

## ISLO-2 RUBRIC FOR SCIENTIFIC/QUANTITATIVE REASONING SKILLS

**Performance Target: 70% or more of students will perform at a “Meets Expectations” level or higher**

<b>Component</b>	<b>Exceeds Expectations</b>	<b>Meets Expectations</b>	<b>Does Not Meet Expectations</b>
<b>Points</b>	<b>2</b>	<b>1</b>	<b>0</b>
<b>Question</b>	Student states question in a clear and concise manner. The question is testable.	Student states question in an unclear or lengthy manner. The question is testable.	The question is un-testable.
<b>Hypothesis</b>	Student correctly states null and alternative hypotheses appropriate for the question and method of analysis.	Student makes one of the following errors: incorrect null hypothesis, incorrect alternative hypothesis, hypotheses inappropriate for question, hypotheses inappropriate for method of analysis.	Student either misstates both null and alternative hypotheses or fails to match hypotheses to the question and/or method of analysis.
<b>Procedure/Methods</b>	All steps are discussed in a logical (ordered) and concise manner such that the procedure could be replicated.	Steps are discussed but presented in a way that is not logical or concise; or a necessary step is missing.	Steps are discussed in a manner that is neither logical nor concise and/or more than one step is missing.
<b>Results</b>	Results and statistics are presented correctly, completely, and concisely without interpretation.	Results are presented correctly and completely but not in a concise manner and/or include interpretation.	Results are presented incorrectly or incompletely.
<b>Results – Graphical</b>	Graphs include legible and correctly labeled axes. Independent and dependent variables are placed on correct axes.	Graphs may be difficult to read accurately but correctly convey trends in the data. Variables are placed on correct axes.	Graphs are incorrectly labeled or unclear to the extent that trends in the data cannot be determined, or variables are placed on incorrect axes.
<b>Conclusion</b>	Hypotheses are restated and evaluated in a logical order. Null hypothesis is supported or refuted. Alternative is addressed correctly in reference to the outcome for the null v.	Hypotheses are not restated or evaluated in a logical order but are interpreted correctly in light of the data.	One or both of the hypotheses are inappropriately addressed in light of the data (e.g. null rejected when data does not support such a rejection).