

Field Study (with Variables) Rubric Grades 3-5

Using the Rubric: Begin in the left-hand column (Required Elements). Mark each category by circling the description that best matches the project. Multiply each score with its weighting factor to get a final score. Total the final scores at the bottom.

Required Elements	0	1 Point	2 Points	Weight	Score
Science Background Research (Students write a summary of science content related to their project building towards development of a testable question.)	ELEMENT NOT PRESENT OR NOT SCORABLE	Summary of science content is present, but components are inaccurate or note present	Summary of science content is accurate and related to topic. Summary is based on a wondering that led to a testable question	x 5	
Research Question (A question that explains what was studied)		States a testable question; but inaccurate, incomplete, or lacks enough detail	Accurately states testable question, includes cause and effect (x and y), and provides ample detail to investigate	x 4	
Prediction (An educated guess based on information you already know; states the most likely outcome; also known as a hypothesis)		Restates the most likely outcome but lacks details and/or reasoning for making the prediction. The "If...then...because" is missing	Restates the most likely outcome using the "If...then...because" format; includes details and reasoning for making the prediction	x 2	
Independent Variable (Describes the one thing students are changing)		States what will be changed but with inaccurate or incomplete details	Accurately states what will be changed and how it will be changed with enough detail to assure accuracy (ex. quantity, scale, temperature, etc.)	x 3	
Dependent Variable (Describes the one thing students will be measuring)		States what will be measured but with inaccurate or incomplete details	Accurately states what will be measured and how it will be measured with enough detail to assure accuracy (time, distance, temperature, etc.)	x 3	
Constants/Set-Up Conditions (A list of factors that do not change in the set-up and as trials are conducted during your field study – i.e. making observations at the same time each day)		Identifies the set of data that will be measured under normal conditions but is inaccurate	Accurately states the set of data that will be measured under normal conditions	x 3	
Materials List (Detailed, bulleted list of all items that were used to complete the field study – think recipe - i.e. binoculars, hand lens, etc. Includes quantities and measurements)		Lists partial, confusing, or inaccurate materials; or lacks quantities or measurements	Lists complete set of materials and sufficient detail to duplicate directions. (quantities, metric measurements, tools, etc.)	x 4	
Procedures (Detailed, numbered list of steps in order of exactly what was done; enough details so that it can be duplicated – think recipe)		Gives partial, confusing, or non-sequential directions or lacks enough detail to follow	Gives complete list of procedures with detail such that the field study could be duplicated; uses metric measurements and includes safety considerations)	x 4	
Data Collection (Observations and accurate data table; includes average of each data set)		Most data shown; some data missing, or not organized in chart form, or missing units or averages	Proper chart shown with complete data; 10 or more trials and averages; all units, labels, and detail present	x 4	
Graph (Mathematical picture of the averaged data sets)		Graph shown; some elements incomplete or inaccurate	Proper graph shown; all elements complete and accurate	x 4	
Results (Tells what happened with the data using mathematical language)		Lists some results; some statements inaccurate or incomplete	Lists at least three mathematical results accurately and with detail	x 3	
Explanation (Summary of findings that evaluate the experimental procedure and provides scientific reason that supports field study findings; revisits/addresses prediction)		Explanation statement present but inaccurate or incomplete	Explanation is accurate and provides specific scientific detail related to the field study	x 3	
Real World Uses relating to Research (Ways the information might be used outside of the field study)		States one or more uses but is incomplete, inaccurate, or lacks details	States one or more possible uses (outside of the field study) related to the research question with accuracy and complete detail	x 3	
Science Journal (Record of directions, observations and data collected throughout the process; information detailed enough to be replicated accurately)	Some elements are missing, incomplete or inaccurate	All elements present, accurate, good detail and few errors; dated narrative present	x 3		
Display Board or other Presentation Format (Projects presented in a digital format must be converted to a display board if chosen to represent school in the District Science Showcase.)	Some elements are missing, incomplete or inaccurate	All elements present and accurate with good detail and few errors	x 2		

Comments:

Total Score
/100