

Third Grade Science SBRC Rubric

Report Card Standard	TEKS	Performance Assessment	Assessment of Mastery		
Process Skills			PS	AS	IPS
Actively contributes in planning and conducting investigations using tools safely.	<p>1A Demonstrate safe practices as described in the Texas Education Agency-approved Safety Standards during classroom and outdoor investigations using safety equipment as appropriate, including goggles or chemical splash goggles, as appropriate, and gloves.</p> <p>1B 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>4A Collect, record, and analyze information using tools, including...(see TEKS).</p>	Learners design and conduct descriptive investigations of objects or organisms, demonstrating safe practices. Throughout the investigations, learners collect and record data and effectively communicate their findings.	Demonstrates a solid ability to actively contribute in planning and conducting investigations using tools safely.	Demonstrates partial ability to actively contribute in planning and conducting investigations using tools safely.	Demonstrates minimal ability to actively contribute in planning and conducting investigations using tools safely.
Observes, collects, and records scientific data in charts, tables, or graphs.	<p>2A 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>2B collect and record data by observing and measuring using the metric system and recognize differences between observed and measured data.</p> <p>2C Construct maps, graphic</p>		Demonstrates a solid ability to collect, organize, display, and analyze data independently.	Demonstrates partial ability to collect, organize, display, and analyze data independently	Demonstrates minimal ability to collect, organize, display, and analyze data independently

	<p>organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data.</p> <p>2E Demonstrate that repeated investigations may increase the reliability of results.</p>				
<p>Draws reasonable explanations and communicates valid conclusions based on data.</p>	<p>2D Analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations.</p> <p>2F communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.</p> <p>3A Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing.</p> <p>3D Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.</p>	<p>Learners mirror the work of scientists by identifying real problems, using collected data to make predictions, and designing problem solutions. Throughout the process, learners model critical thinking by analyzing data and constructing evidence-based conclusions.</p>	<p>Demonstrates a solid ability to construct reasonable explanations using specific scientific language and draw appropriate scientific conclusions using evidence from collected data.</p>	<p>Demonstrates partial ability to construct reasonable explanations using specific scientific language and draw appropriate scientific conclusions using evidence from collected data.</p>	<p>Demonstrates minimal ability to construct reasonable explanations using specific scientific language and draw appropriate scientific conclusions using evidence from collected data.</p>
Life Science					
<p>Describes the physical characteristics of environments and explain how they support organisms within an</p>	<p>9A Observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem.</p>	<p>Design a habitat, such as a terrarium or aquarium, which includes both plants and animals. Using evidence from observations, explain how the needs of the organisms</p>	<p>Demonstrates a solid ability to independently observe, identify, and describe</p>	<p>Demonstrates partial ability to independently observe, identify, and describe</p>	<p>Demonstrates minimal ability to independently observe, identify, and describe</p>

ecosystem.		within the habitat are met in order to survive.	habitats of organisms within an ecosystem and how they compete with one another for resources.	habitats of organisms within an ecosystem and how they compete with one another for resources.	habitats of organisms within an ecosystem and how they compete with one another for resources.
Identifies the flow of energy in a food chain and predicts how changes in a food chain affect an ecosystem.	9B 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.	Design a zoo habitat for an assigned animal explaining how its structures and functions allow it to survive within that habitat. Within the model or drawing, illustrate how the young	Demonstrates a solid ability to compare the life cycles of plants and animals.	Demonstrates partial ability to compare the life cycles of plants and animals.	Demonstrates minimal ability to compare the life cycles of plants and animals.
Communicates how structures and functions allow plants and animals to survive in a particular environment.	10A Explore how structures and functions of plants and animals allow them to survive in a particular environment. 10B Investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady beetles.	look as compared with the parent animals. Explain traits or behaviors that the young animals inherited from their parents as well as traits or behaviors that they learned.	Demonstrates a solid ability to differentiate between inherited characteristics and learned behavior of organisms.	Demonstrates partial ability to differentiate between inherited characteristics and learned behavior of organisms.	Demonstrates minimal ability to differentiate between inherited characteristics and learned behavior of organisms.
Explains the impact of environmental changes on organisms within an ecosystem.	9C Describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations.	Research and construct a model of a multi-step food chain within an ecosystem. Use labels to explain how each organism within the food chain obtains food energy. Predict what might happen to the organisms within the food chain if the	Demonstrates a solid ability to explain the impacts of environmental changes on organisms within an ecosystem.	Demonstrates partial ability to explain the impacts of environmental changes on organisms within an ecosystem.	Demonstrates minimal ability to explain the impacts of environmental changes on organisms within an

		ecosystem undergoes a sudden environmental change, such as a flood, and support your predictions with research or data.			ecosystem.
Earth Science					
Measures, records, and compares weather changes.	8A Observe, measure, record, and compare day-to-day weather changes in different locations at the same time that include air temperature, wind direction, and precipitation. 8B Describe and illustrate the Sun as a star composed of gases that provides light and thermal energy.	Observe, measure, and record weather changes over an extended period of time and compare these, through research, to weather changes in other places in the world during the same timeframe. Apply understanding of the sun-moon-earth relationships by explaining why weather conditions in some parts of the world are similar to the weather here and different from weather in other places.	Demonstrates a solid ability to measure and record weather changes.	Demonstrates partial ability to measure and record weather changes.	Demonstrates minimal ability to measure and record weather changes.
Constructs models that demonstrate relative position and characteristics of objects in the solar system.	8C Construct models that demonstrate the relationship of the Sun, Earth, and Moon, including orbits and positions. 8D Identify the planets in Earth's solar system and their position in relation to the Sun. 3B Represent the natural world using models such as volcanoes or	Select materials to build a model that illustrates the relative positions and motions of the Sun, Moon and Earth and explain how this might fit within a larger model that shows the relative positions of the planets within our solar	Demonstrates a solid ability to describe relative position and characteristics of objects in the solar system.	Demonstrates partial ability to describe relative position and characteristics of objects in the solar system.	Demonstrates minimal ability to describe relative position and characteristics of objects in the solar

	Sun, Earth, Moon system and identify their limitations, including size, properties, and materials.	system.			system.
Investigates and records different types of soils and how they are formed.	7A Explore and record how soils are formed by weathering of rock and the decomposition of plants and animal remains.	Design and conduct a descriptive investigation comparing the properties and components of soils from various locations. Use data to make claims about the processes that contributed to the formation of each of these types of soils.	Demonstrates a solid ability to design and conduct a descriptive investigation and make claims about soil formation based on evidence.	Demonstrates partial ability to design and conduct a descriptive investigation and make claims about soil formation based on evidence.	Demonstrates minimal ability to design and conduct a descriptive investigation and make claims about soil formation based on evidence.
Uses models to investigate the causes and effects of rapid changes in Earth's surface.	7B Investigate rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides. 7C 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.	Build a model of a landform, such as a mountain or a hill, and explain how the landform will eventually form soil through action of weather changes and the water cycle. Explain how plants also contribute to the formation of soils.	Demonstrates a solid ability to compare rapid and slow changes affecting Earth's surface.	Demonstrates partial ability to compare rapid and slow changes affecting Earth's surface.	Demonstrates minimal ability to compare rapid and slow changes affecting Earth's surface.
Physical Science					
Measures, describes, and classifies matter based on physical properties.	5A Measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float. 5B Describe and classify samples of matter as solids, liquids and	Create a cooking show that compares and describes the properties and states of matter and their changes. Explain the physical changes that occur during such cooking situations as:	Demonstrates a solid ability to measure, describe, and classify matter based on physical	Demonstrates partial ability to measure, describe, and classify matter based on physical	Demonstrates minimal ability to measure, describe, and classify matter based on

	<p>gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container.</p> <p>5C Predict, observe, and record changes in the state of matter caused by heating or cooling such as ice becoming liquid water, condensation forming on the outside of a glass of ice water, or liquid water being heated to the point of becoming water vapor.</p>	<p>combining bread, meat and other items to make a sandwich (mixture); boiling water into steam while preparing to cook spaghetti (state change). Students will include examples of solids, liquids, gases and mixtures used within the cooking show and will describe how their properties are important in cooking.</p>	<p>properties.</p>	<p>properties.</p>	<p>physical properties.</p>
<p>Explores and explains how a mixture is created.</p>	<p>5D Explore and recognize that a mixture is created when two materials are combined such as gravel and sand and metal and plastic paper clips.</p>				
<p>Explores and identifies different forms of energy.</p>	<p>6A Explore different forms of energy, including mechanical, light, sound, and thermal in everyday life.</p>	<p>Students will apply their understandings of force and motion by designing models of playground equipment for older and younger grade level students so that the speed of travel is slower on the equipment for younger students. Students will explain the impact of forces on the motion of objects within the model, including the forces of gravity and/or magnetism. Students will also explain the type of energy involved within the</p>	<p>Demonstrates a solid ability to identify different forms of energy.</p>	<p>Demonstrates partial ability to identify different forms of energy.</p>	<p>Demonstrates minimal ability to identify different forms of energy.</p>
<p>Records evidence of contact forces (pushing and pulling) and forces at a distance (gravity and magnetism).</p>	<p>6B Demonstrate and observe how positions and motion can be changed by pushing and pulling objects such as swings, balls, pulleys, and wagons.</p> <p>6C Observe forces such as magnetism and gravity acting on objects.</p>		<p>Models a solid ability to demonstrate that forces can cause change.</p>	<p>Models a partial ability to demonstrate that forces can cause change.</p>	<p>Models a minimal ability to demonstrate that forces can cause change.</p>

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