Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: Why are all living things made of cell/s?	
STRAND: CONTENT OF SCIENCE	**BENCHMARK 5-8 Benchmark III: Understand the structure of organisms and the function of cells in living systems.**
STANDARD: II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	

9 weeks	**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**
1st	1. Understand that all living organisms are composed of cells from one to many trillions, and that cells are usually only visible thought a microscope. 2. Know that some organisms are made of a collection of similar cells that cooperate (e.g., algae) while other organisms are made of cells that are different in appearance and function (e.g., corn, birds). 3. Describe the relationships among cells, tissues, organs, organ systems, whole organisms, and ecosystems	Function of a cell. Relationships of cells, tissues, organs, organ systems, whole organisms, and ecosystem.	**The student will be able to:** **describe and construct a diagram of a cell in science journal. (I.I.I.3)** **use microscope to view live single cells and multi-celled organsims and identify the cell parts (I.I.I.2; I.I.II.1-2; III.I.I.2)** **read and research supplemental texts to understand that some organisms are made of similar cells and some are made of different cells.** **make a diagram representing the relationship of cells, tissues, organs, organ systems, whole organisms, and ecosystems.**	**Teacher made Standards and Benchmark Pre and Post Test** **Cell diagram** **Analysis of students understanding as explained in science journal, working papers, or discussions.** **Supplemental Comprehension student page** **Relationship diagram**	**Science Journal** **Microscope samples of live cells** **Science Studies Weekly Newspaper "Cells and Simple Critters"** **Scott Foresman Unit A Chapter 2**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: Why do plants & animals resemble their parents?	
STRAND CONTENT OF SCIENCE	**BENCHMARK 5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.**
STANDARD II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	

9 weeks	**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**
1st	1. Know that plants and animals have life cycles that include birth, growth and development, reproduction, and death and that these cycles differ for different organisms. 2. Identify characteristics of an organism that are inherited from its parents (e.g., eye color in humans, flower color in plants) and other characteristics that are learned or result from interactions with the environment 3. Understand that heredity is the process by which traits are passed from one generation to another.	**Compare life cycles** **Identify inherited characteristics**	**The student will be able to:** **choose a living organism (plant or animal) and draw and label the life cycle of that organism in a poster size diagram, mobile, flip chart, or science journal. (I.I.I.3)** **classify characteristics and behaviors of living organisms as an inherited trait or a learned behavior.** **participate in a focus activity "How are physical traits passed from parents to child?" to understand how physical traits are passed from parents to child.**	**Teacher made Standards and Benchmark Pre and Post Test** **Diagram, mobile, flip chart** **Analysis of students understanding as explained in science journal and working papers or discussions.**	**Science Studies Weekly Newspaper "Heredity";** **Life Cycle Posters and diagrams of various plant and animal life cycles.** **Dinah Zike's Cross-Curricular Classrooms Thematic Manipulatives: Insects, Butterflies, Spiders and Bees** **McGraw-Hill Children's Publishing: *A Taste of Science* p. 84-88** **Scott Foresman Unit A Chapter 1 p. 11-14**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: What's in our solar system & how do the objects move?	
STRAND CONTENT OF SCIENCE	**BENCHMARK 5-8 Benchmark 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.**
STANDARD III (Earth and Space Science): 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 weeks	**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**
1st	1. Know that many objects in the universe are huge and are separated from one another by vast distances (e.g., many stars are larger than the sun but so distant that they look like points of light). 2. Understand that Earth is part of a larger solar system, which is part of an even larger galaxy (Milky Way), which is One of many galaxies. 3. Know that there have been manned and unmanned journeys to space and to the moon.	**Distance & size of objects in the universe** **Earth in the universe** **Classify manned & unmanned journeys**	**The student will be able to:** **examine and interpret a table to understand distance of objects in space. (I.I.III.1-4)** **compare planet distances by stepping off the distance from the sun outside. Describe observation in science journal. (I.I.II.1-2)** **measure the size of planets using "earth ruler" provided in the activity. (I.I.III.1-4) Make a chart of collected data in science journal. From the chart students will create a bar graph interpretation of planet size. (I.I.I.3)** **read and research supplemental texts to identify and list actual examples and accomplishments of manned and unmanned missions.**	**Teacher made Standards and Benchmark Pre and Post Test** **Analysis of students understanding as explained in science journal, working papers, or discussions.** **Data chart and bar graph** **List of manned and unmanned mission**	**Magic School Bus: Inside the Solar System** **Comparing Planetary Distances Activity (See Smith for Copy)** **How do the planets Differ? From Discover Works p. B42-43** **Daily Comprehension Activities p. 9 "To Jupiter and Beyond", p. 7 "Sputnik I", p. 55 "Challenger", p. 39 "Orbiting Earth"** **Science Studies Week Newspaper: "Watching the Sky"; "Exploring our Solar System"; "Our Universe" and "The Earth"** **Our Universe class set readers in the book room.** **Instructional Fair, Inc. - p 74-76 and 78** **Scott Foresman Unit D Chapter 16-17**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How does water & air affect Earth?	
STRAND CONTENT OF SCIENCE	**BENCHMARK 5-8 Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.**
STANDARD III (Earth and Space Science): 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 weeks	**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. Understand that water and air relate to Earth's processes, including: -how the water cycle relates to weather -how clouds are made of tiny droplets of water, like fog or steam. 2. Know that air is a substance that surrounds Earth (atmosphere), takes up space, moves, and that temperature fluctuations and other factors produce wind currents.	**water cycle** **Earth's atmosphere**	**The students will be able to:** **make a mini water cycle and observe the cycle in action. (I.I.I.1-4)** **build manipulative diagrams which illustrate the movement of water through the cycle. (I.I.I.1-4)** **define Earth's atmosphere as consisting of air that takes up space, moves, and has temperature fluctuations and other factors that produce wind currents in science journals or Dinah Zikes flip booklet.**	**Teacher made Standards and Benchmark Pre and Post Test** **Working water cycle** **Water cycle wheel/manipulative diagram** **Dinah Zikes flip booklet** **Analysis of students understanding as explained in science journal, working papers or discussions.**	**Project Aims A collection of Elementary Water Activities: Water Precious Water** **p. 23-24 "The Mini Water Cycle"** **p. 25-26 "Moving Water"** **p. 27-29 "Moving Raindrops in Water Cycle"** **Center for Hands-On Learning Kit: Earth** **Science Studies Week Newspaper: "The Water Cycle" and "The Earth"** **Dinah Zike's Cross-Curricular Classrooms Thematic Manipulatives: Air, Atmosphere, Weather** **Instructional Fair, Inc. – How Does the Earth Move p. 69-70** **Scott Foresman Unit B Chapter 7-8**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How does water & air affect Earth?	
STRAND CONTENT OF SCIENCE	**BENCHMARK 5-8 Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.**
STANDARD III (Earth and Space Science): 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 weeks	**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**
	3. Know that most of Earth's surface is covered by water, that most of that water is salt water in oceans, and that fresh water is found in rivers, lakes, underground sources, and glaciers. 4. Recognize that the seasons are caused by Earth's motion around the sun and the tilt of Earth's axis of rotation.	**Water on Earth** **Earth's motion around the sun and the tilt of Earth's axis cause the seasons**	**The students will be able to:** **read and research supplemental texts to identify and list actual examples and accomplishments of manned and unmanned missions.** **use a model of the Earth to demonstrate the movement of Earth on it's axis to identify the seasons**	**Teacher made Standards and Benchmark Pre and Post Test** **Analysis of students understanding as explained in science journal, working papers or discussions.**	**Science Studies Week Newspaper: "The Earth"; "Our Life-Giving Oceans"; and "Watching the Sky"** **Dinah Zike's Cross-Curricular Classrooms Thematic Manipulatives: Water, Hydrosphere, Ocean, Fresh Water, Rain Cycle**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How do plants & animals get their energy in an ecosystem?					
STRAND CONTENT OF SCIENCE			**BENCHMARK 5-8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.**		
STANDARD II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.					
9 weeks	**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**
1st	1. Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators). 2. Understand how food webs depict relationships between different organisms. 3. Know that changes in the environment can have different effects on different organisms (e.g., some organisms move, some survive, some reproduce, some die). 4. Describe how human activity impacts the environment.	**Components of habitats of ecosystems** **Food Webs** **Changes to the environment**	**The student will be able to:** **research each major biome identifying plants, animals, climate, and landform facts and culminate in a Dinah Zike layered booklet or science journal.** **use plant and animal picture cards from the Hands-On Learning Kit to build simple food chains that can be combined to create a food web (I.I.I.1; I.I.II.1-2))** **use a set length of paper to represent the flow of energy in an ecosystem and cut it apart to visualize the actual amount of energy transfer (I.I.I.1; I.I.II.1-2)** **make a food web using yarn as the flow of energy and students representing the organisms (I.I.I.1)**	**Teacher made Standards and Benchmark Pre and Post Test** **Biome research rubric/layered book** **Teacher observation during hands on activity and student written analysis of conclusions**	**Science Studies Week Newspaper: "Ecosystems" and "The Water Cycle"** **Dinah Zike's Cross-Curricular Classrooms Thematic Manipulatives: Biome Flip Books** **Land and Water Biome three column chart** **Center for Hand-on Learning Ecosystem Kit** **Valencia Book Room – Guided Group Reader for each Biome** **Biomes WebQuest** **Pictorial food web resources Discover Works handouts p. 92 and 95** **Instruction Fair, Inc. p. 7, 14, 16, 26-27, and 29** **projectwild.org (use w/ human food web)** **Scott Foresman Unit A Ch. 5-6**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How can matter be described?

STRAND CONTENT OF SCIENCE

BENCHMARK 5-8 Benchmark I: Know the forms and properties of matter and how matter interacts.

STANDARD I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

9 weeks	**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**
2nd	1. Describe properties (e.g., relative volume, ability to flow) of the three states of matter. 2. Describe how matter changes from one phase to another (e.g., condensation, evaporation). 3. Know that matter is made up of particles (atoms) that can combine to form molecules and that these particles are too small to see with the naked eye.	**Properties of the three states of matter** **Phase changes in matter** **Matter is made of particles (atoms)**	**The students will be able to:** **make a water molecule mobile and label the parts correctly. (I.I.II.1-2)** **read and research supplemental text to identify properties of matter, phase changes in matter, and that matter is made of particles (atoms)** **use colored marshmallows to build a model of an atom that shows its electrons, protons, and neutrons.** **observe chemical properties and reactions in copper and zinc using the center for hands-on learning (I.I.I.1)** **find the volume and mass of various objects using mathematical tools and measurements (I.I.III.1-4)**	**Teacher made Standards and Benchmark Pre and Post Test** **Water molecule mobile** **Analysis of students understanding as explained in science journal, working papers or discussions.** **Atom model**	**Project Aims A collection of Elementary Water Activities: Water Precious Water p. 3-6 "The Water Molecule"** **Science Studies Week Newspaper: "Building Block of Matter", "Liquids, Solids, and Gasses", "Hot and Cold"** **Aims Education Foundation – Electrical Connections "Atoms" p. 1-5 aimsedu.org** **Center for Hands-On Learning Matter Kit**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How can matter be described?	
STRAND CONTENT OF SCIENCE	**BENCHMARK 5-8 Benchmark I: Know the forms and properties of matter and how matter interacts.**
STANDARD I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.	

9 weeks	**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**
2nd	4. Know that the periodic table is a chart of the pure elements that make up all matter. 5. Describe the relative location and motion of the particles (atoms and molecules) in each state of matter. 6. Explain the relationship between temperature and the motion of particles in each state of matter.	**Periodic table**	**The student will be able to:** **analyze the periodic table to distinguish pure elements and complete the crossword puzzle** **conduct a science experiment entitled "How do Molecules Measure Up" in order to understand molecules vary in size. (I.I.I.1-5)** **use the steps of the scientific method to determine if the amount of surface area will affect the evaporation rate of liquids. (I.I.I.1-5)** **put a drop of food coloring in hot and cold water to compare how molecules move differently at different temperatures. (I.I.I.1-5)**	**Crossword Puzzle** **Grade lab sheets for understanding of content knowledge as well as completion of each step in the scientific method**	**Elements of the Periodic Table Cross word Puzzle-copy of the periodic table** **Elements and Compounds Fact Sheet** **How do Molecules Measure Up Acitivity** **Project Aims A collection of Elementary Water Activities: Water Precious Water p. 34-37 "Moving Molecules"** **"In The Lab" Science Studies Weekly – "Hot and Cold"** **Scott Foresman Unit C Chapter 11**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How can energy be stored and changed into another kind of energy?					
STRAND CONTENT OF SCIENCE			**BENCHMARK 5-8 Benchmark II: Explain the physical processes involved in the transfer, change, and conservation of energy.**		
STANDARD I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.					
9 weeks	**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**
2nd	1. Know that heat is transferred from hotter to cooler materials or regions until both reach the same temperature. 2. Know that heat is often produced as a by-product when one form of energy is converted to another form (e.g., when machines or organisms convert stored energy into motion). 3. Know the different forms of energy. 4. Describe how energy can be stored & converted to a different form of energy (e.g., springs, gravity) & know that machines & living things convert stored energy to motion & heat.	**Heat and energy** **Converting forms of energy** **Forms of energy** **Kinetic and potential energy**	**The students will be able to:** **Determine which materials conduct heat better than others and make inferences about heat conducting materials on scientific investigations sheet** **read and research supplemental text to identify how temperature effects levels of energy, identify forms of energy and how energy changes from potential to kinetic and complete comprehension questions page**	**Teacher made Standards and Benchmark Pre and Post Test** **Scientific investigations sheet** **Teacher made comprehension question page**	**McGraw-Hill Children's Publishing: A Taste of Science "That's Hot" p.58-61** **Science Studies Week Newspaper: "Hot and Cold"** **Kids Discover Magazine "Energy"** **Scott Foresman Unit C Chapter 14**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: What forces produce motion in objects?

STRAND CONTENT OF SCIENCE

BENCHMARK 5-8 Benchmark III: Describe and explain forces that produce motion in objects.

STANDARD I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

9 wks	**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**
3rd	1. Understand how the rate of change of position is the velocity of an object in motion. 2. Recognize that acceleration is the change in velocity with time. 3. Identify forces in nature (gravity, magnetism, electricity, friction). 4. Understand that when a force (e.g., gravity, friction) acts on an object, the object speeds up, slows down, or goes in a different direction.	**Velocity** **Acceleration** **Forces** **Force Acting on Objects**	**The student will be able to:** **read and research supplemental text to identify velocity and acceleration and and complete comprehension questions page** **read *The Magic School Bus and the ElectricField Trip* as a whole class in the format of a play and complete teacher made comprehension page** **use materials provided to make a simple circuit (I.I.II.1-2)** **build a tractor assembly using supplied materials to illustrate how friction works and record data to find out which assembly will go the farthest distance. Distances will be measured and recorded on the data sheet provided in the activity. (I.I.III.1-4)**	**Teacher made comprehension question page** **Teacher made comprehension question page** **Working circuit** **Working tractor assembly and completed data sheet**	**Science Studies Week Newspaper: "A Moving World"; "Electricity and Magnetism"** ***The Magic School Bus and the ElectricField Trip*** **AIMS Education Foundation "All Wound Up"**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How do simple machines allow us to use less force?					
STRAND CONTENT OF SCIENCE			**BENCHMARK 5-8 Benchmark III: Describe and explain forces that produce motion in objects.**		
STANDARD I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.					
9 weeks	**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**
3rd	5. Identify simple machines & describe how they give advantage to users (e.g., levers, pulleys, wheels and axles, inclined planes, screws, wedges).	**Simple Machines**	**The students will be able to:** **read and research supplemental text to identify velocity and acceleration and and complete comprehension questions page** **make & use simple machines using provided materials (I.I.I.1-5)** **make a layered book of the six simple machines and classify tools into each category**	**Teacher made comprehension question page** **Models of simple machines** **Layered book**	**Science Studies Weekly: "Technology & Inventions"** **Center for Hands-on-Learning Kit: Simple Machines** **Aims Education Foundation: "Wedge-Ease", "One good turn deserves another", "Nuts & Bolts", "Pulley Power", & "Making the Grade"** **Dinah Zike's Cross-Curricular Classrooms: Magnets, Simple Tools & Machines** **Scott Foresman Unit C Chapter 13&15**

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How can the scientific method help us conduct and experiment?	
STRAND SCIENTIFIC THINKING AND PRACTICE	**BENCHMARK 5-8 Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.**
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**
Throughout year	1. Plan and conduct investigations, including formulating testable questions, making systematic observations, developing logical conclusions, & communicating findings. 2. Use appropriate technologies (e.g., calculators,computers, balances, spring scales, microscopes) to perform scientific tests and to collect and display data. 3. Use graphic representations(charts, graphs, tables, labeled diagrams) to present data & produce explanations for investigations.		**See referenced activities in content standards and benchmarks above.**		

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CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS:	
STRAND SCIENTIFIC THINKING AND PRACTICE	**BENCHMARK 5-8 Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.**
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**
Throughout year	4. Describe how credible scientific investigations use reproducible elements including single variables, controls, and appropriate sample sizes to produce valid scientific results. 5. Communicate the steps and results of a scientific investigation.		**See referenced activities in content standards and benchmarks above.**		

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: What tools can we use to answer scientific questions?	
STRAND SCIENTIFIC THINKING AND PRACTICE	**BENCHMARK 5-8 Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.**
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**
Throughout year	1. Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments). 2. Understand that scientific conclusions are subject to peer and public review.		**See referenced activities in content standards and benchmarks above.**		

Portales Municipal Schools

CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: What units can we use for measurement?	
STRAND SCIENTIFIC THINKING AND PRACTICE	**BENCHMARK 5-8 Benchmark III: Use mathematical ideas, tools, and techniques to understand scientific knowledge**
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**
Throughout year	1. Use appropriate units to make precise and varied measurements. 2. Use mathematical skills to analyze data 3. Make predictions based on analyses of data, observations, and explanations. 4. Understand the attributes to be measured in a scientific investigation and describe the units, systems, and processes for making the measurement.				

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CURRICULUM MAP

Subject:	Science	**2009**	**Grade Level 5**

ESSENTIAL QUESTIONS: How have scientific discoveries & inventions changed our way of life?					
STRAND SCIENCE AND SOCIETY			**BENCHMARK 5-8 Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies.**		
STANDARD I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.					
9 weeks	**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**
Throughout year	1. Describe the contributions of science to understanding local or current issues (e.g., watershed and community decisions regarding water use). 2. Describe how various technologies have affected the lives of individuals (e.g., transportation, entertainment, health).	**Water issues** **Technology**	**The students will be able to:** **do an activity that simulates the steps in the water treatment process (I.I.I.1-5)** **describe water issues in New Mexico** **read and research supplemental text to identify various technologies that have impacted our way of life and complete comprehension questions page**	**Simulation model** **Active participation in oral discussion** **Comprehension questions page**	**Aims: Water Precious water, "Mini Water Treatment Simulation" page 55-57** **Center for Hands-on-Learning Kit: Planet Earth/Our Universe** **Science Studies Weekly: "Technology and Inventions"** **Daily Comprehension, Remedia Publications: "Eli Whitney" page 15, "First Airplane Flight" page 33, "Thomas Edison" p page 21, "Cotton Gin" page 27** **Scott Forseman Unit D: Chapter 18**