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| **Exhibit/Display** |
| **Topic** | **5** | **4** | **3** | **2** | **1** | **0** |
| **a. Display is creative and age appropriate**  | Very creative and age appropriate | Creative and age appropriate | Age appropriate with some creativity | Age appropriate with very little creativity | Not age appropriate  | No exhibit provided |
| **b. Layout-** * **Neat**
* **Organized**
* **easy to read**
 | The exhibit has all 3 bullets PLUS there is extensive photo documentation in the display | The exhibit has all 3 bullets and there is some photo documentation in the display. | All 3 bullets found in the exhibit but photo documentation is absent. | 2 of the 3 bullets found in the exhibit | 1 of the 3 bullets found in the exhibit | Exhibit does not possess any of the 3 bullets or there is no display |
| **c. Data and Graphs are properly labeled.** | All data and graphs are properly labeled on the display and properly labeled in the log book. | Sufficient use of data and graphs and all are properly labeled on the display | Sufficient Data & graphs included but some labels missing | Insufficient amount of data and graphs | Insufficient data and graphs and missing labels | No data or graphs provided |
| **d. Each element of scientific method is on the backboard** | All steps of scientific method displayed on backboard including how variables were controlled | All steps of scientific method displayed on backboard but there is no reference to controlling variables. | Most steps of scientific method are on backboard. | Some steps of scientific method on backboard | Very little reference to scientific method | No reference to scientific method or no display |
| **e. Display/logbook contained adequate documentation** | 5 or more research sites were cited and directly related to the question | 4 research sites were cited and directly related to the question | 3 research sites were cited and directly related to the question | 2 research sites were cited and directly related to the question | 1 research site was cited and directly related to the question | No evidence of research found or research not related to question |
| **Scientific Method** |
| **Topic** | **5** | **4** | **3** | **2** | **1** | **0** |
| **a. Problem/question stated specifically and clearly** | Problem/question is both clear and specific. Higher level vocabulary used. | Problem/ question is both clear and specific and vocabulary used was age appropriate. | Problem/question is clear and specific but vocabulary used was inadequate for the age level. | Problem statement/question is clearly communicated but lacks specificity  | Problem statement/question is confusing and lacks specificity | Problem/question missing |
| **b. Hypothesis clearly and specifically stated.**  | Hypothesis was clear, specific and well formulated. Researcher cited rationale behind hypothesis using appropriate vocabulary. | Hypothesis was clear, specific and well formulated with appropriate vocabulary. No rationale for hypothesis cited. | Hypothesis is clear and specific but vocabulary was inadequate for age level. | Hypothesis was clearly communicated but it lacked specificity. | Hypothesis is confusing and lacks specificity | No hypothesis |
| **c. Variables clearly recognized and controlled.** | Exceptional effort made to identify and control all variables.  | Acceptable identification and control of all variables. | Most variables were identified and controlled. | Some variables were identified and controlled. | Very little identification or control of variables. | Variables were neither identified nor controlled. |
| **d. Materials and Procedures Explanation** | Comprehensive list of materials and detailed explanation of procedure were given. | Materials list and basic procedural description were both provided. | Incomplete list of materials & incomplete procedure | Procedure provided but material list was missing  | Materials were listed but no procedure was provided. | Both materials and procedures were missing. |
| **e. Data to support conclusions** | Multiple sources of data: Quality data found in well developed graphs/charts/tables verify conclusion. Log book also verifies data collection on supports conclusion. | Adequate data from multiple sources all support conclusion. | Good data from one source but data not evident from multiple sources.  OrUsed multiple sources but some data did not support conclusion. | Data was collected from one source only and it does not support the conclusion. | Very little data provided. | No data provided |
| **F. Quality Log Book** | Comprehensive journal with labeled and detailed entries | Adequate logbook with labeled/dated entries. | Adequate logbook but some entries are not dated or labeled. | Logbook provided- Details missing in the entries | Logbook provided but very few entries. | No log book |
| **g. Conclusion relevant to Hypothesis** | Based on the hypothesis there is a well developed conclusion with attention to higher level vocabulary. | Conclusion was adequately linked to the hypothesis. | Most of the conclusion was adequately linked to the hypothesis | Some linkage of the conclusion to the hypothesis. | Conclusion was offered but was not linked to the hypothesis. | No conclusion was offered. |
| **h. Multiple trials used** | Four or more trials were used to gather data that support the conclusion. | Three trials were used to gather data that supports conclusion. | Two trials were used to gather data that supports the conclusion. | One trial was used to gather data to support the conclusion. | Although data was collected there is no evidence of how it supports the conclusion. | No documentation of the experiment. |
| **Interview** |
| **Topic** | **5** | **4** | **3** | **2** | **1** | **0** |
| **a. Clear conclusion based on results and connected back to hypothesis.** | Student’s explanation reflects a well developed conclusion connected back to the hypothesis. Student incorporates higher level vocabulary when discussing the conclusion. | Student’s explanation reflects a well developed conclusion. He/She connects the conclusion back to the hypothesis.  | Student’s discussion adequately links the conclusion to the hypothesis but details are missing. | Student’s discussion shows some linkage of conclusion to hypothesis. |  Student discusses his/her conclusion but does not link it to the hypothesis. | Student cannot discuss the conclusion or the student has no conclusion. |
| **b. Written material reflects the researcher’s understanding of the research.** | Student can explain in detail the research findings located in his logbook and/or experimental notebook. | Student is able to adequately explain the research findings located in his logbook and/or experimental notebook. | Student has some understanding of the research findings located in his logbook and/or experimental notebook. | Student has a limited understanding of the research findings located in his logbook and/or experimental notebook. | Student has very little understanding of the research findings located in his logbook and/or experimental notebook. | Student is unable to discuss the research or student did not submit any written research findings. |
| **c. Oral communication of the components of the scientific process.** | Student is very articulate in his/her ability to discuss the components of the scientific process. | Student is able to adequately discuss the components of the scientific process. | Student can discuss some components of the scientific process | Student is limited in his/her ability to discuss the components of the scientific process. | Student is only able to discuss one or two components of the scientific process. | Student is unable to discuss the components of the scientific process. |
| **d. Data/Results and project display discussion** | Student is very articulate in his/her ability to discuss the data/results and project display with the judges. | Student is able to adequately discuss the data/results and project display with the judges. | Student can discuss some parts of the data/results and project display with the judges. | Student is limited in his/her ability to discuss the data/results and project display with the judges. | Student can discuss only a little of the data/results and project display with the judges. | Student is unable to discuss the data/results and project display with the judges. |
| **e. New information acquired as a result of the project** | Student is very articulate in his/her ability to discuss the new information acquired as a result of the project with the judges. | Student is able to adequately discuss the new information acquired as a result of the project with the judges. | Student can discuss some parts of the data/results and new information acquired as a result of the project with the judges. | Student is limited in his/her ability to discuss the new information acquired as a result of the project with the judges. | Student can discuss only a little of the new information acquired as a result of the project with the judges. | Student is unable to discuss the new information acquired as a result of the project with the judges. |
| **f. Project Revision/Expansion** | Student is very articulate in his/her ability to discuss ways the project can be revised or expanded in the future with the judges. | Student is able to adequately discuss the ways the project can be revised or expanded in the future with the judges. | Student can discuss some parts of the ways the project can be revised or expanded in the future with the judges. | Student is limited in his/her ability to discuss ways the project can be revised or expanded in the future with the judges. | Student can discuss only very little of the ways the project can be revised or expanded in the future with the judges. | Student is unable to discuss the ways the project can be revised or expanded in the future with the judges. |
| **g. Student work ethic** | Based on the interview, it is virtually 100% evident that the student did the majority of the work on this project. | Based on the interview, it appears the student did the majority of the work on this project. | Based on the interview, it appears the student did the some of the work on this project but he/she had significant help. | Based on the interview, it appears the student had a great deal of help on the project. | Based on the interview, it appears the student did very little work on this project. | Based on the interview, it appears the student did not work on the project. |