## NORTH SMITHFIELD HIGH SCHOOL MATHEMATICAL MODELING RUBRIC $\star$

STUDENT \_\_\_\_\_\_

\_DATE \_\_\_\_\_

Standard	4	3	2	1
Criteria	Proficient with distinction	Proficient	Partially proficient	Below proficiency
PROBLEM	<ul> <li><u>Thoroughly</u> identifies variables in the situation and selecting those that represent essential features.</li> </ul>	<ul> <li>Identifies variables in the situation and selecting those that represent essential features.</li> </ul>	<ul> <li><u>Attempts to</u> identifies variables in the situation and selects <u>some</u> of those that represent essential features.</li> </ul>	<ul> <li>Shows little or no attempt to identify variables in the situation and <u>neglects to select some</u> of those that represent essential features.</li> </ul>
FORMULATE	• <u>Skillfully</u> formulates a model by creating and selecting geometric, graphical, tabular, algebraic or statistical representations that describe relationships between the variables.	<ul> <li>Formulates a model by creating and selecting geometric, graphical, tabular, algebraic or statistical representations that describe relationships between the variables.</li> </ul>	<ul> <li><u>Attempts to</u> formulate a model by creating and selecting <u>some</u> geometric, graphical, tabular, algebraic or statistical representations that <u>may or</u> <u>may not</u> describe relationships between the variables.</li> </ul>	<ul> <li><u>Shows little or no attempt to</u> formulate a model by creating and selecting some_geometric, graphical, tabular, algebraic or statistical representations that <u>may or may not</u> describe relationships between the variables.</li> </ul>
COMPUTE	• <u>Insightfully</u> analyzes and performs operations on these relationships to draw conclusions.	<ul> <li>Analyzes and performs operations on these relationships to draw conclusions.</li> </ul>	<ul> <li><u>Attempts to</u> analyze and perform operations on these relationships to <u>somewhat</u> draw conclusions.</li> </ul>	• <u>Shows little or no attempt to</u> analyze and perform operations on these relationships and <u>neglects to</u> draw conclusions.
INTERPRET	• <u>Thoughtfully</u> interprets the results of the mathematics in terms of the original situation.	<ul> <li>Interprets the results of the mathematics in terms of the original situation.</li> </ul>	• <u>Attempts to</u> interpret the results of the mathematics that <u>may or</u> <u>may not be</u> in terms of the original situation.	• <u>Shows little or no attempt to</u> interpret the results of the mathematics .
VALIDATE	• <u>Thoroughly</u> validates the conclusions by comparing them with the situation, and then either improving the model or, if it is acceptable.	<ul> <li>Validates the conclusions by comparing them with the situation, and then either improving the model or, if it is acceptable.</li> </ul>	• <u>Attempts to</u> validates the conclusions by <u>somewhat</u> comparing them with the situation, and then either improving the model or, if it is acceptable.	<u>Shows little or no attempt to</u> validate the conclusions by comparing them with the situation.
REPORT	<ul> <li><u>Succinctly</u> reports on the conclusions and the reasoning behind them.</li> </ul>	• Reports on the conclusions and the reasoning behind them.	<ul> <li><u>Attempts to</u> report on the conclusions and<u>/or</u> the reasoning behind them.</li> </ul>	• <u>Shows little or no attempt to</u> report on the conclusions and <u>/or</u> the reasoning behind them.



DATE \_\_\_\_\_