Scientific Communication
Journal Entries
Standard 1.17 - Notation and Representation: Express ideas in a variety of ways
 (e.g. words, numbers, symbols, pictures, charts, tables, diagrams, models)
Standard 7.1, 7.2 Scientific Inquiry and the Scientific Method (Inquiry Guidelines)
Grade Level Expectations for all areas of Inquiry Guidelines for Grades 3/4

Criteria	Meets Standard	Nearly Meets Standard	Beginning to meet Standard
Scientific Questioning	**In Journal entries:** Student poses observational questions ; "I wonder if..?" Can identify one variable	Student poses observational questions: "I wonder if.?" Cannot identify one variable	Student cannot pose a question or identify a variable.
Predicting and hypothesizing	Uses prior knowledge, experience to predict what may happen. Identifies some simple evidences that support a prediction	Uses prior knowledge or experience to predict what may happen. Does not identify evidences that support prediction	Makes a prediction but does not base it on prior knowledge or experience. Does not identify evidences that support a prediction
Experimental Design	Student can develop a **fair test** that includes: materials list sequential steps variables. multiple trials	Student can develop a **fair test** that includes some of the elements of a fair test:	Student can not develop a **fair test**
Investigation	Follows a plan for the investigation. Records all data accurately at various points in the investigation Chooses appropriate measurements and measures accurately Draws scientifically with an appropriate perspective and with as many details as	Follows a plan for the investigation. Records some data accurately at various points in the investigation. Chooses appropriate measures but may not always measure accurately. Draws scientifically with perspective and with as many details	Does not follow the plan for the investigation Records some data but not accurately. Does not choose appropriate measurements Draws scientifically but not with many details. Does not label correctly

	possible Uses correct labels	as possible Does not label correctly	
Analysis and Conclusion	**Represents, displays and labels** all data correctly for trials and observations. Consistently chooses an appropriate representation (graph, table or chart or diagram)	**Represents, displays and labels** some data for trails and observations. Sometimes chooses and appropriate representation (graph, table or chart or diagram)	**Represents , displays, and labels** some data from trials and observation. Does not choose an appropriate representation
	Analyzes data based on original question and prediction	**Analyzes** data based on original question and prediction	**Analyzes** data but does not base analysis on original question and prediction
	Explains results of the experiment using the data that was collected. Identifies similarities or differences between results of the experiment and original predictions	**Explains** results of the experiment but does not refer back to the data that was collected. Identifies similarities or differences between results of the experiment and original prediction	**Explains** results of the experiment but does not refer back to the data collected. Does not recognize the differences between results of the experiment and original prediction.