

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>