CHECKPOINT 5: REPORT PART 1

The purpose of Report Part 1 is to organize the preliminary information of the investigation. Use the outline on the next page to help you complete Report Part 1. Just like your Research Summary (checkpoint 4), this report should be **typed (or neatly written in pen) and written in third person**. Personal pronouns are not permitted and will result in a grade penalty if used. The copy submitted for a grade must be in the same format as the outline (not paragraph form).

For Part 1, only the following sections are required:

A. Purpose: Why was this topic chosen, or why is it useful?

B. Investigative Question: Copy investigative question from proposal.

C. Hypothesis: The hypothesis is a prediction about what might occur during the science project and is based on what is already known and/or what was learned from completing the research. **The hypothesis is not a question.** It is a prediction, and it's okay if it's wrong! The hypothesis must be a single, testable, and measurable statement that answers the investigative question.

- One way to format the hypothesis is with an "If_____, then_____" statement.
- Another example: "The plant will grow tallest under green light."
- Example: "If the temperature of a cup of water increases, then the amount of sugar that dissolves will increase."

D. Experimental Design:

- **Independent variable**: Copy independent variable from proposal.
- **Dependent variable**: Copy dependent variable from proposal.
- **Constants**: Copy constants from proposal.
- **Limitations/uncontrolled variables**: These are variables that can't be controlled but might be a factor in the experiment. (Examples: wind, human error) *Every experiment has limitations*.
- **Control group** (*if warranted*): Rewrite control group question from proposal.

E. Materials: This is a list of all materials and equipment that are going to be used in the experiment. Be specific! How many? What size? What brand? All measurements must be in **metric units**.

F. Procedures: These are detailed, step-by-step instructions on how to carry out the experiment. Think of it as a cookbook. This should be a recipe that another person could use to perform the same exact experiment. **Specifically explain what data will be collected and how it will be collected (measured)**. Procedures should account for the number of trials that will be done. **A minimum of five trials per independent variable is required**.

REPORT PART 1 OUTLINE

Report Part 1 (ROUGH DRAFT OUTLINE – Final copy must be typed or written neatly in pen in this format):

Name: _____

A. **Purpose:** _____

_____

_____

B. **Investigative question:** _____

_____

_____

C. **Hypothesis:** _____

_____

_____

D. **Experimental design:**
   - **Independent variable:** _____
   - **Dependent variable:** _____
   - **Constants:** _____
   - **Uncontrolled variables/limitations:** _____
   - **Experimental/control group** (if warranted)**:** _____

E. **Materials***:*

- _____
- _____
- _____
- _____
- _____
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- _____
- _____
- _____

F. **Procedures** (this is a numbered list and must account for five trials)**:**

_____

Please note: The following rubric is intended to support students in determining their quality of work. Rubrics help students understand what success looks like and what they should strive for in order to excel in the state Science and Engineering Fair. The results of this rubric are not to be used toward grade-level content grades.

REPORT PART 1 RUBRIC				
	2 points	**1 points**	**0 points**	**Total Points**
Format	Follows outline format with labels,	Partially follows outline format with labels,	Does not follow the outline with labels.	
	Typed or written neatly in pen in 3rd person,	Some of the report is written in 3rd person.	Not typed or written neatly in pen in 3rd person,	
Purpose	Explains why the student chose the project or why it is useful,	Partially explains why the student chose the project or why it is useful,	Does not explain why the student chose the project or why it is useful,	
Investigative Question	Investigative question correctly written.		Investigative question missing.	
Hypothesis	Written as an "if, then" statement **or** something similar.		Hypothesis statement is missing.	
	Hypothesis clearly names the IV and DV and its observable, testable, and measurable statement.	Hypothesis doesn't clearly name the IV and DV or isn't completely observable, testable, and measurable.	Hypothesis is not an observable, testable, and measurable statement.	
Experimental Design	Independent Variable is correctly identified.	Independent Variable is mislabeled.	Independent Variable is missing.	
	Dependent Variable is correctly identified.	Dependent Variable is mislabeled.	Dependent Variable is missing.	
	All/most constants are identified,	Some constants are identified,	No constants are identified,	
	Most limitations/ uncontrolled variables are correctly identified.	Some limitations/ uncontrolled variables are partially identified.	No limitations/ uncontrolled variables are missing.	
	Experimental and control groups are correctly identified or not included by design.	Experimental and control groups are not correctly identified but are appropriate for the design, or they are identified but inappropriate for the design.	Experimental and control groups are missing but should be included within the design.	
	4 points	**2 points**	**0 points**	
Materials	Listed all supplies needed.	Listed some of the supplies needed.	Did not list the supplies needed.	
	All measurements and amounts are included and are in metric units.	Some measurements and amounts are included and are in metric units.	No measurements and amounts are included.	
Procedure	Included step-by-step list of instructions.	Included only a few steps needed to complete the experiment.	Did not include a step-by-step list of instructions.	
	Included at least five trials in procedure.	Included less than five trials in procedure.	Did not include trials in procedure.	
	Included specifics on how data will be collected and measured.	Included only a few specifics on how data will be collected and measured.	Did not include specifics on how data will be collected and measured.	
			Total for Report Part	**/ 42 pts**