

**INQUIRY PROCESS SKILLS
GRADE 5 - 6 RUBRIC**

	Nearing Proficient	Proficient	Advanced
Process skill:			
OBSERVING: Making use of the senses to collect qualitative and quantitative data about objects and events.	Descriptions of the properties are simplistic, inappropriate, or missing. Understanding of quantitative and qualitative observations is unclear. Uses limited senses to describe objects and events.	Demonstrates an understanding that quantitative observations are more precise than qualitative observations. Uses appropriate senses to describe objects and events in terms of size, shape, color, texture, dimension and function.	Uses quantitative observations to confirm or reject thinking. Uses all appropriate senses to describe objects and events in terms of size, shape, color, texture, dimension and function.
PREDICTING: Using a pattern of evidence to make a logical guess about an outcome. Evidence is based on both observations and prior knowledge. A hypothesis is a type of formalized prediction.	Predictions are not made with evidence of prior knowledge. Use of observational data, quantitative or qualitative, is not used to predict.	Makes predictions supported with evidence based on prior knowledge and observations. When appropriate quantitative or qualitative data is used to help describe predictions.	Constructs predictions based on prior knowledge and observations. Quantitative and/or qualitative data is used to help describe prediction. Uses predictions to extend investigations and connect to other experiences or real world situations.
COMMUNICATING: Oral, written or mathematical process of describing an event, action or object to and/or with others. Communication is a means to organize ideas using text, graphs, and/or other visual representations and mathematical equations.	Information is not organized. Information is presented with random data or the data is presented inaccurately (wrong graph, not labeled, inaccurate or falsified data).	Information is organized using appropriate vocabulary, graphs, other visual representations and mathematical equations. Chooses a variety of methods to communicate information relevant to investigation. Information is presented in a logical and clear manner.	Information is organized using appropriate vocabulary, graphs, other visual representations and mathematical equations. Chooses a variety of methods to communicate information relevant to investigation. Information is presented in a logical and clear manner. Can communicate why the organization of data is best represented and why other organizational tools are appropriate. Can extend and connect data to other investigations, experiences, and real-world scenarios.
MEASURING: Determining quantitative properties (length/area, volume, mass/weight, time and temp. etc.) of objects and changes during events.	Does not choose appropriate units or tools during the investigation. Uses tools inaccurately when measuring.	Chooses and/or uses appropriate units and tools to make precise measurement during the investigation.	Qualitative and/or quantitative measurements are used throughout the investigation. Selects the most appropriate and accurate metric unit for comparing and ordering objects and events.
QUESTIONING: Wondering, pondering, and adding to a knowledge base by seeking modes to create meaning through experiences.	Writes questions that can not be tested, researched, or investigated. Question may be off topic, will not lead to deeper understanding, or is limited.	Writes questions that can be tested or researched. Question is related to module or topic and it clarifies or leads to deeper understanding of content.	Uses quantitative and/or qualitative language to create a question that can be tested or researched. Question is related to a module or topic and it clarifies or leads to deeper understanding of content. Question is inferential, clear, and concise.
USING VARIABLES: Factors that can change in an experiment.	Can not identify variables. Can not communicate the relationships observed or experienced. Unable to make an inference from observations.	Distinguishes between variables and can communicate their relationships through observations, experiences, research, and inferences.	Formulates an explanation directly related to the problem and purpose and is stated as a relationship between variables. It is justified and supported by observations, experiences and inferences.
INFERRING: Creating explanations based upon previous experiences and observations. The process of inferring includes continually constructing and modifying knowledge.	Creates limited explanation of results from data collected. Unable to confirm or reject a prediction based on data.	Creates explanations using qualitative and/or quantitative data to predict results. Confirms or rejects a prediction based on data.	Accepts, modifies, or rejects explanations based on data. Offers suggestions for improvement in the investigation. Describes real-world phenomena based on results investigations. Explains models and synthesizes information.