JOURNEY NORTH

Science Inquiry / Investigation Rubric

Criteria	Meets Standard	Beginning to Meet Standard	Doesn't Yet Meet Standard
Questioning	Asks "testable" questions based on observations; re-states untestable questions. Identifies variables. Distinguishes between questions that can be answered through observation, experiments, and research.	Poses questions based on observations. Identifies one variable. Does not consistently distinguish between questions that can be answered through observation, experiments, and research.	Asks questions that may or may not relate to observations. Does not identify a variable. Does not distinguish between questions that can be answered through observation, experiments, and research.
Predicting and Hypothesizing	Uses logical inferences to predict what may happen or be observed or provides a reasonable hypothesis related to evidence.	Uses logic to make a prediction but does not relate it to evidence.	Not yet able to generate a hypothesis or logical prediction.
Designing an Experiment/ Investigation	Student can create a plan for a fair test that identifies what they will observe and measure, includes a materials list and sequential steps, and describes variables and how all but one will be kept constant, if necessary.	Student can develop a fair test that includes some of the elements of a fair test.	Student can not yet develop a fair test.

Investigating	Follows a plan for the investigation. Records all data systematically and accurately. Records observations of similarities and differences. Chooses appropriate measurements and measures accurately. Draws scientifically with an appropriate perspective and with as many details as possible.	Follows a plan for the investigation. Records some data but not always systematically or accurately. Records observations but not always similarities and differences. Chooses appropriate measurements but doesn't always measure accurately. Draws scientifically with an appropriate perspective and with as many details as possible.	Does not follow the plan for the investigation. Records some data, but not systematically or accurately. Records some observations. Does not always choose appropriate measurements. Draws scientifically, but not with many details.
Analyzing and Explaining Data, Drawing Conclusions	Represents data using graphs, charts, and tables. Analyzes data based on evidence and results of the investigation. Explains data using scientific terminology. Uses resources to support explanation. Identifies problems /flaws with the experimental design.	Represents data using graphs, charts and tables, but may not have chosen the appropriate ones. Analyzes data based on evidence and results of the investigation. Explains data using some scientific terminology. Uses resources to support explanation. Cannot identify problems/flaws with the experimental design.	Does not represent data in an organized manner. Analyzes data but does not base analysis on results/ evidence from the investigation. Explains data but does not use scientific terminology. Does not use resources to support explanation. Cannot identify problems/flaws with the experimental design.

Communicating Investigations and Results	Considers audience in selecting what and how to communicate. Communicates questions, investigation plan, data collection and analysis, and conclusions with accuracy and clarity. Critiques own investigation and those of others.	Communicates a general description of their plan and findings, but omits details about the data collection and analysis process. Is challenged to critique investigation.	Communication about investigation lacks key components, clarity, and detail.