Name: _____   Date: _____

Unit 4 Project Rubric

Criteria	Level 1	Level 2	Level 3	Level 4	Level 5
Understanding					
• **strategies and mathematical processes**	• makes an initial start to various sections of the project but is unable to carry through	• makes initial start to various sections of the project	• makes correct start to all sections of the project, or completes all of the Chapter 8 Task or Chapter 9 Task, or provides answers to all questions without supporting work	• demonstrates a thorough understanding of the problem by providing a complete response to all parts of the project but there are errors or justification/ organization problems	• provides a complete and correct response
• **comparisons and connections**	• is unable to link concepts together • is able to identify an object but cannot link it to parabolic designs	• provides some correct links	• makes some connections • correctly completes the identification of a design for nanotechnology • correctly indicates an area involving parabolas or a parabola and a line	• addresses the link between mathematics and nanotechnology	• provides significant comparisons and connections
Connections					
• **procedures**	• reflects a correct start	• may be partially correct	• are basic	• are reasonable	• are efficient and effective
• **reflect level of understanding**	• attempts to determine the model equation for the design but it is not reasonable or complete and prevents further work • provides little algebraic calculation	• attempts to determine a model equation for the intersection of two parabolas, or a parabola and a line • may include errors that prevent correct identification of points of intersection • may explain the relevance of the points • may make an error in the inequality for region C	• provides correct model equation but the points of intersection may contain an error, or one of the equations is incorrect but the points of intersection are correct for the incorrect equation • writes the inequalities, one of which may contain an error • has difficulty with cost analysis	• includes an error (such as an incorrect equation) that does not hinder the overall result or the understanding of the problem	• demonstrates a comprehensive understanding

Criteria	Level 1	Level 2	Level 3	Level 4	Level 5
Communicating					
• **use of mathematical language**	• uses poorly or does not use it (may use explanations only)	• uses little or none	• uses common language	• uses appropriate language	• use significant language that may be weak for no more than one calculation
• **level of support for conclusions**	• is able to explain why parabolas represent the costs of nanotechnology • may make an attempt to explain the point labelled B	• correctly explains the relevance of point B • determines the boundaries for region C and explains the meaning • attempts to explain how regions A and C are important to the designer and manufacturer but explanation is weak and incomplete	• correctly explains the relevance of point B • correctly explains what regions A and C represent	• is missing justification or provides incorrect justification in no more than two parts of the project; or is missing documented evolution of the design	• provides in-depth support for conclusions
Presenting					
• **appropriateness of format**	• includes an initial start to a format	• uses format that may not be appropriate or well developed	• uses reasonable format	• uses appropriate format	• uses appropriate format with significant authority
• **clarity**	• includes little or no communication	• includes some communication at a basic level	• includes communication that may lack clarity or contain minor errors	• includes good communication but may sometimes lack organization	• provides clear and concise communication
• **audience appeal**	• does not consider audience	• provides weak appeal to audience	• may not consistently consider needs/interests of audience	• communicates directly to audience	• focuses on needs and interests of intended audience
• **accuracy of information**	• provides no support for information	• provides minimal support for information	• mostly provides support; information is basic	• may not provide full support; information is accurate	• provides full support; information is accurate and in-depth