**Science Fair Project Phase III:**

**Experimenting and Data Collection**

In this phase of the science project, you will design and conduct your actual experiment.

This phase also has multiple parts to it.

For this phase you will do the following:

***Part A: Experiment Proposal***

*For Part A, you will be submitting a more detailed proposal as to exactly how you intend to conduct your experiment or build your design.*

***Your proposal will need to be approved by me BEFORE*** *you can move on to Part B, where you will conduct your actual experiment.*

For the Experiment Proposal, you will need to provide:

1. **State your topic/question**
   * STATE YOUR HYPOTHESIS
2. **Background of Experiment (about 1 paragraph of 7-8 sentences)**
   * Why you and your group chose to do this experiment.
   * What greater relevance or purpose does this experiment have in the greater. Why is it important to study?
   * HOW DID YOUR BACKGROUND RESEARCH INFORM, INFLUENCE OR CHANGE YOUR EXPERIMENT FROM YOUR ORIGINAL PROPOSAL? (i.e. how did you decide to tweak or change your experiment from what you originally planned, what new aspects might you consider exploring etc.)
3. **A materials list**
   * ALL materials required for your experiment needs to be listed in bulleted form
   * And who will be providing each material (responsibility for providing materials and their costs should be split evenly by all members in the group)
4. **A procedures list**
   * This step-by-step list MUST **THOROUGLY** explain EXACTLY how you intend on conducting your experiment or how you intend on building your design.

*\*\*In other words, you should write this as if it were a set of instructions for someone to reproduce your experiment. If someone were to read these instructions they should have no instructions as to how to do the experiment or build your design\*\**

1. **Potential Dangers and Precautions** 
   * Here you will list any potential dangers and precautions the experimenter might experience or may need to take
2. **Anticipated Problems**
   * Here you will list any problems or difficulties you may anticipate having when conducting your experiment or building your design.

***Part B: Conducting the Experiment***

After getting your proposal approved, you and your group will then have the opportunity to conduct your experiment and/or build your engineering design.

During this phase, you will need to **collect data.**

To show evidence of your data you MUST:

1. **Take and provide hand-written data/notes**
   * This must be done NEATLY. No messy or torn work will be accepted
2. **Convert hand-written data into typed charts and graphs**
   * You will reproduce your hand-written data/notes in typed form
   * You will also need to convert your data in some type of graph or chart that accurately and comprehensively depicts the results of your experiment
3. **Take and provide pictures of your experiment and its results**

*\*EACH PERSON IN YOUR GROUP IS RESPONSIBLE FOR DOING THIS, AND FOR DOING THEIR OWN WORK\**

**DUE DATES**

|  |  |
| --- | --- |
| Experiment Proposal |  |
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**Science Fair Phase III: Part A**

**Scoring Sheet**

1. **State your topic/question /3**
   * A logical, clear hypothesis is stated in a brief statement
2. **Background of Experiment (about 1 paragraph of 7-8 sentences) /5**
   * A thoughtful, meaningful paragraph explaining how the background research influenced your group’s experiment.
   * There is evidence of careful, thoughtful consideration and critical thinking as to how the background information influenced the overall experiment
3. **A materials list /5**
   * ALL materials required for your experiment is listed in bulleted form
   * List of material-supplying responsibilities also delineated
4. **A procedures list /10**
   * A step-by-step list that **THOROUGLY** explains EXACTLY how you intend on conducting your experiment or how you intend on building your design is provided.
   * Instructions were clear enough that someone could reproduce or conduct the experiment exactly as you would. If an outside third party were to read these instructions they would have specific instructions as to how to do the experiment or build your design
5. **Potential Dangers and Precautions /2**
   * Careful and thoughtful consideration of any potential dangers and precautions the experimenter might experience or may need to take is provided
6. **Anticipated Problems /5**
   * A thoughtful list of any problems or difficulties you may anticipate having when conducting your experiment or building your design is provided.

**Total: /30**