is expected to:</p> <p>(A) plan and implement descriptive investigations including asking and answering questions,</p>	<p>▶ repeated investigations may increase the reliability of results.</p> <div data-bbox="852 488 1094 565" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p align="center">Emphasis on Scientific Method</p> </div>	<p>scientific process independent variable observe measure predict communicate conclude models investigate</p>	<p>Grade 2 (2.2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to: (A) ask questions about organisms, objects, and events; (B) plan and conduct simple describe</p>	<p>Investigations will be provided by Science Leader</p>

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Sixth Six Weeks - **Week Seven**- May 31 - June 4- Themes

Standards	New Standard	Concepts	Vocabulary	Prerequisites	Resources/ Materials
<p>Introduction Part 4</p> <p>A system is a collection of cycles, structures, and processes that interact. Students should understand a whole in terms of its components and how these components relate to each other and to the whole. All systems have basic properties that can be described in terms of space, time, energy, and matter. Change and constancy occur in systems and can be observed and measured as patterns. These patterns help to predict what will happen next and can change over time.</p>	<p>Introduction Part 2</p> <p>Recurring Themes are pervasive in science, mathematics and technology. These ideas transcend disciplinary boundaries and include patterns, cycles, systems, models, change and constancy.</p> <div data-bbox="470 805 760 992" style="border: 2px solid green; padding: 10px; text-align: center;"> <p>Recurring Themes</p> </div>	<ul style="list-style-type: none"> ▶ A system is a collection of cycles, structures, and processes that interact. ▶ All systems have basic properties that can be described in terms of space, time, energy, and matter. ▶ Change and constancy occur in systems and can be observe and measured as patterns. ▶ Patterns help predict what will happen next and can change over time. 	<p>systems change Constancy pattern cycles models</p>	<p>These concepts are part of Kinder through 5th grade.</p>	<p>Create a Tree Map to sort out the different Themes and the science concepts that represent each theme.</p>