

Scientific Method

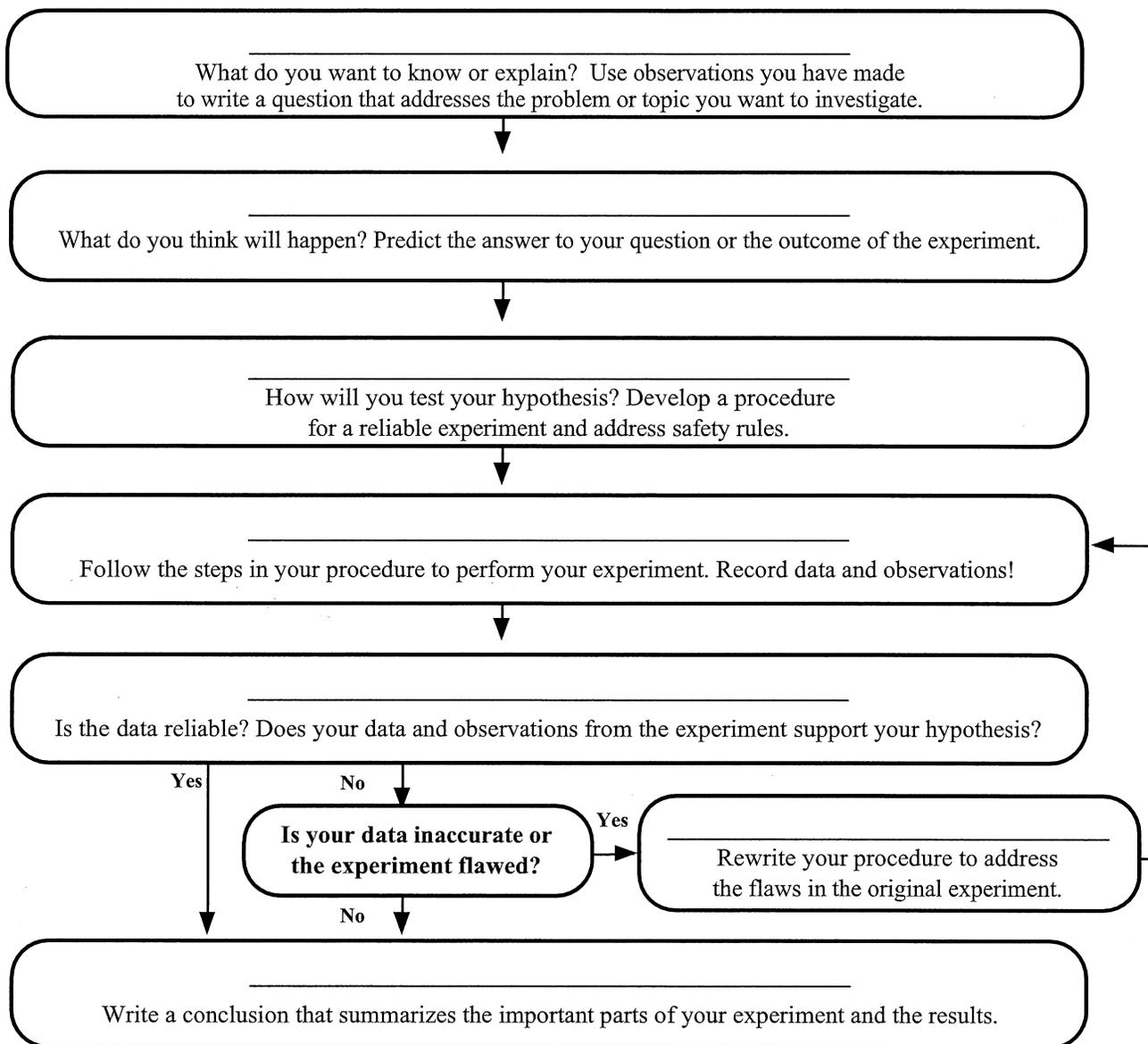
Name _____

What is the scientific method? It is a _____ that is used to find _____ to questions about the world around us.

Is there only one “scientific method”? No, there are several versions of the scientific method. Some versions have more _____, while others may have only a few. However, they all begin with the identification of a _____ or a _____ to be answered based on observations of the world around us and provide an _____ method for conducting and analyzing an experiment.

What is a hypothesis? It is an _____ based on observations and your knowledge of the topic.

What is data? It is _____ gathered during an experiment.



Scientific Method

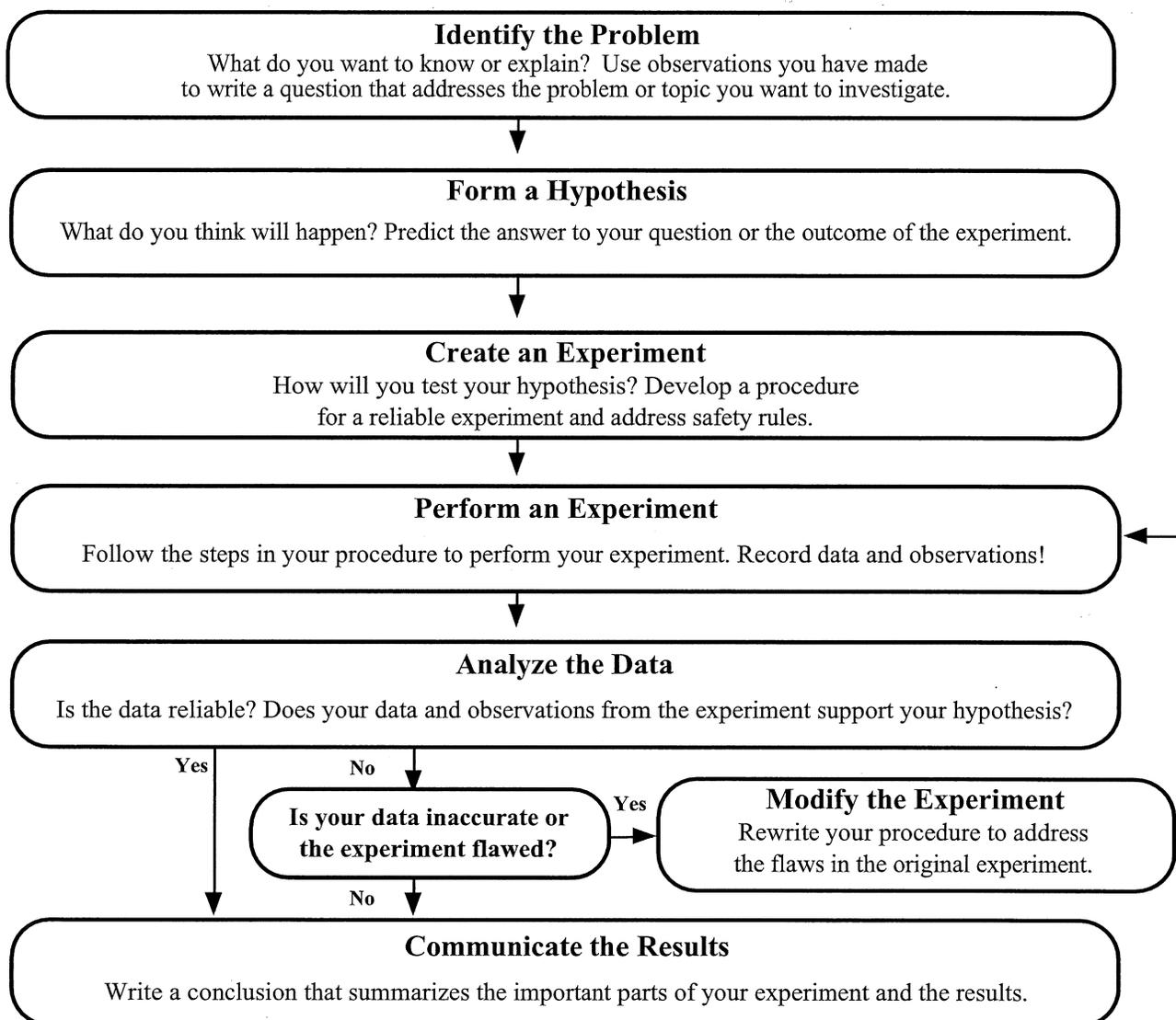
Overhead Key

What is the scientific method? It is a process that is used to find answers to questions about the world around us.

Is there only one “scientific method”? No, there are several versions of the scientific method. Some versions have more steps, while others may have only a few. However, they all begin with the identification of a problem or a question to be answered based on observations of the world around us and provide an organized method for conducting and analyzing an experiment.

What is a hypothesis? It is an educated guess based on observations and your knowledge of the topic.

What is data? It is information gathered during an experiment.



Independent Investigation Guidelines

Step 1: Create a Question

- What do you want to find out?
- Does your question relate to the topic?
- Can you develop an experiment to answer your question?
- Does your question make sense? Is it confusing?

Step 2: Hypothesis

- What do you think will happen?
- BE SPECIFIC!
- Use complete sentences.

Step 3: Procedure

- What steps will you follow to find an answer?
 - ✓ BE SPECIFIC! Label your steps using 1, 2, 3, etc.
 - ✓ Would someone else be able to follow your directions?
- How will you collect your data?
- How will you ensure reliable results?
- What safety issues need to be addressed?

Step 4: Experiment & Data

- Be sure to display your data in an organized manner. Use a table or chart to help you show your results. Don't forget to label!
- Include enough data to prove or disprove your hypothesis.

Step 5: Analysis/Conclusion

- What happened during your experiment?
- Did your results support your hypothesis?
- Write a summary of what you learned during your experiment and address your results.
- Explain any unexpected results.
- Are your results reliable?
- Did you use complete sentences?

Independent Investigation

Name _____

Question

What do you want to find out?

Hypothesis

What do you think will happen?

Procedure

Design your experiment! Write the steps for your experiment in the space below.

Safety Rules

What safety rules do you need to follow during your experiment?