

Portales Municipal Schools
CURRICULUM MAP

Subject:	Science	2009	Grade Level Kindergarten
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ESSENTIAL QUESTIONS: What are the main parts of my body, the correct names and what is their function?

<p>STRAND II Content of Science STRAND I: Scientific Thinking and Practice</p>	<p>BENCHMARK Benchmark III: Know the parts of the human body and their functions. Benchmark II: Use scientific thinking and knowledge and communicate findings.</p>
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STANDARD II Life Science
STANDARD 1: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicating, and validating to think critically.

	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 N i n e W e e k s	<p>2. Identify the parts of the human body (e.g. legs, arms, head, and hands) and the functions of these parts.</p> <p>1. Communicate observations and answer questions about surroundings.</p>	<p>Identify Name Body Parts and function of each</p> <p>Locate Body Parts</p>	<p>TSW sing along with songs about the body</p> <p>TSW play “Simon Says” with the name of body parts</p>	<p>Teacher observation</p> <p>Teacher Observation</p>	<p>CDs: Jack Hartmann, Dr. Jean etc.</p> <p>Books/Read Alouds</p> <p>BECC Science tubs from resource room</p> <p>HOLS Kits :See Materials list in Teacher Manual</p> <p>Body Parts Figure</p> <p>*http://teachers.net/curriculum/</p>

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ESSENTIAL QUESTIONS: (1) How do I stay healthy? (2) How is energy used to cook food?					
STRAND III: Science and Society			BENCHMARK I: Describe how science influences decisions made by individuals and societies.		
STANDARD I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.					
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F i r s t N i n e W e e k s	<p>1. Recognize that germs exist and may cause disease.</p> <p>2. Describe how science helps provide products we use every day</p>	<p>Recognize that germs are in our world</p> <p>Understand that gas, wind, and electricity are useful in our homes and society.</p>	<p>TSW discuss using the teaching strategy “think-pair-share” that germs are very tiny things and can make us sick</p> <p>TSW will observe the proper method of hand washing.</p> <p>TSW wash hands frequently and thoroughly with soap and water.</p> <p>TSW will observe the teacher demonstrating products that utilize energy sources.</p>	<p>Teacher observation</p> <p>Teacher observation</p>	<p>Health and Hygiene Posters</p> <p>HOLS kits</p> <p>Student Created Books</p> <p>Books relating to the existence of germs.</p> <p>School. Nurse</p> <p>http://teacher.net/curriculum/science.html</p> <p>Hand mixer running at different speeds.</p> <p>www.howstuffworks.com</p> <p>Cook using the oven or stove</p> <p>Use freezer to freeze ice</p>

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ESSENTIAL QUESTIONS: How are animals different/similar in appearance and respective habitat?					
STRAND II: Content of Science			BENCHMARK II: Know that living things have diverse forms, structures, functions, and habitats.		
STANDARD II: Life Science: Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.					
	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 N i n e W e e k s	1. Observe and describe similarities and differences in the appearance and behavior of living organisms.	Discuss the various structures of different kinds of animals	TSW explore tactilely and visually the most familiar body coverings within the animal kingdom. (wings, legs, scales, fur/hair, feathers, skin)	The assessments will be through Teacher Observation Unless noted otherwise.	Visit: Science collections of various teachers within pods/school Think/pair/share: to create murals of habitats, choose animal within that habitat and create a large paper replica of that animal Zoo Phonics nature animal cards Read Alouds Puzzles www.enchantedlearning.com Venn diagrams HOLS kits
	2. Observe that living organisms closely resemble their parents.	Observe how adults and babies are the same and how they are different.	TSW match pictures of animal babies to their parents.		

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ESSENTIAL QUESTIONS: How do our senses help us observe/interact with the world around us?

<p>STRAND II: Content of Science STRAND 1: Scientific Thinking and Practice</p>	<p>BENCHMARK III: Know the parts of the human body and their functions. BENCHMARK I: Use scientific methods to observe, collect, record, analyze, predicate, interpret, and determine reasonableness of data.</p>
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STANDARD II: Life Science
STANDARD I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

	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 N i n e W e e k s	<p>1. Use the senses to observe surroundings, and describe the observations.</p> <p>3. Record observations and data with pictures, numbers, and/or symbols.</p>	<p>Identify each of the senses' particular characteristics.</p> <p>Record results on Teacher produced recording sheet.</p>	<p>TSW identify and discuss the sense of:</p> <p>Touch*** using a 'feely bag'</p> <p>Smell *** using different scents.</p> <p>Taste *** predicting, tasting, and recording tastes of salty, sour, sweet, and bitter.</p> <p>Sight *** viewing and describing observations of their surroundings by using their eyes.</p> <p>Hearing ***closing their eyes and describing to a friend their surroundings using the auditory sense.</p>	<p>Assessments will be through Teacher Observation unless noted otherwise.</p>	<p>HOLS Kits</p> <p>Touch***Various textures/bag</p> <p>Smell*** Various scents/jars</p> <p>Taste***peppermint candy, jelly beans, lemons, pickles, orange peel, bittersweet chocolate, potato chips and pretzels.</p> <p>Teacher produced recording sheet</p> <p>Books</p> <p>Big Books</p> <p>http://teacher.net/curriculum/science.html</p>

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ESSENTIAL QUESTIONS: What are some different forms of energy and how do they affect our lives?

<p>STRAND II: Content of Science STRAND I: Scientific Thinking and Practice</p>	<p>BENCHMARK II: Know that energy is needed to get things done and that energy has different forms. BENCHMARK I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.</p>
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STANDARD I: Physical Science: Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.
STANDARD I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

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T h i r d N i n e W e e k s	<p>1. Observe how energy does things (e.g. batteries, the sun, wind, electricity.</p> <p>2. Ask and answer questions about surroundings and share findings with classmates.</p>	<p>Discuss students' experience with the wind.</p> <p>Analyze the wind's effect on our surroundings.</p>	<p>TSW make wind spinners using a spiral pattern and string and scissors.</p> <p>TSW will listen to a Book about the wind read by the teacher.</p>	<p>Teacher Observation</p> <p>Teacher Observation</p>	<p>HOLS Kits</p> <p>Read the poem: "Wind Song" Author unknown</p> <p>Wind spinners</p> <p>Battery Operated Fan</p> <p>Pinwheels</p> <p>www.howstuffworks.com</p> <p>Read Alouds</p>

Portales Municipal Schools
CURRICULUM MAP

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**ESSENTIAL QUESTIONS (1) What are different objects in the night or daytime sky and what do we call them?
(2) What are the seasons and what are the types of weather that can occur in each?**

STRAND II: Content of Science	BENCHMARK I: Know the structure of the solar system and the objects in the universe. BENCHMARK II: Know the structure and formation of Earth and its atmosphere and the processes that shape them.
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STANDARD III: Earth and Space Science

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T h i r d N i n e W e e k s	<p>BM I 1. Observe that there are many objects in the night sky and that some are brighter than others.</p> <p>2. Describe the location and movements of objects in the sky (e.g. stars, sun, and moon).</p> <p>BM II 1. Observe that changes in weather occur from day to day and season to season.</p> <p>2. Observe that the sun warms the land and water and they warm the air.</p>	<p>Discuss the experience students have had looking at the night sky.</p> <p>Develop foundational understanding of the celestial sky.</p> <p>Discuss students' current knowledge about the weather.</p> <p>Explain that the energy from the sun keeps the Earth warm.</p>	<p>TSW draw picture of the night sky using books and posters as a reference.</p> <p>TSW will participate as the teacher demonstrates the movement of objects in the sky.</p> <p>TSW will observe and draw a picture of the day's weather for a week.</p> <p>TSW experiment with sand and ice cubes to discover the effects of the intensity of the sun on both.</p>	<p>Teacher Observation</p> <p>Teacher Observation</p> <p>Teacher Observation</p> <p>Teacher Observation</p>	<p>Black Paper and Chalk</p> <p>HOLS Kits</p> <p>Books and Posters</p> <p>Flashlight</p> <p>Globe</p> <p>Jack Hartman's C.D. "Seasons"</p> <p>Nursery Rhymes</p> <p>Teacher made booklet</p> <p>Pencils, crayons</p> <p>Aluminum pie pans</p> <p>Ice cubes</p> <p>Sand</p>

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ESSENTIAL QUESTIONS: What are different objects made from and why was that particular material chosen to produce that object?					
STRAND II: Content of Science			BENCHMARK I; Recognize that matter has different forms and properties.		
STANDARD I Physical Science : Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy. Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.					
	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 u r t h N i n e W e e k s	<p>1. Observe that objects are made of different types of materials (e.g. metal plastic, cloth, wood).</p> <p>2. Observe that different materials have different properties (e.g. color, odor).</p>	<p>Compare and contrast properties of different materials</p> <p>Discuss materials that our clothes and shoes are made of and that science and engineers pick the best material for the job.</p>	<p>TSW be able to sort metal, plastic, cloth and wooden objects into correct category by material they are made of.</p> <p>TSW experiment with different materials to determine strength by building a 3 level house of marshmallows and a 3 level house of blocks and placing a heavy book on completed houses.</p>	<p>Teacher Observation</p> <p>Teacher Observation</p>	<p>Various items made of wood, plastic, metal and cloth. Plastic sorting tubs</p> <p>Blocks, marshmallows, toothpicks Large book (like a dictionary)</p> <p>http://teachers.net/curriculum/science.html</p>

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ESSENTIAL QUESTIONS: What is force? What are some of the different motions?	
STRAND II : Content of Science STRAND I: Scientific Thinking and Practice	BENCHMARK III: Identify forces and describe the motion of objects. BENCHMARK I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.

STANDARD I Physical Science: Understand the structure and properties of matter, the characteristics of energy and the interactions between matter and energy.
STANDARD I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

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F o r t h N i n e W e e k s	<p>1. Observe that things move in different ways (e.g. straight line, vibration, circular)</p> <p>1. Use observation and questioning skills in science inquiry (what happens when something is pushed or pulled?)</p> <p>2. Know that the position and motion of an object (direction or speed) are changed by pushing or pulling it.</p>	<p>Explore the various directions an egg will have when rolled.</p> <p>Predict what will happen to an egg when it is pushed.</p> <p>Observe changes when force is applied.</p>	<p>TSW sit across from each other on the floor and roll a plastic / regular egg back and forth.</p> <p>TSW predict whether the egg will move in a circular, straight or vibrating line.</p> <p>TSW will observe the change in speed by the force applied.</p>	<p>Teacher Observation</p> <p>Teacher Observation</p> <p>Teacher Observation</p>	<p>HOLS Kits</p> <p>Plastic Eggs</p> <p>www.howstuffworks.com</p> <p>Playground swing</p> <p>Magnets</p> <p>Balls</p>

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ESSENTIAL QUESTIONS: (1) What are the different parts of a plant? (2) What are the two categories of living things?

<p>STRAND II: Content of Science STRAND I: Scientific Thinking and Practice</p>	<p>BENCHMARK I: Know that living things have diverse forms, structures, functions, and habitats. Benchmark III: Use mathematical skills and vocabulary to analyze data, understand patterns, and relationships, and communicate findings.</p>
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STANDARD II: LIFE SCIENCE: Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.
STANDARD I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

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F o u r t h N i n e W e e	<p>1. Identify major structures of common living organisms (e.g., stems, leaves, and roots of plants; arms, wings, and legs of animals).</p> <p>1. Observe and describe the relative characteristics and sizes of objects (e.g. bigger, brighter, louder, smellier).</p> <p>2 Observe that differences exist among individual living organisms (e.g., plant, animals) of the same kind.</p>	<p>Discuss the parts and role of a plant.</p> <p>Observe and validate the relative sizes and characteristics of seeds.</p> <p>Discuss what is living or non-living and understand different stages of growth of living things.</p>	<p>TSW listen to Plant books read by the teacher and draw a visual representation.</p> <p>TSW bring a fruit or vegetable that has seed(s) inside to observe different sizes and characteristics.</p> <p>TSW will use pictures to sequence the growth process of living things.</p>	<p>Teacher Observation</p> <p>Teacher Observation</p> <p>Teacher Observation</p>	<p>Books Posters HOLS kit Paper, pencil, crayons</p> <p>Fruits or vegetables from home.</p> <p>www.enchantdlearning.com</p>

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ESSENTIAL QUESTIONS:

STRAND	BENCHMARK
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STANDARD

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STRAND			BENCHMARK		
STANDARD					
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STRAND			BENCHMARK		
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