<table>
<tr><th colspan="4">Common Core State Standards for Mathematics</th></tr>
<tr><th colspan="4">Domain: Trigonometric Functions</th></tr>
<tr><th colspan="4">Periodic Phenomena (F-TF.5-7)</th></tr>
<tr><th colspan="4">High School</th></tr>
<tr><td>Score 4.0</td><td colspan="2">In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard. The student will:
• write an inverse trigonometric function by restricting its domain (F-TF.6)</td><td>Example Activities</td></tr>
<tr><td></td><td>3.5</td><td>In addition to score 3.0 performance, in-depth inferences and applications with partial success.</td><td></td></tr>
<tr><td>Score 3.0</td><td colspan="2">The student will:
• choose trigonometric functions to model periodic phenomena with specified amplitude, frequency and midline (F-TF.5)
• understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed. (F-TF.6)
• use inverse functions to solve trigonometric equations that arise in modeling contexts and evaluate the solutions using technology, and interpret them in terms of the context (F-TF.7)

The student exhibits no major errors or omissions.</td><td><u>Periodic Phenomena Card Match</u> – Students will be placed in pairs and given sets of cards that contain situations or graphical representations of periodic phenomena as well as the corresponding trigonometric function that represents each phenomena. The students will be tasked to match the correct function to the situation or graphic it represents. Once the groups have matched the functions to the situations, the teacher will verify the accuracy of the groups' work and require each student to write an explanation as to why each function matches its corresponding situation or graphic.</td></tr>
<tr><td></td><td>2.5</td><td>No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content</td><td></td></tr>
<tr><td>Score 2.0</td><td colspan="2">There are no major errors or omissions regarding the simpler details and processes as the student will:
• recognize or recall specific vocabulary, such as:
o the periodic phenomena for the trigonometric functions sine, cosine and tangent
• perform basic processes, such as:
o

However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</td><td><u>Marzano Vocabulary Template</u> – Students will be given key vocabulary such as periodic phenomena.
Students will fill in the Marzano vocabulary template for each of the key words for the unit. The completed templates will be placed into the student's interactive vocabulary notebooks.
<table><tr><td>Term:</td><td>My Understanding
1 2 3 4</td></tr><tr><td>My Definition:</td><td>Visual Trigger:</td></tr><tr><td>Samples of the Concept:</td><td>Non-Examples:</td></tr></table></td></tr>
<tr><td></td><td>1.5</td><td>Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content</td><td></td></tr>
<tr><td>Score 1.0</td><td colspan="2">With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</td><td></td></tr>
<tr><td></td><td>0.5</td><td>With help, a partial understanding of the 2.0 content but not the 3.0 content</td><td></td></tr>
<tr><td>Score 0.0</td><td colspan="2">Even with help, no understanding or skill demonstrated.</td><td></td></tr>
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