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<tr>
<th>Score</th>
<th>1= 0-1 out of 5 bullets</th>
<th>2= 2-3 out of 5 bullets</th>
<th>3= 4-5 out of 5 bullets</th>
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</table>
| **Trimester-1** | Student is unable or rarely able to demonstrate understanding of key concepts.  
- Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.  
- Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.  
- **Read maps to identify and compare Earth’s surface features.**  
- **Identify patterns in Earth’s surface features.** | Student is beginning to demonstrate understanding of key concepts.  
- Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.  
- Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.  
- **Read maps to identify and compare Earth’s surface features.**  
- **Identify patterns in Earth’s surface features.**  
- Student is beginning to communicate or sometimes communicates using acquired vocabulary. | Student demonstrates understanding of key concepts by using them effectively throughout the units taught.  
- Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.  
- Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.  
- **Read maps to identify and compare Earth’s surface features.**  
- **Identify patterns in Earth’s surface features.**  
- Student communicates using acquired vocabulary. | Student independently meets standards and extends understanding through application to real-life situations. Example:  
Student can construct an explanation based on evidence for how geoscience processes have changed Earth’s surface at varying time and spatial scales. |
- Student is unable or rarely able to communicate using acquired vocabulary.

**Assessment:** worktext responses, projects, experiments, and investigations  
**Examples:** water stream investigation, mudslide investigation, trail design, model of plate tectonics, volcano demonstration, tsunami investigation

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</table>
| **Trimester-All** | Student is unable or rarely able to plan and carry out investigations.  
- Identify the purpose of the investigation or the question to be answered through building of model.  
- Use materials and tools correctly.  
- Plan procedures and carry them out accurately.  
- Use time well and stay focused.  
- Label models and diagrams.  
- Include an explanation of the | Student is beginning to plan and carry out investigations.  
- Identify the purpose of the investigation or the question to be answered through building of model.  
- Use materials and tools correctly.  
- Plan procedures and carry them out accurately.  
- Use time well and stay focused.  
- Label models and diagrams.  
- Include an explanation of the scientific concept modeled | Student consistently plans and carries out investigations.  
- Identify the purpose of the investigation or the question to be answered through building of model.  
- Use materials and tools correctly.  
- Plan procedures and carry them out accurately.  
- Use time well and stay focused.  
- Label models and diagrams.  
- Include an explanation of the scientific concept modeled | Not applicable. |
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<th>Score</th>
<th>1=0-3 out of 9 bullets</th>
<th>2=4-6 out of 9 bullets</th>
<th>3=7-9 out of 9 bullets</th>
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| **Trimester-All** | Student is unable or rarely able to express scientific ideas effectively using writing, discussion, and/or drawing.  
- Write data that are scientifically appropriate to support the claim.  
- Write claim that is a reasonable answer to the question and is based on general knowledge.  
- Write data that is sufficient and convincing.  
- Use scientific terms. | Student is beginning to express scientific ideas effectively using writing, discussion, and/or drawing.  
- Write data that are scientifically appropriate to support the claim.  
- Write claim that is a reasonable answer to the question and is based on general knowledge.  
- Write data that is sufficient and convincing.  
- Use scientific terms.  
- Include charts/diagrams/or models.  
- Include evidence that is qualitative, using senses, or | Student consistently expresses scientific ideas effectively using writing, discussion, and/or drawing.  
- Write data that are scientifically appropriate to support the claim.  
- Write claim that is a reasonable answer to the question and is based on general knowledge.  
- Write data that is sufficient and convincing.  
- Use scientific terms.  
- Include charts/diagrams/or models.  
- Include evidence that is qualitative, using senses, or | Student independently meets standards and extends understanding. Example:  
- Write a claim that is a reasonable answer to the question and is based on general knowledge and describe the relationship between dependent and independent variables. |
- Include charts/diagrams/models.
- Include evidence that is qualitative, using senses, or quantitative, using numbers.
- Include multiple pieces of evidence.
- Write response that adequately expresses ideas and include scientifically appropriate descriptions and vocabulary that is focused mainly on question at hand with a logical progression of ideas.
- Provide the justification for why this evidence is important to this claim.

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<thead>
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<th>quantitative, using numbers.</th>
<th>Include multiple pieces of evidence.</th>
<th>or quantitative, using numbers.</th>
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<td>Write response that adequately expresses ideas and include scientifically appropriate descriptions and vocabulary that is focused mainly on question at hand with a logical progression of ideas.</td>
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Assessment: work text responses, projects, experiments, and investigations

Demonstrates Understanding of unit Concepts- (4-ESS2-2), (4-ESS3-2), (4-ESS3-1), (4-PS3-2), (4-PS3-1), (4-PS3-3), (4-PS3-4)

Science Unit 2 – Plate Tectonics and Natural Hazards 9 weeks (finishing from the first trimester)
Science Unit 3 – Conservation of Energy 5 weeks
**Science Unit 4- Forces and motions 6 weeks (Introduction)**
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<th>2 = 4-7 out of 11 bullets</th>
<th>3 = 8-11 out of 11 bullets</th>
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| Trimester-2 | Student is unable or rarely able to demonstrate  
- Read maps to identify and compare Earth’s surface features.  
- Identify patterns in Earth’s surface features.  
- Create a model of a topographic map.  
- Explain how tectonic movement and weather related natural hazards can negatively affect humans and explain how these dangers can be minimized.  
- Use models, conduct investigations, and design solutions to reduce the harmful impacts caused by them.  
- Make observations to provide evidence that energy can be transferred from place to place by sounds, light, heat, and electric currents. | Student is beginning to demonstrate understanding of key concepts.  
- Read maps to identify and compare Earth’s surface features.  
- Identify patterns in Earth’s surface features.  
- Create a model of a topographic map.  
- Explain how tectonic movement and weather related natural hazards can negatively affect humans and explain how these dangers can be minimized.  
- Use models, conduct investigations, and design solutions to reduce the harmful impacts caused by them.  
- Make observations to provide evidence that energy can be transferred from place to place by sounds, light, heat, and electric currents.  
- Obtain and combine information to describe that energy and fuel are derived from natural resources and their uses affect the environment. | Student demonstrates understanding of key concepts by using them effectively throughout the units taught.  
- Read maps to identify and compare Earth’s surface features.  
- Identify patterns in Earth’s surface features.  
- Create a model of a topographic map.  
- Explain how tectonic movement and weather related natural hazards can negatively affect humans and explain how these dangers can be minimized.  
- Use models, conduct investigations, and design solutions to reduce the harmful impacts caused by them.  
- Make observations to provide evidence that energy can be transferred from place to place by sounds, light, heat, and electric currents.  
- Obtain and combine information to describe that energy and fuel are derived from  
- Obtain and combine information to describe that energy and fuel are derived from | Student independently meets standards and extends understanding through application to real-life situations. Example:  
Student can describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. |
<table>
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<tr>
<th>Level 1</th>
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<td><strong>Obtain and combine information to describe that energy and fuel are derived from natural resources and their uses affect the environment.</strong></td>
<td><strong>Use evidence to construct an explanation relating the speed of an object to the energy of the object.</strong></td>
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<td>Obtain and combine information to describe that energy and fuel are derived from natural resources and their uses affect the environment.</td>
<td><strong>Ask questions and predict outcomes about the changes in energy that occur when objects collide.</strong></td>
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<td><strong>Use evidence to construct an explanation relating the speed of an object to the energy of the object.</strong></td>
<td><strong>Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</strong></td>
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<td><strong>Ask questions and predict outcomes about the changes in energy that occur when objects collide.</strong></td>
<td>Student is beginning to communicate or sometimes communicates using acquired vocabulary.</td>
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<td><strong>Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</strong></td>
<td>Student is unable or rarely able to communicate using acquired vocabulary.</td>
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Assessment: worktext responses, projects, experiments, and investigations  Examples: earthquake investigation, topography map construction, electrical investigations in circuits, wind turbine construction and design, race car track model

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<td>Develop a model of waves to describe patterns in terms of amplitude and wavelength and show that waves can cause objects to move.</td>
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<td>Student independently meets standards and extends understanding through application to real-life situations. Example:</td>
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<td>Student can explain gravitational force.</td>
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that waves can cause objects to move.
- Generate and compare multiple solutions that use patterns to transfer information.
- Student is unable or rarely able to communicate using acquired vocabulary.

- Generate and compare multiple solutions that use patterns to transfer information.
- Student is beginning to communicate or sometimes communicates using acquired vocabulary.

that waves can cause objects to move.
- Generate and compare multiple solutions that use patterns to transfer information.
- Student communicates using acquired vocabulary.

**Assessment:** worktext responses, projects, experiments, and investigations Examples: wave experiments with water slinky experiment, code investigation