

Portales Municipal Schools
CURRICULUM MAP

Subject:	Science	2009	Grade Level 8
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ESSENTIAL QUESTIONS: How do scientists gather, analyze, and interpret scientific data? What is the S.I. system? What laboratory safety skills should scientists follow?

STRAND I: Scientific Thinking and Practice	BENCHMARK I: Use scientific methods to develop questions, design, and conduct experiments using appropriate technologies, analyze and evaluate results, make predications, and communicate findings. II: Understand the processes of scientific investigations and how scientific inquiry in scientific knowledge. III: Use mathematical ideas, tools, and techniques to understand scientific knowledge.
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STANDARD
I: Understand the processes of scientific investigation and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
A L L Y E A R	<p>1. Evaluate the accuracy and reproducibility of data and observations</p> <p>2. Use a variety of technologies to gather, analyze and interpret scientific data</p> <p>3. Know how to recognize and explain anomalous data</p> <p>1. Examine alternative explanations for observations</p> <p>2. Describe ways in which science differs from other ways of knowing and from other bodies of knowledge (experimentation, logical arguments, skepticism).</p>	<p>Scientific methods to develop questions, design, and conduct experiments using technologies, analyze and evaluate results, make predictions, and communicate findings.</p> <p>Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.</p>	<p>Design and test an experiment to answer a question in which one variable is manipulated over many trials (science fair projects).</p> <p>Design and test a hypothesis on how salt, sand, iron fillings and water can be separated using physical properties.</p> <p>Research and create a humus farm lab to gauge the amount of methane gas produced by different amounts of humus through energy transfer of methane gas. (from a container to a balloon).</p>	<p>Read and interpret maps, graphs, and diagrams</p> <p>Teacher will provide material data that can be used for graphing through lab work. Students will be assessed through lab write-up.</p> <p>Write a summary report of the findings from lab.</p> <p>Class presentation: Explain and chart results of the amount of volume of gas transferred from container to balloon. Research and discuss possible alternative sources for uses of this type of energy. Provide flow chart to illustrate the sequence of events.</p>	<p>http://www.scienceproject.com/</p> <p>Measurement lab: Holt Physical Science , pg. 24 – 27 http://nces.ed.gov/nceskids/graphing/</p> <p>Looking at variables: http://www.edhelper.com</p> <p>http://www.agintheclassroom.org/</p>

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ESSENTIAL QUESTIONS: How would I develop an experiment using the scientific method?					
STRAND I Scientific Thinking and Practice		BENCHMARK I: Use scientific methods to develop questions, design, and conduct experiments using appropriate technologies, analyze and evaluate results, make predications, and communicate findings. II: Understand the processes of scientific investigations and how scientific inquiry in scientific knowledge. III: Use mathematical ideas, tools, and techniques to understand scientific knowledge.			
STANDARD I Understand the processes of scientific investigation and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.					
9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
A L L Y E A R	<p>3. Know that scientific knowledge is built on questions posed as testable hypotheses, which are tested until the results are accepted by peers.</p> <p>1. Use mathematical expressions and techniques to explain data and observations and to communicate findings (formulas and equations, significant figures, graphing, sampling, estimation, mean)</p>	<p style="color: red;">Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.</p> <p style="color: red;">Use mathematical ideas, tools, and techniques to understand scientific knowledge.</p>	<p>Compose and test a hypothesis about a given problem. Students will summarize findings using a graphic organizer.</p> <p>Compare the volume, mass and density of a variety of objects using scientific tools of measurement. Create a chart describing the physical properties for selected substances.</p>	<p>Student led feedback and self evaluation</p> <p>Student charts</p>	<p>www.agclassroom.org/ut</p> <p>Density http://www.elmhurst.edu/~chm/vchembook/120Adensity/html</p>

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ESSENTIAL QUESTIONS: How are elements organized on the periodic table? What is the difference between a metal and nonmetal? How are substances classified?

STRAND II: Content of Science	BENCHMARK I: Know the forms and properties of matter and how matter interacts.
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STANDARD I: Know the forms and properties of matter and how matter interacts.

9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
F I R S T	Structure of Matter 4. Identify the protons, neutrons, and electrons within an atom and describe their locations (i.e., in the nucleus or in motion outside the nucleus). 5. Explain that elements are organized in the periodic table according to their properties. 6. Know that compounds are made of two or more elements, but not all sets of elements can combine to form compounds.	Know the forms and properties of matter and how matter interacts.	Create and interpret a model of an atom using Styrofoam and toothpicks or of various materials; label each part of the atom. Construct and present Bohr models of the first 10 elements of the periodic table on power point to demonstrate how they work. Choose an element, research and write a 1 page paper about that element and create a poster of that element, examples of the element will be included. Draw electron-dot diagrams of several compounds to illustrate bonding.	Rubric: points given for correct identification of atom Rubric Teacher observation, template of requirements Rubric	Structure of Matter http://www.chem4kids.com/files/atom_intro.html Class Presentation rubric http://tinyurl.com/qow7ay Elements, compounds, and mixtures Holt Physical science pg. 373

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ESSENTIAL QUESTIONS: What is the difference between a physical and chemical change? What factors influence chemical reactions?

STRAND II: Content of Science	BENCHMARK I: Know the forms and properties of matter and how matter interacts.
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STANDARD I: Know the forms and properties of matter and how matter interacts.

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1	<p>Changes in Matter</p> <p>7. Know that phase changes are physical changes that can be reversed (e.g., evaporation, condensation, melting).</p> <p>8. Describe various familiar physical and chemical changes that occur naturally (e.g., snow melting, photosynthesis, rusting, burning).</p> <p>9. Identify factors that influence the rate at which chemical reactions occur (e.g., temperature, concentration).</p> <p>10. Know that chemical reactions can absorb energy (endothermic reactions) or release energy (exothermic reactions).</p>	<p>Know the forms and properties of matter and how matter interacts.</p>	<p>Research and conduct an experiment - Ice on a string...table salt lowers the melting point of water</p> <p>Students will observe oxidation of metals (students will observe and record data), burning of objects (students will observe and explain the physical or chemical changes occurring), by watching a teacher demo. (Chemical changes).</p> <p>Experimentally determine the types of reactions of hydrogen peroxide and liver, vinegar and baking soda, and Alka-seltzer and water, by monitoring temperature changes and compare on bar or line graph</p> <p>Predict the types of reactions of various known ingredients. Conduct experiments and monitor temperature changes. Record data on table.</p>	<p>Student –led feedback and self-evaluations</p> <p>Teacher will provide students with template for reporting predictions and observations.</p> <p>Graph</p> <p>Data table</p>	<p>Demonstration with Density: http://www.lelmhurst.edu/~chm/</p> <p>http://go.hrw.com type in key word: HP5MATW Holt Physical science pg.53</p> <p>Holt Physical science pg. 399</p> <p>Holt Physical science pg. 399 - 400 http://go.hrw.com and type in the keyword HP5REAW</p>

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ESSENTIAL QUESTIONS: How are elements, compounds, and mixtures different?

STRAND II: Content of Science	BENCHMARK I: Know the forms and properties of matter and how matter interacts.
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STANDARD I: Know the forms and properties of matter and how matter interacts.

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1	<p>Properties of Matter</p> <p>1. Know how to use density, boiling point, freezing point, conductivity, and color to identify various substances.</p> <p>2. Distinguish between metals and non-metals.</p> <p>3. Understand the differences among elements, compounds, and mixtures by:</p> <p>-classification of materials as elements, compounds, or mixtures</p> <p>-interpretation of chemical formulas</p> <p>-separation of mixtures into compounds by methods including evaporation, filtration, screening, magnetism.</p>	<p>Know the forms and properties of matter and how matter interacts.</p>	<p>Record attributes of various substances according to their physical properties; similarities, differences, and relationships</p> <p><u>Lab: metals and nonmetals.</u> Analyze an unknown substance's appearance, conductivity, malleability and acidic reactivity.</p> <p>Classify, experiment and record data of several unknown substances according to their physical properties by separation of mixtures and compounds by methods including evaporation, filtration, screening and magnetism.</p>	<p>3-Way Venn Diagram</p> <p>Lab format and student conclusions. (Scientific Method Write Up)</p> <p>Lab write up</p>	<p>www.scilinks.org Topic: Describing Matter; Physical Changes Scilinks code: HSM0391 ; HSM1142</p> <p>www.scilinks.org topic: Mixtures Scilinks code: HSM0974</p>

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ESSENTIAL QUESTIONS: What are the different forms of energy? How is energy transformed from one form to another? What energy resources are found in New Mexico?

STRAND II: Content of Science	BENCHMARK II: Explain the physical processes involved in the transfer, change, and conservation of energy.
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STANDARD I: Know the forms and properties of matter and how matter interacts.

9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
1	<p>Energy Transformation</p> <p>1. Know that energy exists in many forms and that when energy is transformed some energy is usually converted to heat.</p> <p>2. Know that kinetic energy is a measure of the energy of an object in motion and potential energy is a measure of an object's position or composition, including:</p> <ul style="list-style-type: none"> - transformation of gravitational potential energy of position into kinetic energy of motion by a falling object. <p>3. Distinguish between renewable and nonrenewable sources of energy.</p>	<p style="color: blue;">Explain the physical processes involved in the transfer, change, and conservation of energy.</p>	<p>Predict temperature changes due to motion; measure the temperature of water in a bowl before and after agitating with a hand mixture and record results and conclusion in lab write up.</p> <p>Determine potential chemical energy of food; Burn different foods and measure temperature with calorimeter to demonstrate chemical potential energy.</p> <p>Compare KE and GPE. Experiment with various objects dropped from different heights and observe the increased impacts from greater heights. Record data in t-chart</p> <p>Make a chart of renewable and nonrenewable energy resources found in New Mexico.</p>	<p>lab write up</p> <p>lab write up</p> <p>T-chart</p> <p>Then and Now: Compare events of past and present to see what changes have occurred over time.</p>	<p>http://www.weatherwizkids.com Temperature Conversion Chart</p> <p>What is energy? http://tinyurl.com/qyc65z</p> <p>Potential and kinetic energy http://tinyurl.com/qaygey</p>

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ESSENTIAL QUESTIONS: Explain how an electric current is created? How do generators and motors illustrate the principle of electromagnetism?					
STRAND II: Content of Science		BENCHMARK II: Explain the physical processes involved in the transfer, change, and conservation of energy.			
STANDARD I: Know the forms and properties of matter and how matter interacts.					
9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
S E C O N D	4. Know that electrical energy is the flow of electrons through electrical conductors that connect sources of electrical energy to points of use, including: -electrical current paths through parallel and series circuits -production of electricity by fossil-fueled and nuclear power plants, wind generators, geothermal plants, and solar cells -use of electricity by appliances and equipment (e.g., calculators, hair dryers, light bulbs, motors).	Explain the physical processes involved in the transfer, change, and conservation of energy.	Analyze and create the flow of electricity. Experiment with parallel and series circuits using various combinations of bulbs, batteries and wiring. Research New Mexico Energy Sources: find the types of energy produced in New Mexico using solar, wind, nuclear, fossil and geothermal power and present on power point or poster board.	Success of circuit Rubric for presentation; research paper or power point	www.scilinks.org topic: Electric Circuits Scilinks code: HSM0471 Various Internet sources related to topic

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ESSENTIAL QUESTIONS: What is the difference between renewable and nonrenewable resources? What is the law of conservation of energy?

STRAND II: Content of Science	<p>BENCHMARK</p> <p>III: Describe and explain forces that produce motion in objects.</p> <p>II: Explain the physical processes involved in the transfer, change, and conservation of energy.</p>
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STANDARD I: Know the forms and properties of matter and how matter interacts.

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2	<p>6. Know that Earth has a magnetic field.</p> <p>1. Know that energy exists in many forms and that when energy is transformed some energy is usually converted to heat.</p> <p>2. Know that kinetic energy is a measure of the energy of an object in motion and potential energy is a measure of an object's position or composition, including:</p> <p>- transformation of gravitational potential energy of position into kinetic energy of motion by a falling object.</p> <p>3. Distinguish between renewable and nonrenewable sources of energy.</p>	<p>Forces:</p> <p>Describe and explain forces that produce motion in objects.</p> <p>Energy Transformation:</p> <p>Explain the physical processes involved in the transfer, change, and conservation of energy.</p>	<p>Observe magnetic fields; diagram iron fillings and how they react to the bar magnets.</p> <p>Observe the transformation of GPE to KE. Construct a vessel to enclose a raw egg. Must be no bigger than a sheet of paper, weigh less than 200g. Egg projects will be dropped and graded by teacher for breakage. Participate in egg drop project.</p> <p>Recycle Project: chose a recyclable material and research how material is recycled after use. Present on poster board.</p>	<p>Sentence Map</p> <p>Rubric: student research paper and project</p> <p>Presentation per poster board: Rubric</p>	<p>www.scilinks.org topic: magnetism, types of magnets code: HSM0900 ; HSM1566</p> <p>Various websites related to topic</p> <p>RRSI: Engineers and Consultants in Resource Management www.recycle.com</p>

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ESSENTIAL QUESTIONS: Can laws of motion save my life? How can you diagram the magnitude and direction of forces?

STRAND II: Content of Science	<p>BENCHMARK</p> <p>III: Describe and explain forces that produce motion in objects</p> <p>I: Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.</p>
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STANDARD

I: Know the forms and properties of matter and how matter interacts.

III: Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
2	<p style="text-align: center;">Motion</p> <p>7. Know that an object's motion is always described relative to some other object or point (i.e., frame of reference).</p> <p>3. Understand how gravitational force acts on objects in the solar system and the universe, including:</p> <ul style="list-style-type: none"> - similar action on masses on Earth and on other objects in the solar system - explanation of the orbits of the planets around the sun. 	<p style="color: blue;">Describe and explain that forces produce motion in objects.</p> <p style="color: red;">Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.</p>	<p>Conduct speed and acceleration activities by comparing the change of acceleration of various objects. Record on worksheet. Recall distance and time.</p> <p>Determine if mass effects gravitational attraction on Earth. Design and experiment to test various objects with different masses being dropped at the same time. Record and analyze results.</p>	<p>Lab worksheet; group</p> <p>Template, rubric.</p>	<p>www.scilinks.org topic: Measuring Motion code: HSM0927</p> <p>Triple beam balance to record mass. Stop to record time. Project board for presentation.</p>

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ESSENTIAL QUESTIONS: What are the different kinds of waves? What is sound? What is light? What would change straight-line wave travel?	
STRAND II: Content of Science	BENCHMARK II: Explain the physical processes involved in the transfer, change, and conservation of energy.

STANDARD I: Know the forms and properties of matter and how matter interacts.

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T H I R D	<p style="text-align: center;">Waves</p> <p>5. Understand how light and radio waves carry energy through vacuum or matter by:</p> <ul style="list-style-type: none"> -straight-line travel unless an object is encountered -reflection by a mirror, refraction by a lens, absorption by a dark object -separation of white light into different wavelengths by prisms -visibility of objects due to light emission or scattering. 	<p style="color: red;">Explain the physical processes involved in the transfer, change, and conservation of energy.</p>	<p>Illustrate the principles of waves, sound and light</p> <p>Use a laser pointer and chalk dust to demonstrate reflection and refraction with lenses and mirrors.</p> <p>Using a mirror and flashlight, change the refraction of light.</p> <p>Using a prism, separate a white light into difference wave lengths.</p> <p>Use overhead projector and prism to separate white light into colors.</p> <p>Expose various colors of cans, filled with water exposed to sunlight and measure temperature.</p>	<p>Triple Venn Diagrams</p> <p>KWL: Previous knowledge of reflection/refraction – observation – learned knowledge Packed with Details worksheet</p> <p>Observation: Train track worksheet</p> <p>Observation</p> <p>Worksheet: Sorting circles. Visual patterns of colors and temperatures</p>	<p>www.scilinks.org</p> <p>Reflection and refraction www.play-hookey.com</p> <p>Physical science book page 640, making a rainbow</p> <p>Electromagnetic Spectrum http://tinyurl.com/ux7i</p>

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ESSENTIAL QUESTIONS: What is sound? How can you compare and contrast the risks and benefits of advancement in sound technology?

STRAND II: Content of Science	BENCHMARK II: Explain the physical processes involved in the transfer, change, and conservation of energy.
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STANDARD I: Know the forms and properties of matter and how matter interacts.

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3	<p>6. Understand that vibrations of matter (e.g., sound, earthquakes, water waves) carry wave energy, including:</p> <ul style="list-style-type: none"> -sound transmission through solids, liquids, and gases -relationship of pitch and loudness of sound to rate and distance (amplitude) of vibration -ripples made by objects dropped in water. 	<p>Explain the physical processes involved in the transfer, change, and conservation of energy.</p>	<p>Illustrate the properties of sound by using various objects such as a rubber eraser and a cup of water to observe results of vibrations.</p>	<p>Lab write up : Cause and Effect</p>	<p>Water Waves http://www.owrc.com/waves/waves.html</p>

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ESSENTIAL QUESTIONS: How can we calculate force using appropriate formulas?

STRAND II: Content of Science	BENCHMARK III: Describe and explain forces that produce motion in objects
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STANDARD I: Know the forms and properties of matter and how matter interacts.

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3	<p style="text-align: center;">Forces</p> <p>1. Know that there are fundamental forces in nature (e.g., gravity, electromagnetic forces, nuclear forces).</p> <p>2. Know that a force has both magnitude and direction.</p> <p>3. Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object</p>	<p>Describe and explain forces that produce motion in objects.</p>	<p>Illustrate and explain planetary forces, like gravity and inertia?</p> <p>First Law Skateboard (Newton's First Law of Motion) Lab: Students will conduct an experiment using an empty soda can on top of a skateboard.</p> <p>Using a table, empty cup, and paper towel, students will conduct Newton's first law of motion.</p>	<p>Rubric on internet research for students: Building Plan</p> <p>Write Up: My Best Guess: students will examine the possible outcomes of their actions</p> <p>Write Up: Students Research Organizer</p>	<p>www.scilinks.org topic: Gravity and orbiting objects; Projectile Motion Code: HSM0692 ; HSM1223</p> <p>www.scilinks.org topic: Newton's Law of Motion code: HSM1028</p>

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ESSENTIAL QUESTIONS: What is the relationship between electricity and magnetism?

STRAND II: Content of Science	BENCHMARK III: Describe and explain forces that produce motion in objects
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STANDARD I: Know the forms and properties of matter and how matter interacts.

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3	<p>4. Know that electric charge produces electrical fields and magnets produce magnetic fields.</p> <p>5. Know how a moving magnetic field can produce an electric current (generator) and how an electric current can produce a magnetic field (electromagnet).</p> <p>6. Know that Earth has a magnetic field.</p>	<p>Describe and explain forces that produce motion in objects</p>	<p>Using a magnet, coil of wire and volt meter; observe the factors that affect an induced current.</p> <p>Construct a DC motor by using various materials.</p> <p>Model of Earth's magnetic field</p>	<p>Worksheet: Key factors</p> <p>Rubric of performance of motor and 1 page write up</p> <p>Rubric of model and 1 page write up</p>	<p>www.scilinks.org topic: electromagnetic induction code: HSM0481</p> <p>Physical science book page 530-531</p> <p>Physical science book page 515</p>

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ESSENTIAL QUESTIONS: How does Newton's law of motion pertain to daily life?					
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STANDARD I: Know the forms and properties of matter and how matter interacts.					
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3	<p style="text-align: center;">Motion</p> <p>7. Know that an object's motion is always described relative to some other object or point (i.e., frame of reference).</p> <p>8. Understand and apply Newton 's Laws of Motion:</p> <p>-Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia).</p> <p>-If a greater force is applied to an object a proportionally greater acceleration will occur.</p> <p>-If an object has more mass the effect of an applied force is proportionally less.</p>	<p style="color: red;">Describe and explain forces that produce motion in objects</p> <p style="color: blue;">Describe and explain forces that produce motion in objects: Newton's Laws</p>	<p>Predict and compare motion using frame of reference.</p> <p>Determine if the height of a ramp affects the distance of a hot wheels car?</p>	<p>Internet work page</p> <p>Observations Data table</p>	<p>http://tinyurl.com/2anl6x Relative Motion</p> <p>http://tinyurl.com/o5l567 Newtons Laws</p>

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ESSENTIAL QUESTIONS: How important is photosynthesis in changing carbon to oxygen?

STRAND II: Content of Science	BENCHMARK II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.
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STANDARD III: Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

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3	<p>-reactant in photosynthesis.</p> <p>3. Understand the geologic conditions that have resulted in energy resources (e.g., oil, coal, natural gas) available in New Mexico</p>	<p>Describe the structure of Earth and its atmospheres and explain how energy, matter, and forces shape Earth's systems.</p>	<p>Conduct internet research by utilizing classification chart to compare information and make connections to what they already know as well as record historical events of past, present and future availability of resources in New Mexico.</p>	<p>Rubric of project.</p>	<p>Energy research and News http://energy.usgs.gov/</p>

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ESSENTIAL QUESTIONS: What is the structure of DNA? What is cellular respiration?					
STRAND II: Concepts of Science		BENCHMARK II: Understand how traits are passed from one generation to the next and how species evolve			
STANDARD II: Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.					
9 w e e k s	PERFORMANCE STANDARD	CONCEPTS/SKILLS Review/Extend previously introduced skill unless noted I = Introduce R= Review AND Extend M = Master	STUDENT ACTIVITIES AND INSTRUCTIONAL STRATEGIES	ASSESSMENTS	STUDENT MATERIALS AND RESOURCES
F O R T H L i f e s c i e n c e	1. Understand that living organisms are made mostly of molecules consisting of a limited number of elements (e.g., carbon, hydrogen, nitrogen, oxygen). 2. Identify DNA as the chemical compound involved in heredity in living organisms. 3. Describe the widespread role of carbon in the chemistry of living systems.	Elements of Life: Understand how traits are passed from one generation to the next and how species evolve.	Design and display each cycle: carbon, oxygen, nitrogen). Giving explanation of each cycle and how it affects the life cycle.	Rubric	Oxygen Cycle http://tinyurl.com/ppgkwe Nitrogen Cycle http://www.neuse.ncsu.edu/nitrogen/ Carbon Cycle http://tinyurl.com/p4ny78

