

RUBRIC: **Controlled Experiment Investigation (CEI)**

Name:

Investigation Component	Description of required investigation component	Points Possible	Points Earned
Background	This section should be short and concise, no more than a few lines long. It should summarize your research related to your topic area and lead naturally to your question.	2	
Question	The scientific question your team is investigating	1	
Prediction Reason	The hypothesis is expected to include a cause-effect reason. We will use the "if, then, because" format for our CEI lab write-ups. IF manipulated variable (independent variable), THEN responding variable (Dependent variable), BECAUSE a specific reason (based on your life experiences and theory)	3	
Materials	A list of the minimum materials needed to perform the procedure must be listed in this section. Include specific quantities within this section OR your logical steps section.	3	
Procedure The written or diagrammed procedure is evaluated as follows			
Controlled Variables	At least two controlled (kept the same) variables must be identified in the procedure or the materials list (e.g., same type of seeds in plants specified, same amount and type of soil specified, same specified temperature).	2	
Manipulated Variable	Only one manipulated (independent) variable is identified in the procedure and data table (e.g. size of space above or below ground).	1	
Responding Variable	The responding (dependent) variable identified in the procedure and data table (e.g. health of plants as measured by height or number of leaves).	1	
Record Measurements	The procedure states how measurements are recorded periodically and gives a data table. The phrase "take measurement" or "record data" may not be used.	5	
Trials are repeated	More than one trial is planned in the procedure, and noted in the data table, to measure the responding variable (e.g. including more than one plant for each condition)	1	
Experimental Control Condition	An experimental control condition is identified in the procedure. An experimental control condition is an unchanged condition of the system that is used to insure the manipulated variable caused the changes in the responding variable when the investigating complex systems.	1	
Extra Validity Measures	Additional validity measures that were not included in the scenario investigation should be included in the procedure (e.g. plant seeds at the same depth). This is similar to additional controlled variables, explicitly stated. Usually includes a labeled diagram, often with key measurements.	2	
Logical Steps	The steps of the procedure are detailed enough, and well-ordered, to repeat the procedure effectively.	3	
Lab Safety	Describes all lab safety procedures to be followed.	5	

