

SLO 7/Problem Solving

	Mastery 4	Target 3	Progressing 2	Developing 1	Does Not Meet 0
Observation (SLO 7)	Possible alternative logical explanations for observed phenomena are well developed. Fallacies or illogical conclusions based on observations or data are accurately described. Claims based on observation, experimentation or data presented are accurately evaluated.	Possible alternative logical explanations for observed phenomena are observed. Fallacies or illogical conclusions based on observations or data are identified. Claims based on observation, experimentation or data presented are present.	Logical explanations for observed phenomena are identified. Fallacies or illogical conclusions based on observations are attempted but may be inaccurate. Claims based on observation, experimentation or data presented are attempted but may be inaccurate.	Some explanations for observed phenomena are identified but may be inaccurate. Fallacies or illogical conclusions based on observations are absent or incorrect. Claims based on observation, experimentation or data presented are absent or incorrect.	The student does not demonstrate the knowledge/skills to a level of developing for this element.
Analysis (SLO 7)	Important relationships, patterns and changes are stated based on observation through the investigation. Calculations (if relevant) are clearly laid out and when appropriate, data are correctly graphed and labeled.	Most relationships, patterns and changes are stated based on observation through the investigation. Calculations (if relevant) are mostly accurate and when appropriate, data are nearly all correctly graphed and labeled.	The data lacks detail, patterns and relationships are based on misconceptions. Calculations (if relevant) contain some errors or misunderstandings.	No mention of the relationships and patterns in the data. Calculations (if relevant) are incomplete or incorrect.	The student does not demonstrate the knowledge/skills to a level of developing for this element.
Identify Strategies (Problem Solving)	Identifies multiple approaches for solving the problem that apply within a specific context.	Identifies multiple approaches for solving the problem, only some of which apply within a specific context.	Identifies only a single approach for solving the problem that does apply within a specific context.	Identifies one or more approaches for solving the problem that do not apply within a specific context.	The student does not demonstrate the knowledge/skills to a level of developing for this element.
Evaluate Potential Solutions (Problem Solving)	Evaluation of solutions is deep and elegant (for example, contains thorough and insightful explanation) and includes, deeply and thoroughly, all of the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is adequate (for example, contains thorough explanation) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is brief (for example, explanation lacks depth) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is superficial (for example, contains cursory, surface level explanation) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	The student does not demonstrate the knowledge/skills to a level of developing for this element.
Evaluate Outcomes (Problem Solving)	Reviews results relative to the problem defined with thorough, specific considerations of need for further work.	Reviews results relative to the problem defined with some consideration of need for further work.	Reviews results in terms of the problem defined with little, if any, consideration of need for further work.	Reviews results superficially in terms of the problem defined with no consideration of need for further work	The student does not demonstrate the knowledge/skills to a level of developing for this element.