

Jemez Valley Public Schools
SECOND GRADE SCIENCE • CONTENT MAP

Quadrant I	Quadrant II	Quadrant III	Quadrant IV
Strand I: Scientific Thinking and Practice			
Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.			
<ul style="list-style-type: none"> ● Use tools to provide information not directly available through only the senses (e.g., magnifiers, rulers, thermometers). ● Understand that in doing science it is often helpful to work with a team and share findings. ● Record investigations on simple charts or diagrams. –all year— ● Measure length, weight, and temperature with appropriate tools and express those measurements in accurate mathematical language. –all year-- 	<ul style="list-style-type: none"> ● Use tools to provide information not directly available through only the senses (e.g., magnifiers, rulers, thermometers). ● Make predictions based on observed patterns as opposed to random guessing. ● Understand that in doing science it is often helpful to work with a team and share findings. 	<ul style="list-style-type: none"> ● Use tools to provide information not directly available through only the senses (e.g., magnifiers, rulers, thermometers). ● Understand that in doing science it is often helpful to work with a team and share findings. ● Make accurate observations and communicate findings about investigations. 	<ul style="list-style-type: none"> ● Conduct simple investigations (e.g., measure the sizes of plants of the same kind that are grown in sunlight and in shade).
Quadrant I	Quadrant II	Quadrant III	Quadrant IV
Strand II: Content of Science			
Standard I: (Physical Science) Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.			
	<ul style="list-style-type: none"> ● Observe that properties of substances can change when they are mixed, cooled, or heated (e.g., salt dissolves in water, ice melts). ● Describe the changes that occur when substances are heated or cooled and change from one state of matter to another (i.e., solid, liquid, and gas). ● Describe how heat can be produced (e.g., burning, rubbing, mixing some substances). ● Know that heat moves more rapidly in thermal conductors (e.g., metal pan) than in insulators(e.g.,plastic handle). 	<ul style="list-style-type: none"> ● Describe how heat can be produced (e.g., burning, rubbing, mixing some substances). ● Know that heat moves more rapidly in thermal conductors (e.g., metal pan) than in insulators (e.g.,plastic handle). ● Describe the usefulness of some forms of energy (e.g., electricity, sunlight, wind, sound) and how energy (*e.g., heat, light) can affect common objects (e.g., sunlight warms dark objects, heat melts candles). ● Observe that sound is made by vibrating objects and describe it by its pitch and loudness. ● Recognize that moving objects carry energy (kinetic energy). ● Describe how the strength of a push or pull affects the change in an object's motion (e.g., how a big or small push affects how high a swing rises.) ● Observe that electrically charged materials and magnets attract and repel each other, and observe their effects on other kinds of materials. 	

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Strand II: Content of Science			
Standard I: (Life Science) Understand the properties, structures, and processes of living things and the interdependence of living things and their environments..			
<ul style="list-style-type: none"> ● Observe that diversity exists among individuals within a population. ● Observe and describe various shapes of fungi. ● Know that bacteria and viruses are germs. ● Identify a variety of human organs (e.g., lungs, heart, stomach, brain) ● Know that various nutrients are required for specific parts and functions of the body (e.g., milk for bones and teeth, protein for muscles, sugar for energy). ● Identify the functions of human systems (e.g., respiratory, circulatory, digestive.) 		<ul style="list-style-type: none"> ● Explain that stages of the life cycle are different for different animals (e.g., mouse, cat, horse, butterfly, frog). ● Observe that many characteristics of the offspring of living organisms (e.g., plants or animals) are inherited from their parents. ● Observe how the environment influences some characteristics of living things (e.g., amount of sunlight required for plant growth). 	
Quadrant I	Quadrant II	Quadrant III	Quadrant IV
Strand II: Content of Science			
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.			
<ul style="list-style-type: none"> ● Know that rocks have different shapes and sizes (e.g., boulders, pebbles, sand) and that smaller rocks result from the breaking and weathering of larger rocks. ● Understand that rocks are made of materials with distinct properties. ● Know that soil is made up of weathered rock and organic materials, and that soils differ in their capacity to support the growth of plants. 	<ul style="list-style-type: none"> ● Observe that the phase of the moon appears a little different every day but looks the same again after about four weeks. ● Observe that some objects in the night sky are brighter than others ● Know that the sun is a star. ● Recognize the characteristics of the seasons. 		

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Quadrant I	Quadrant II	Quadrant III	Quadrant IV
Strand II: Science and Society			
Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.			
<ul style="list-style-type: none"> ● Describe ways to prevent the spread of germs (e.g., soap, bleach, cooking). ● Know that science has ways to help living things avoid sickness or recover from sickness (e.g., vaccinations, medicine) and adult supervision is needed to administer them. ● Know that science has discovered many things about objects, events, and nature and that there are many more questions to be answered. –all year-- 		<ul style="list-style-type: none"> ● Know that some materials are better than others for making particular things (e.g., paper, cardboard, plastic, metal, fiberglass, wood). ● Understand that everybody can do science, invent things, and formulate ideas. 	