

Scientific Method

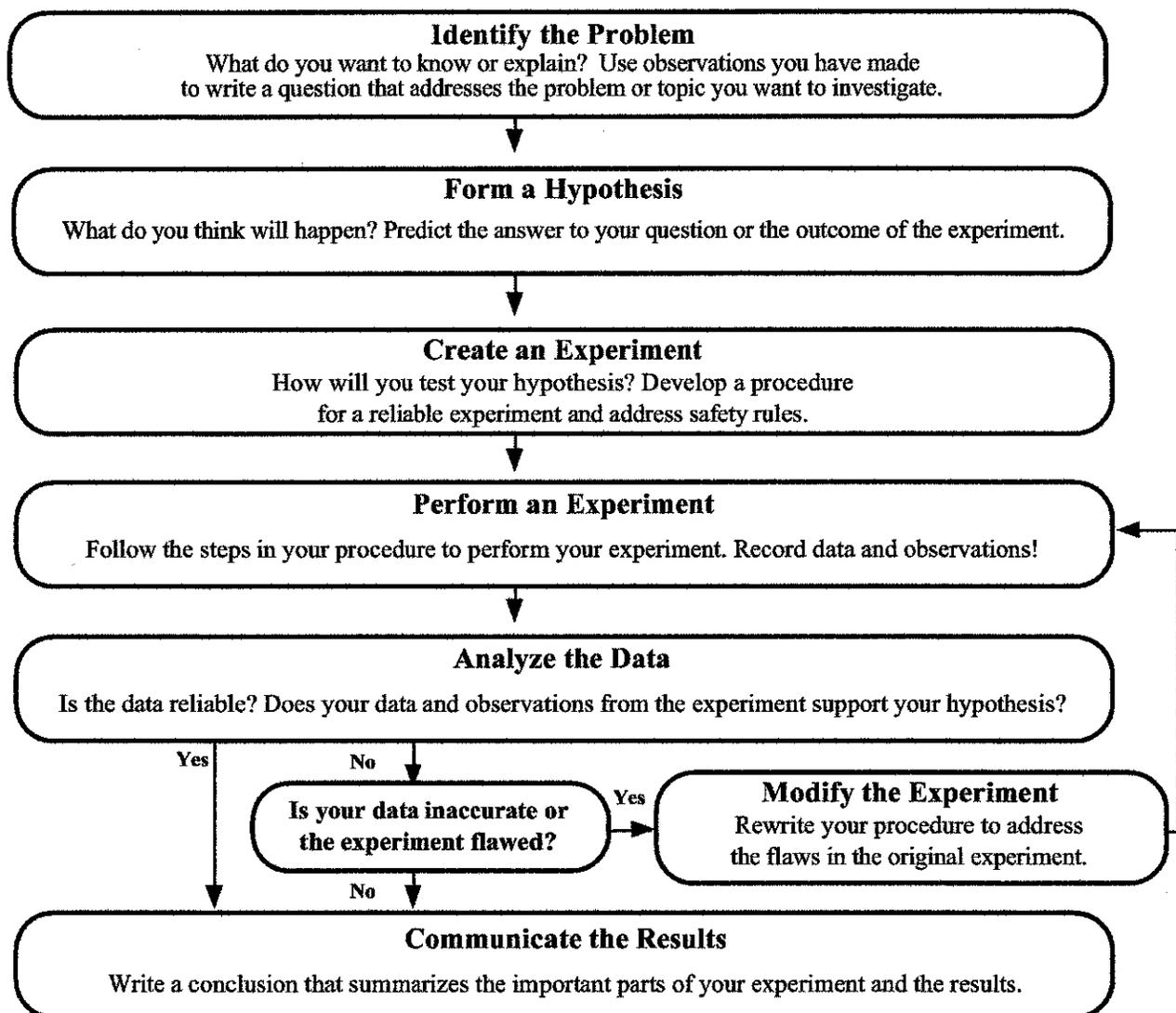
Overhead Key

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.



Lab Safety, Branches of Earth Science, and Scientific Method

Make sure you study ALL Lab Safety Rules, Earth Science Book, and The Scientific Method Graphic Organizer!

Test will be given on _____

Lab Safety:

1. It is important to make sure that you do not eat or drink in the lab because you may run the risk of internalizing poisons.
2. Horseplay can lead to chemical spills, accidental fires, or broken glass. Therefore, this should never be done in the lab.
3. If there are no adults in the room then labs should not be performed.
4. If you need to smell a chemical you should hold it away from your face and wave the fumes towards your nose.

Scientific Method:

1. Identify the problem and question are the first steps in the scientific method.
2. The second step in the scientific method is to collect data / information.
3. Once information has been gathered then based on the information collected a scientist will form a hypothesis as a possible explanation.
4. Next you will create an experiment to test the hypothesis.
5. After many experiments and observations scientists will reach a conclusion to support or change their hypothesis.
6. The scientific method is a process to solve a problem.
7. The results of the scientific method should be based on data.
8. There is not just one way to use the scientific method. It can be changed or modified.
9. The final step is the conclusion (reporting results). It should communicate the results of their experiments in order to summarize the important parts of the experiment and to share that they have learned.

Earth Science:

1. The four major branches of Earth Science are geology, oceanography, astronomy, and meteorology.
2. Geology is the study of the solid earth.
3. The study of the ocean is called oceanography.
4. Astronomy is the study of stars + universe; beyond Earth.
5. Meteorology is the study of atmosphere + weather.

Branches of Earth Science: Place the jobs listed under the correct branch.

- The study of climates.
- The Study of the stars, planets, and comets.
- The examination of fossils.

- Composition of seawater.
- Processes that occur in the seas.
- Volcanoes and Earthquakes.

- Storm Patterns.
- Features of the moon.
- Ocean floor
- Layers of atmosphere

Geology	Oceanography	Astronomy	Meteorology
- examine fossils - volcanoes / earthquakes	- composition of seawater - processes that occur in the seas - ocean floor	- study of climates - storm patterns - features of the moon - study of stars, planets + comets	- study of climates - storm patterns - layers of the atmosphere