

Learning Outcome 4: Students will solve quantitative problems and apply quantitative reasoning skills in a variety of contexts.

Quantitative (Q)

Capability	1. Emerging	2. Developing	3. Proficient	4. Advanced
1. Students will produce foundational algorithmic, or data driven work. .	Foundational algorithmic, data driven, or mathematical methods and concepts incorrectly formulated or produced.	Foundational algorithmic, data driven, or mathematical methods and concepts somewhat produced. .	Foundational algorithmic, data driven, or mathematical methods and concepts are produced after trying several different methods.	Foundational algorithmic, data driven, or mathematical methods and concepts are correctly produced.
2. Students will accurately interpret quantitative visual representations	Interpretation of the quantitative representation includes major errors.	Interpretation of the quantitative representation includes minor errors with some key omissions.	Interpretation of the quantitative representation is mostly correct, making only minor errors or omissions.	Interpretation of the quantitative representation is accurate and complete with no errors or omissions.
3. Students will correctly communicate solutions.	Communication of the model-supported omits key component(s), communicating little or inaccurate knowledge.	Communication of the model-supported omits key component(s), but demonstrates some knowledge of the model.	Communication of the solution includes model-supported conclusions but may not acknowledge the strengths or limits of the model.	Communication of the solution includes model-supported conclusions that acknowledge the strengths or limits of the model.

Application (A)

Capability	1. Emerging	2. Developing	3. Proficient	4. Advanced
1. Students will correctly apply and solve quantitative problems using a given quantitative model.	Application of the model and solution are incorrect.	Several different attempts made to apply the model, solution is somewhat correct.	Solution is correct after attempting to apply the correct model multiple times.	Solution is correct and applied the correct model.
2. Students will correctly translate information from a real-world problem into a given quantitative model.	Translation of the quantitative representation includes major errors.	Translation of the quantitative representation includes minor errors with some key omissions.	Translation of the quantitative representations only include minor errors or omissions.	Translation of the quantitative representations are accurate, with no errors or omissions.
3. Students will correctly communicate solutions.	Solutions are incorrectly communicated.	The communication of the solution is tentative and basic.	Communication of the solution includes model-supported conclusions but may not acknowledge the strengths or limits of the model.	Communication of the solution includes model-supported conclusions that acknowledge the strengths or limits of the model.