

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 or problem your team is investigating	1	
Problem Statement	The statement of the problem in as much detail as you have, including constraints (including why the problem cannot achieve a complete solution at this time) and the reasons why the problem is important; and why you believe, using information from theory and your personal background, that a solution can be found.	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(s)	Only one manipulated (independent) variable is identified in the procedure and data table to be modified at any one time (e.g. size of space above or below ground).	1	
Responding Variable(s)	The targeted responding (dependent) variable(s) is 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.	2	
Trials are repeated	More than one trial is planned in the procedure for each different manipulated variable, and noted in the data table, to measure the responding variable (e.g. including more than one plant for each condition)	1	
Intermediate Results	The result of each test of each variable are briefly noted. A reason is given for the choice of constant for that variable before moving on to the next variable to manipulate.	2	
Untestable Variables	Those variables for partial solutions that cannot be tested are clearly identified and the reason(s) stated why they cannot be tested at this time.	2	
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 safety procedures to be followed.	5	

