

# Science ISAT: General Science – Earth and Space Systems

## Skills: Understand Geo-chemical Cycles – and Energy in the Earth System

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| <b>Students:</b> | <p><b>RIT Above 240:</b></p> <ul style="list-style-type: none"> <li>• Describes the relative abundance of minerals in Earth's crust</li> <li>• Predicts where sedimentation will occur in a meandering stream</li> <li>• Describes oxygen cycle</li> </ul>  |
| <b>Students:</b> | <p><b>RIT 231-240:</b></p> <ul style="list-style-type: none"> <li>• Relates the characteristics of igneous rocks to the conditions of their formation</li> <li>• Classifies rocks according to composition</li> <li>• Recognizes that oxygen is an agent of chemical weathering</li> <li>• Recognizes agents of chemical weathering</li> <li>• Recognizes the carbon cycle</li> </ul>   |
| <b>Students:</b> | <p><b>RIT 221-230:</b></p> <ul style="list-style-type: none"> <li>• Describes the makeup of minerals</li> <li>• Recognizes that each mineral has a specific chemical composition and structure which give it specific physical properties</li> <li>• Explains that specific properties of a mineral are due to its chemical composition and structure</li> <li>• Identifies rocks and minerals based on physical properties</li> <li>• Describes the process of metamorphic rock formation</li> <li>• Identifies minerals using established methods</li> <li>• Interprets data related to formation of Earth materials</li> <li>• Describes the formation of extrusive and intrusive rocks</li> <li>• Describes how sedimentation occurs</li> <li>• Describes sequences within the rock cycle that minerals could pass through</li> <li>• Describes the carbon cycle</li> </ul> |
| <b>Students:</b> | <p><b>RIT 211-220:</b></p> <ul style="list-style-type: none"> <li>• Gives examples of igneous rocks</li> <li>• Describes the process of igneous rock formation</li> <li>• Recognizes that petrification is the replacement of bone by minerals</li> <li>• Describes characteristics of sedimentary rock</li> <li>• Makes inferences about where igneous rocks may be found</li> <li>• Classifies rocks according to the forces which formed them</li> <li>• Recognizes the Sun's role in the water cycle</li> <li>• Recognizes the sources of geothermal energy</li> <li>• Compares weathering and erosion</li> <li>• Compares agents of erosion</li> <li>• Describes sequences within the rock cycle that minerals could pass through</li> </ul>   |
| <b>Students:</b> | <p><b>RIT 201-210:</b></p> <ul style="list-style-type: none"> <li>• Describes physical characteristics of different rocks and minerals (e.g., color, hardness, texture, pattern, layering, particle size)</li> <li>• Describes the process of sedimentary rock formation</li> <li>• Defines the rock cycle</li> <li>• Describes ways in which rocks undergo changes from physical weathering</li> <li>• Gives examples of chemical weathering</li> <li>• Predicts how sediments of different sizes will sort</li> <li>• Describes how Earth materials erode</li> <li>• Recognizes major agents of erosion</li> <li>• Interprets data related to the continuous modification of rocks in the rock cycle</li> </ul>   |
| <b>Students:</b> | <p><b>RIT 191-200:</b></p> <ul style="list-style-type: none"> <li>• Identifies rock types</li> <li>• Explains that the Sun is the major source of heat and light for Earth</li> <li>• Describes the Sun as the major source of energy for Earth</li> <li>• Explains that the Sun is the major energy source for Earth</li> <li>• Recognizes that the Sun's light energy is transformed to heat energy upon hitting Earth's surface</li> <li>• Describes weathering</li> <li>• Explains how weather can cause changes in rocks</li> <li>• Makes inferences about the causes of a change to rock</li> <li>• Defines erosion as the wearing away or removal of rock or soil from a site</li> </ul>   |
| <b>Students:</b> | <p><b>RIT 181-190:</b></p> <ul style="list-style-type: none"> <li>• Describes different types of Earth materials</li> <li>• Recognizes that the Sun produces heat and light energy</li> <li>• Recognizes that the Sun's energy can be stored in objects as heat</li> <li>• Explains that tiny rocks come from the weathering and breakage of larger rocks</li> </ul>  |