Competency: *Mathematical and Scientific Reasoning*

Mathematical and scientific reasoning is the ability to apply scientific or mathematical processes to explore natural phenomena, determine and evaluate relationships, solve problems, and make effective decisions.

The following rubric will be used to measure students' mathematical and scientific reasoning skills as part of Broward College's general education assessment process. A faculty member may use any one class assignment for this assessment, so long as the assignment selected allows for an accurate measurement of at least one of the mathematical and scientific reasoning outcomes included in the rubric below.

Please use one of the following learning outcomes to assess your students' work.

	Exceeds Competency	*Demonstrates Competency*	*Approaches Competency*	*Below Competency*
Apply a deductive or inductive approach to inquiry	The student can produce an **entirely** valid conclusion through the application of either deductive or inductive reasoning	The student can produce a **mostly** valid conclusion through the application of either deductive or inductive reasoning	The student can produce a **somewhat** valid conclusion through the application of either deductive or inductive reasoning	The student **cannot** produce a somewhat valid conclusion through the application of either deductive or inductive reasoning

	Exceeds Competency	*Demonstrates Competency*	*Approaches Competency*	*Below Competency*
Develop solutions or reach conclusions by applying appropriate problem-solving methods	The student can develop **completely** relevant and accurate solutions or reach conclusions by applying appropriate problem-solving methods	The student can develop **mostly** relevant and accurate solutions or reach conclusions by applying appropriate problem-solving method.	The student can develop **somewhat** relevant and accurate solutions or reach conclusions by applying appropriate problem-solving methods	The student **cannot** develop relevant and accurate solutions or reach conclusions by applying appropriate problem-solving methods

	Exceeds Competency	*Demonstrates Competency*	*Approaches Competency*	*Below Competency*
Generate or interpret graphs or charts to model data and understand relationships	Generates or interprets **all** relevant details of a graph or chart to model data and understand relationships	Generates or interprets **most** of the relevant details of a graph or chart to model data and understand relationships	Generates or interprets **some** of the relevant details of a graph or chart to model data and understand relationships	Generates or interprets **few or none** of the relevant details of a graph or chart to model data and understand relationships

	Exceeds Competency	*Demonstrates Competency*	*Approaches Competency*	*Below Competency*
Construct answers to applied problems using quantitative or qualitative reasoning skills	Constructs answers to applied problems using **strong** quantitative or qualitative reasoning skills	Constructs answers to applied problems using **suitable** quantitative or qualitative reasoning skills	Constructs answers to applied problems that contain errors but also shows **some** quantitative or qualitative reasoning skills	Constructs answers to applied problems that show **no or very poor** quantitative or qualitative reasoning skills

Outcome assessed:

Number of students who exceeded competency:

Number of students who demonstrated competency:

Number of students who approached competency:

Number of students who were below competency:

Number of students who did not turn in a submission: