

Ponaganset High School Graduation Expectation

PGE PS1 Problem Solving Rubric

	Exemplary – 4	Proficient - 3	Developing - 2	Beginning - 1
Defines Problem	<ul style="list-style-type: none"> ❑ Devises a focused problem statement that effectively considers the meaningful issues and limitations; ❑ <u>Thoroughly</u> generates plausible questions to solve the problem ❑ Determines accurate <u>quantitative and</u> qualitative criteria for evaluating proposed solutions which satisfy problem constraints ❑ Creates a <u>detailed</u> plan that includes relevant information and realistic actions. 	<ul style="list-style-type: none"> ❑ Devises a problem statement that effectively considers the meaningful issues and limitations; ❑ Generates plausible essential questions to solve the problem. ❑ Determines qualitative criteria for evaluating proposed solutions which satisfy problem constraints, and competing issues. ❑ Create a plan that includes relevant sources of information and realistic actions. 	<ul style="list-style-type: none"> ❑ Devises a problem statement that considers some of the issues ❑ Generates limited essential questions to solve the problem ❑ Determines vague criteria for evaluating proposed solutions ❑ Create a plan that includes some sources of information and actions 	<ul style="list-style-type: none"> ❑ Devises a problem statement that considers unimportant issues ❑ Fails to generate essential questions ❑ Establishes largely irrelevant criteria for analyzing the solutions ❑ Create a plan that omits relevant details and includes limited actions.
Gathers Information	<ul style="list-style-type: none"> ❑ Uses <u>extensive</u> information and generates primary source information when appropriate. ❑ <u>Clearly</u> demonstrates and <u>documents</u> evidence of assessing information as well as the sources from which it was obtained. 	<ul style="list-style-type: none"> ❑ Acquires a variety of information from suitable sources for solving the problem. ❑ Demonstrates evidence of differentiating between relevant and irrelevant information. 	<ul style="list-style-type: none"> ❑ Uses limited information for solving the problem. ❑ Demonstrates limited evidence of differentiating between relevant and irrelevant information 	<ul style="list-style-type: none"> ❑ Uses unsuitable information for solving the problem and / or displays limited evidence of adequate research ❑ Fails to analyze information for relevance and suitability.
Generates solutions	<ul style="list-style-type: none"> ❑ Produces <u>sophisticated</u>, detailed preliminary solutions that clearly incorporate the analysis of data and the identified criteria. ❑ <u>Comprehensively</u> documents and justifies the rationales for the choices made to generate preliminary solutions. 	<ul style="list-style-type: none"> ❑ Produces preliminary solutions, in multiple forms, that incorporate the analysis of data and the identified criteria. ❑ Documents and justifies the rationales for the choices made to generate preliminary solutions. 	<ul style="list-style-type: none"> ❑ Produces preliminary solutions with minor data analysis and comparison to the criteria. ❑ Adequately documents the rationales for the choices made to generate preliminary solutions 	<ul style="list-style-type: none"> ❑ Produces incomplete solutions that demonstrate that fail to include the analysis of data and the criteria. ❑ Fails to adequately document the rationales for the choices made to generate preliminary solutions.
Refines Preliminary Solutions	<ul style="list-style-type: none"> ❑ <u>Insightfully</u> refines plausible solutions and highlights any changes made to improve the solution as it relates to the established criteria ❑ <u>Competently</u> produces the solutions in appropriate forms that enhance the overall representation of the solutions. ❑ <u>Insightfully and thoroughly</u> shows how the analysis and synthesis of data led to the selection of the most viable solutions 	<ul style="list-style-type: none"> ❑ Refines the most plausible solutions to address the established criteria and other considerations ❑ Produces the refined solutions in appropriate forms and mediums that reflect the overall the solutions. ❑ Shows how the analysis and synthesis of data led to the selection of the most viable solutions 	<ul style="list-style-type: none"> ❑ Partially refines the solutions to address the established criteria, and other considerations ❑ Incompletely produces the refined solutions in appropriate forms and mediums. ❑ Partially explains how the analysis and choices made led to the selection of the most viable solutions 	<ul style="list-style-type: none"> ❑ Displays minimal refinement of the most plausible solutions using the established criteria and considerations. ❑ Does not refine solutions and/or uses inappropriate forms to represent the solution ❑ Advances a rudimentary explanation of how the choices made that led to the most viable solutions
Selects Plausible Solution	<ul style="list-style-type: none"> ❑ <u>Comprehensively</u> determines the extent to which each solution reflects the criteria. ❑ Thoughtfully and competently justifies the analysis done to select the solution with quantitative and qualitative evidence. ❑ Thoroughly compares various solutions and justifies the reasons why some alternatives could be plausible solutions 	<ul style="list-style-type: none"> ❑ Evaluates the extent to which each solution reflects the established criteria. ❑ Justifies the analysis done to select the solution with varied quantitative and qualitative evidence ❑ Effectively compares various solutions and describes alternatives that could be plausible solutions 	<ul style="list-style-type: none"> ❑ Identifies the extent to which each solution reflects the established criteria. ❑ Advances an undeveloped analyses of alternative solutions to select the most viable solution, ❑ Provides limited comparison of the plausible and alternative solutions 	<ul style="list-style-type: none"> ❑ Displays limited evidence of evaluating the extent to which each solution reflects the established criteria ❑ Does not provide an analysis of alternative solutions, ❑ Ineffectively compares the alternative solutions to the most plausible solution
Shares Solution	<ul style="list-style-type: none"> ❑ Creatively and skillfully communicates the proposed solution in a variety of forms. ❑ Demonstrates thoughtful reflection on the problem solving process, and offers well-constructed, detailed suggestions for solving similar problems. 	<ul style="list-style-type: none"> ❑ Creatively communicates the proposed solution in a variety of appropriate forms. ❑ Reflects on the problem solving process, and offers well-constructed suggestions for solving similar problems in the future. 	<ul style="list-style-type: none"> ❑ Unclearly communicates the proposed solution ❑ Provides a cursory reflection on the problem solving process, responds to the essential questions 	<ul style="list-style-type: none"> ❑ Ineffectively communicates the proposed solution using inappropriate forms. ❑ Shows little reflection, responds insufficiently to the prompts