

## Modeling Periodic Behavior – Project Rubric

|  | Exemplary (10)  | Proficient (8.5)  | Developing (7)  | Emerging (6)   |
|--|---|---|---|--|
| <p><b>Knowledge</b></p> <p><i>Key Question: Are the mathematics done in an accurate and complete manner?</i></p>                                 | <ul style="list-style-type: none"> <li>All aspects of your work were complete, accurate, and consistent</li> <li>Your data is reasonable, suitable to the task and well-researched</li> <li>Your role and audience are clear and consistent</li> </ul>  | <ul style="list-style-type: none"> <li>All aspects of your work were complete</li> <li>Your work was essentially accurate</li> <li>Your data may have lapses in suitability or reasonability</li> </ul>   | <ul style="list-style-type: none"> <li>Some aspects of your work were incomplete</li> <li>Your work may have significant errors</li> <li>Your data may have lapses in suitability or reasonability</li> </ul>   | <ul style="list-style-type: none"> <li>Many aspects of your work were incomplete</li> <li>Your work may have significant errors</li> <li>Your data is not well-chosen</li> <li>Your role and audience are not clear or are ignored in parts of your project</li> </ul>   |
| <p><b>Application</b></p> <p><i>Key Question: Does the student use his/her knowledge and skills to make connections within the task?</i></p>     | <ul style="list-style-type: none"> <li>All of your work, discussion and mathematical representations were <b>consistent</b> with one another and <b>relevant</b> to the task</li> <li>You interpreted <b>all</b> the mathematics correctly in the real-life context of the task</li> </ul>  | <ul style="list-style-type: none"> <li>Most of your work, discussion and mathematical representations were <b>consistent</b> with one another and <b>relevant</b> to the task</li> <li>You interpreted <b>some</b> of the mathematics correctly in the real-life context of the task</li> </ul>                             | <ul style="list-style-type: none"> <li>There were <b>some inconsistencies and errors</b> in your work, discussion and mathematical representations</li> <li>You were able to find some connections to real-life, but your interpretations were incorrect</li> </ul>   | <ul style="list-style-type: none"> <li>There were <b>significant inconsistencies and errors</b> in your work, discussion and mathematical representations</li> <li>You could not interpret the mathematics in real-life context</li> </ul>   |
| <p><b>Thinking/Problem Solving</b></p> <p><i>Key Question: Did the student use critical thinking and analytical skills?</i></p>                  | <ul style="list-style-type: none"> <li>Your approach to the task was <b>insightful</b></li> <li>You confirmed that your solution was correct</li> <li>You provided <b>relevant, logical</b> discussion about the meaning and reasonableness of your solution</li> <li>You noted possible sources of error or ambiguity or limitations in the problem</li> </ul> | <ul style="list-style-type: none"> <li>Your approach to the task was <b>appropriate</b></li> <li>Your attempt to confirm that your solution was correct was adequate</li> <li>You discussed the meaning and reasonableness of your solution, though your discussion may have <b>lapses in relevance or logic</b></li> </ul> | <ul style="list-style-type: none"> <li>You used an <b>oversimplified approach</b> to the task</li> <li>Your attempt to confirm that your solution was correct was not adequate</li> <li>You attempted to discuss the meaning and reasonableness of your solution, though your discussion may have large gaps in relevance or leaps in your logic that are hard to follow</li> </ul> | <ul style="list-style-type: none"> <li>Your strategies were not appropriate for the task</li> <li>You did not attempt to confirm that your solution was correct</li> <li>You provided little discussion about the meaning and reasonableness of your solution, or your discussion was not logical or relevant</li> <li>Your reasoning and your work were inconsistent</li> </ul> |
| <p><b>Communication</b></p> <p><i>Key Question: Did the student clearly, concisely, and completely convey meaning through various forms?</i></p> | <ul style="list-style-type: none"> <li>All explanations and mathematical representations were clear, concise and complete</li> <li>You used mathematical terminology <b>precisely</b></li> </ul>  | <ul style="list-style-type: none"> <li>Most explanations and mathematical representations were clear, concise and complete</li> <li>You used mathematical terminology <b>correctly</b></li> </ul>   | <ul style="list-style-type: none"> <li>Some explanations and mathematical representations were clear, concise and complete</li> <li>You used mathematical terminology <b>incorrectly at times</b></li> </ul>  | <ul style="list-style-type: none"> <li>Your explanations and mathematical representations were <b>often unclear, incomplete or redundant</b></li> <li>You often used mathematical terminology <b>incorrectly</b></li> </ul>  |

Name: \_\_\_\_\_

Knowledge: /10

Application: /10

Thinking: /10

Communication: /10

Block: \_\_\_\_\_ Total Score: /40