DATE: NAME: CLASS:

GENERAL
SCIENCE INQUIRY

Design Your Own Investigation

BLM G-8

Goal • Practise organizing your ideas and information to design your own investigation.

Introduction

Scientists carefully plan and develop investigation proposals before actually conducting an inquiry. Like them, as your start to plan an investigation, consult books, the Internet, knowledgeable people, and other sources to get ideas to help you develop and revise your design.

What to Do

- Follow this outline to draft a proposal and design for a science inquiry you would be interested in investigating.
- Refer to your responses to help you complete your investigation and presentation.

Outline

Consider the purpose of your inquiry.

1. Topic

a. Describe the area or topic you want to investigate.

_____

_____

b. List at least three key words related to your topic.

_____

c. Explain why this inquiry interests you.

_____

2. Timing

Write the due date. _____

3. Problem Statement

Revise your inquiry topic to focus on a single problem, hypothesis, or question that can be investigated in the time available. Write your specific inquiry topic or problem statement.

_____

_____

Prepare the equipment and materials needed for your inquiry.

4. Apparatus and Materials

a. List apparatus (equipment, tools, machines) needed for your proposed design.

_____

_____

b. List the materials needed for your proposed design.

_____

_____

c. State where apparatus and materials are available or can be obtained.

_____

_____

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5. Safety Precautions

a. List the protective clothing or equipment you may need.

_____

_____

b. List any special precautions.

_____

_____

_____

Plan where, when, and how your inquiry can take place.

6. Locations

a. State the location for each step in your proposed inquiry.

_____

_____

_____

b. Indicate safety procedures, such as the presence of an adult supervisor, required for each location.

_____

_____

7. Timing

On the back of this sheet, draw a diagram or flowchart showing all of your steps and the approximate amount of time you estimate each step will take. Remember to include the need for a control or for repeating an experiment.

8. Recording

a. State whether you will use a log, journal, or notebook for recording your actual procedure and your observations, information, or data summaries.

_____

b. List what visual ways you will use to record data (i.e., charts, tables, graphs, or organizers).

_____

_____

c. Decide if you will draw diagrams or take photographs of observations.

_____

d. Explain what you plan to do if you miss an observation.

_____

_____

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Consider the results of your enquiry.

9. Presenting

a. List the ways you plan to present your major findings and conclusions. For example, will you build a model, write a report, prepare a display or multi-media show, hand out a summary fact sheet, give an oral presentation, or do something else?

_____

_____

b. Decide if you will include your raw data in your presentation, or only data patterns and trends or predictions.

_____

c. Describe sources you can use to find supporting data. Write each source in proper form.

_____

_____

d. Has this investigation made you think of other ideas to investigate? _____
If so, mention them.

_____

_____

e. Are there questions related to this investigation that you might now like to investigate?

_____

If so, list them.

_____

_____

10. Applications

a. Explain how your inquiry applies to society.

_____

_____

b. Explain how you will assess your completed inquiry to decide whether you have fulfilled your stated purpose and responded effectively to your stated problem.

_____

_____

c. At the end of your inquiry, outline what you have learned that will help you do future science inquiries.

_____

_____

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