

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

Date: \_\_\_\_\_

## Task: Predators and Prey Rubric

BLM 5-14

Categories	Level 1	Level 2	Level 3	Level 4
<b>Knowledge and Understanding</b> <ul style="list-style-type: none"> <li>produces a scatter plot for each animal</li> <li>sketches a curve of best fit</li> <li>finds the rate of change at one intersection point</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates limited understanding of trigonometric functions, sketching unrealistic curves and incorrect rates of change</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates some understanding of trigonometric functions, sketching realistic curves and estimating the rates of change</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates considerable understanding of trigonometric functions, sketching realistic curves and correctly finding the rates of change</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates thorough understanding of trigonometric functions, sketching realistic periodic curves and correctly calculating the rates of change</li> </ul>
<b>Thinking</b> <ul style="list-style-type: none"> <li>prepares a plan to solve the problem</li> <li>carries out the plan</li> </ul>	<ul style="list-style-type: none"> <li>needs extensive assistance to begin organizing a plan and needs clearly laid out steps to follow</li> </ul>	<ul style="list-style-type: none"> <li>needs some assistance to begin organizing a plan and needs some steps to follow</li> </ul>	<ul style="list-style-type: none"> <li>needs minimal assistance to organize and implement an effective strategy</li> </ul>	<ul style="list-style-type: none"> <li>needs no assistance to organize and implement an effective strategy</li> </ul>
<b>Communication</b> <ul style="list-style-type: none"> <li>correctly uses mathematical language</li> <li>clearly explains and fully justifies solution</li> </ul>	<ul style="list-style-type: none"> <li>maintains the correct units and language in some of the solution</li> <li>does not clearly explain or justify solution</li> </ul>	<ul style="list-style-type: none"> <li>maintains the correct units and language throughout most of the solution</li> <li>explains and justifies solution somewhat</li> </ul>	<ul style="list-style-type: none"> <li>maintains the correct units and language throughout the solution</li> <li>explains and justifies solution fully</li> </ul>	<ul style="list-style-type: none"> <li>maintains the correct units and language throughout the solution</li> <li>explains, justifies and shows insight into the complexities of the solution</li> </ul>
<b>Application</b> <ul style="list-style-type: none"> <li>finds an equation for the curve of best fit</li> <li>discusses the characteristics of each curve</li> <li>discusses the phase shift</li> <li>interprets the rates of change</li> <li>finds another real-world situation</li> </ul>	<ul style="list-style-type: none"> <li>interprets the information ineffectually, presenting unreasonable equations, minimally discussing the characteristics and phase shift and misinterpreting the rates of change</li> </ul>	<ul style="list-style-type: none"> <li>interprets the information somewhat effectually, presenting somewhat reasonable equations, discussing the characteristics and phase shift and attempting to interpret the rates of change</li> <li>produces another example</li> </ul>	<ul style="list-style-type: none"> <li>interprets the information with considerable effectiveness, presenting reasonable equations, discussing the characteristics and phase shift and interpreting the rates of change correctly.</li> <li>produces another example</li> </ul>	<ul style="list-style-type: none"> <li>interprets the information with a high degree of effectiveness, presenting and justifying reasonable equations, thoroughly discussing the characteristics and phase shift and fully interpreting the rates of change.</li> <li>produces another interesting example</li> </ul>