

ISLO 3 – Scientific Reasoning Rubric

Students will apply the Scientific Method, develop hypotheses, analyze results, and draw conclusions.

	Exceeds Expectations - 4	Meets Expectations - 3	Approaches Expectations - 2	Does Not Meet Expectations - 1
Hypothesis/Goals/Purpose Constructs a testable hypothesis or sets or identifies goals based on the question or problem.	Hypothesis/ Goal/Purpose is skillfully stated and clearly addresses the question/problem/ theory being studied.	Hypothesis/Goal/ Purpose is stated and adequately addresses the question/ problem/theory being studied.	Hypothesis/Goal/Purpose is stated but it does not accurately address the question/ problem/ theory being studied.	Hypothesis/Goal/Purpose is missing or has no relevance to the question/problem/theory being studied.
Data Organization Acquires/organizes/critiques observations and other evidence in a way that is useful.	Appropriate methods for acquiring/organizing/ critiquing qualitative and quantitative data are skillfully selected and applied.	Appropriate methods for acquiring/ organizing/critiquing qualitative and quantitative data are adequately selected and applied.	Appropriate methods for acquiring/organizing/ critiquing qualitative and quantitative data are not adequately selected and applied.	Appropriate methods for acquiring/organizing/ critiquing qualitative and quantitative data are missing/ inaccurate.
Analyze Results Evaluates data obtained for accuracy and completeness.	Results are skillfully analyzed for accuracy and significance. When appropriate, results are displayed using the correct graphical organizer/tool.	Results are adequately analyzed for accuracy and significance. When appropriate, the results are displayed using a graphical organizer/ tool.	Results are inadequately analyzed and not all data are included.	Results are not correctly analyzed/mentioned.
Draw Conclusions Interprets data/observations and makes appropriate conclusions based on evidence.	Based on evidence, insightful conclusions are drawn/applied and errors/inaccuracies are explained.	Based on evidence, reasonable conclusions are drawn/applied but conclusions lack detail or information.	Conclusions lack substantial/ supporting evidence.	No conclusion is made or is incorrect.