

**Grade 4 – SCIENCE**  
**Skills Based Report Card**

Standard	Standards	Students will be able to....
<p><b>Scientific Inquiry:</b></p> <p><b>Understands that scientific inquiry is the process of predicting, planning, conducting, observing, describing and classifying information</b></p>	<p><b>5.1.4.B.3</b> Evidence is used to construct and defend arguments.</p> <p><b>5.1.4.C.2</b> Revisions of predictions and explanations occur when new arguments emerge that account more completely for available evidence.</p> <p><b>5.1.4.D.2</b> In order to determine which arguments and explanations are most persuasive, communities of learners work collaboratively to pose, refine, and evaluate questions, investigations, models, and theories (e.g., scientific argumentation and representation).</p>	<p>Construct a hypothesis and design a test that will generate appropriate evidence to confirm or reject the hypothesis.</p> <p>Analyze results to confirm or reject the hypothesis.</p>
<p><b>Scientific Literacy:</b></p> <p><b>Demonstrates scientific literacy through listening, speaking, presenting, reading and writing about science</b></p>	<p><b>5.1.4.B.1</b> Building and refining models and explanations requires generation and evaluation of evidence.</p> <p><b>5.1.4.B.3</b> Evidence is used to construct and defend arguments.</p> <p><b>5.1.4.B.4</b> Reasoning is used to support scientific conclusions.</p> <p><b>5.1.4.C.3</b> Scientific knowledge is a particular kind of knowledge with its own sources, justifications, and uncertainties.</p> <p><b>5.1.4.D.1</b> Science has unique norms for participation. These include adopting a critical stance, demonstrating a willingness to ask questions and seek help, and developing a sense of trust and skepticism.</p>	<p>Organize data into charts or graphs and use them to describe the relationship between two or more variables.</p> <p>Develop an argument or explanation regarding a hypothesis, data, or results.</p> <p>Use writing, drawing and discussion to communicate observations and results of investigations.</p> <p>Use Venn Diagrams, journaling, and research.</p>
<p><b>Scientific Numeracy:</b></p>	<p><b>5.1.4.B.2</b></p>	<p>Perform accurate measurements in science investigations.</p>

<p><b>Understands that measurement and mathematics provide useful tools for accurately collecting data and is able to use data to draw conclusion of scientific processes and ideas</b></p>	<p>Tools and technology are used to gather, analyze, and communicate results.</p> <p><b>5.1.4.D.3</b> Instruments of measurement can be used to safely gather accurate information for making scientific comparisons of objects and events.</p>	
<p><b>Scientific Content:</b></p> <p><b>Grasps concepts presented during trimester</b></p>	<p><b>5.2.4.B.1</b> Many substances can be changed from one state to another by heating or cooling.</p> <p><b>5.2.4.C.1</b> Heat (thermal energy), electricity, light, and sound are forms of energy.</p> <p><b>5.2.4.C.2</b> Heat (thermal energy) results when substances burn, when certain kinds of materials rub against each other, and when electricity flows through wires. Metals are good conductors of heat (thermal energy) and electricity. Increasing the temperature of any substance requires the addition of energy.</p> <p><b>5.2.4.C.3</b> Energy can be transferred from one place to another. Heat energy is transferred from warmer things to colder things.</p> <p><b>5.2.4.C.4</b> Light travels in straight lines. When light travels from one substance to another (air and water), it changes direction.</p> <p><b>5.2.4.D.1</b> Electrical circuits require a complete loop through conducting materials in which an electrical current can pass.</p> <p><b>5.4.4.A.1</b> Objects in the sky have patterns of movement. The Sun and Moon appear to move across the sky on a daily basis. The shadows of an object on Earth change over the course of a day, indicating the changing position of the Sun during the day.</p>	<p>Consistently demonstrate an understanding of all concepts presented during the trimester through a variety of assessments.</p>

**5.4.4.A.2**

The observable shape of the Moon changes from day to day in a cycle that lasts 29.5 days.

**5.4.4.A.3**

Earth is approximately spherical in shape. Objects fall towards the center of the Earth because of the pull of the force of gravity.

**5.4.4.A.4**

Earth is the third planet from the Sun in our solar system, which includes seven other planets.

**5.4.4.C.2**

Earth materials in nature include rocks, minerals, soils, water, and the gases of the atmosphere. Attributes of rocks and minerals assist in their identification.