# Science Experiment Product

# Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Levels/Criteria** | **4 Points**  | **3 Points**  | **2 Points**  | **1 point**  | **Score/Level** |
| --- | --- | --- | --- | --- | --- |
| Layout  | The product (poster or presentation) uses **color** **and** is **easy to read**. | The product (poster or presentation) includes 1 of the following 2 elements: the product uses color, is easy to read.  | The product (poster or presentation) includes 0 of the following 2 elements: the product uses color, is easy to read. | There is no product in the form of a poster or presentation. |   |
| Spelling and Grammar | There are no major errors in spelling or grammar.  |  |  | There are major errors in spelling or grammar. |  |
| Topic or Question  | The **topic** or basic question of the experiment is present, with the use of **color** and **size** to draw attention to it.  | The **topic** or basic question of the experiment is present, with the use of **color** **or** **size** to draw attention to it. | The **topic** or basic question of the experiment is present.  | The topic or basic question of the experiment is not present.  |   |
| Hypothesis  | The hypothesis is **present**, follows the **if/then** predictive form, and includes an **explanation**.  | The hypothesis is **present**, and follows the **if/then** predictive form with **no explanation**. | The hypothesis is **present**, and is a **prediction**. | A **clear** hypothesis is **not present**.  |   |
| Experimental Variables  | The **independent** and **dependent** variables are **labeled** and properly **identified**.  | The **independent** and **dependent** variables are **labeled** and but one is **not** properly **identified**. | The **independent** and **dependent** variables are **labeled** and but **both** are **not** properly **identified**. | The independent and dependent variables are **not present and identified**. |   |
| Controlled Variables | **All** variables that could affect outcomes for the dependent variable are identified, **and how** they will be controlled is explained. | **Some** variables that could affect outcomes for the dependent variable are identified, **and how** they will be controlled is explained. | **Some** variables that could affect outcomes for the dependent variable are identified. | **No** variables that could affect outcomes for the dependent variable are identified. |  |
| Trials:  | The effect of the independent variable is tested with three different values for the independent variable. | The effect of the independent variable is tested with two different values for the independent variable. | The effect of the independent variable is tested with one value for the independent variable.  | There are no trials.  |   |
| Number of trials.  | There are at least 3 repetitions of each trial.  | There are at least 2 repetitions of each trial. | There is at least 1 repetition of each trial. | There are no trials.  |   |
| Data Table(s)  | There is a data table that shows **all** the measurements for the experimental variables from each repetition of each trial. The **average** from each set of trials is included.  | There is a data table that shows **all** the measurements for the experimental variables from each repetition of each trial. The **average** from each set of trials is **not** included. | There is a data table that shows **some** of the measurements for the experimental variables from each repetition of each trial. The **average** from each set of trials is **not** included. | The data table is **absent or incomplete.**  |   |
| Materials  | **All** required materials are listed.  | **Most** required materials are listed.  | **Some** required materials are listed.  | **No** required materials are listed.  |   |
| Procedures  | The procedure includes **all steps**, including what **measurements** to take.  | The procedure includes **most steps** and **most measurements**.  | The procedure includes **some steps** and **some measurements**.  | The procedure is **lacking either** steps or measurements.  |   |
| Results/Data Analysis  | How the dependent variable changed for each trial is **identified and measured**, and its meaning for the experiment is **explained**.  | How the dependent variable changed for each trial is **identified** but **not measured**, and its meaning for the experiment is **explained**.  | How the dependent variable changed for each trial is identified.  | There is no analysis.  |   |
| Conclusion  | The conclusion includes whether the **hypothesis** was correct, incorrect, or unproven. It includes an **explanation** based on at least **2 specific measurements** from the data.  | The conclusion includes whether the **hypothesis** was correct, incorrect, or unproven. It includes an **explanation** based on at least **1 specific measurement** from the data. | The conclusion includes whether the **hypothesis** was correct, incorrect, or unproven. | The conclusion does not mention the hypothesis.  |   |
| Error Analysis  | An **explanation** of what mistakes were made is included, as well as how such mistakes could be prevented in the future or there are **no mistakes**. How this experiment could be **improved and any new questions** are explained. | An **explanation** of what mistakes were made is included.  | Mistakes are listed, but not explained.  | No mistakes are identified or explained. |   |
| Final Score  |  |  |  |  |   /39 |

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