|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Identifying Phenomenon** | **1** | **2** | **3** | **4** |
| * Students describe the phenomenon under investigation
 | Statement of incorrect phenomenon or no description was produced | Statement of correct phenomenon without description  | Incomplete description of phenomenon or description has errors | Complete description of the phenomenon without errors  |
| **Identify evidence to answer question** | **1** | **2** | **3** | **4** |
| * Students describe the evidence from data to be collected
 | No indication of the evidence to be collected or indication of incorrect evidence | Indication of some of the evidence to be collected may include some extraneous evidence | Indication of all of the evidence to be collected may include some extraneous data | Indication of all of the evidence to be collected without extraneous data |
| * How the evidence will be relevant to the purpose of the investigation
 | No indication of how the evidence will be used in the investigation | Attempted explanation, with errors, of use of data. Indication of misuse of data. | Incomplete explanation of use of data may include use of extraneous data. | Complete explanation of the use of data without extraneous data use. |
| **Planning for the Investigation** | **1** | **2** | **3** | **4** |
| * Students detail how the data will be indicated, collected, and/or measured, including variables to be tested and controlled.
 | No details about how data is indicated and collected. No plan for controlling error in measurement or variables. | Few details about how data is indicated. Incomplete or incorrect explanation of data collection plan. (*Misuse of tools, etc.)* Limited plan for controlling error in measurement or variables. | Completely shows how data is indicated. Complete explanation of data collection plan with few errors. (No m*isuse of tools, etc.)* Plan is apparent for controlling error in measurement or variables. | Completely shows how data is indicated. Complete explanation of data collection plan with no errors. (No m*isuse of tools, etc.)*  Describes the plan for controlling error in measurement and variables. |
| * Students indicate if collaborative or individual
 | No indication | Group or individual work is apparent but not intentional | Mentions group or individual in planning but not intentional | Specific, intentional reference as to Individual or collaborative work |
| **If plan is given, students ID how:*** Data is collected
* Methods are relevant to purpose
 | No details about how data is collected. Methods are not relevant. | Incomplete or incorrect explanation of data collection plan. Some methods are not relevant. | Completely details how data is collected with few errors. Methods are relevant. | Complete explanation of data collection plan with no errors. Methods are relevant. |
| **Collecting the Data** | **1** | **2** | **3** | **4** |
| * Students perform the investigation, collecting and recording data systematically.
 | Does not follow a systematic plan even with assistance. | Follows a non-systematic approach or follows a systematic plan with some assistance. | Follows a systematic approach with few errors or little or no assistance | Follows a systematic approach with no errors and no assistance. |