

SCIENCE LAB OBSERVATION RECORD/OUTLINE

As part of the science lab procedure, you are to keep a careful record of what we do each day in your science notebook. This record is a history of our study of various organisms and habitats. It is a compilation of questions, observations, description, evidence, inferences, next steps, and summaries. You will use your notebook information to develop reports and representations, field guides and taxonomies, presentations and models of your research and findings. The more detailed your information, the better able you will be to produce quality work.

Some of the detail may seem repetitive (the backswimmer looks the same as it did last week). However, if you are keeping careful records, you may notice slight changes from your previous observations (your data may show that the backswimmer is moving more slowly now). Or the plant really hasn't grown/changed in any way since the last observation (should it be larger? should it have seed pods? what environmental conditions may be responsible for the lack of growth/change?). You won't have any way of knowing if you don't write everything down.

Further, your science notebook and lab interactions form one third of your science grade. The other two thirds are made up of your nature journal and your reports and projects. The reports and projects utilize all of the information you have collected in your science notebooks. Without the notebook, you cannot do the presentations.

The observation record and direction attached to this sheet will help you get the most out of your science lab experiences and collect all of the necessary information. It is an outline or guide for you to follow. It is not meant as a form on which you write. The lines and spaces are there only to indicate the possible amount of writing and room you may need to allot to each entry in your notebook. The most important directions are that you look closely and carefully; you write down everything you see, hear, smell, feel (touch), taste (only if appropriate) using vivid and exact words. Draw diagrams and pictures to show what you see. Use direction, space, and time to indicate how an organism is behaving. Measure! Document! Give evidence. All of the information below is a form of evidence. If you include everything in the observation record in your notebook each day, you will have what you need to complete any assignment or project.

As with all work, be neat. You (and I) have to be able to read your entries, so write legibly. Do not doodle in this notebook. All drawings should be diagrams of the organisms under study. Do not tear out pages. You will need all of them and more besides.

REMEMBER: All entries are made in your notebook on notebook paper!

DIRECTIONS FOR SCIENCE NOTEBOOK

In your science notebook, be sure to include all of the following. Each item must be labeled just as you see it here.

1. **Date.** Dating every observation allows you to look back and know on what date something happened. Without dates, there is no record for growth/change rates. There is no way for you to compare your information to anyone else's.
2. **Observation Number.** We will be starting different investigations at different times during the year. Students may be absent some days. We won't observe every day. The observation number allows us to compare your information on that day with someone else's.
3. **Topic.** This tells us which organism or system the observation is about.
4. **Day number.** Refers to the age of the system or organism. It dates from the day we began the growth.
5. **Question.** What are you researching?
6. **Diagram** (draw, title, label, measure, count, color, scale, time, close-up, vocabulary). This is a careful copy of the organism under study, with attention to how many (organisms, leaves, etc.), how big (length, width, depth, area, volume, etc.), time (for behavior, growth rate), color is important, and a close up of a part of the organism or system aids understanding. Use appropriate terminology, especially in labeling.
7. **Detailed Description of Organism.** Words. What exactly do you see, hear, etc. Be accurate in your word choice. Look closely.
8. **Behavior.** What's it doing? What has changed? Under what conditions? *Look for patterns of behavior, repeated motions, actions or sounds. What conclusions can you draw about the animal's behavior? What motivations may have triggered the behavior? In your opinion, was the animal frightened or calm, bored or restless? What specifically, the animal's behavior suggested this emotion to you? How might you test? What would you accept as evidence?*
9. **Conditions.** This refers especially to test/research conditions that you have imposed to answer a question. It also refers to classroom patterns and changes that may affect the system or organism.
10. **Change/Growth.** Our observations are based on the premise that something is going to happen that will cause the organism or system to change in some way or remain the same. Tell about what is happening or not.
11. **Evidence/Data.** How do you know that change has taken place or hasn't? What's your proof? What information have you collected that supports what you are saying? Is it enough to be sure of your statements? Why?
12. **Representations.** Tables, charts, graphs, maps, plots, models are all representations of information you have collected. They are methods of organizing

information so that patterns and differences are clearer and ideas are easier to communicate.

13. **More Questions.** During the course of your observation, some other questions occur to you about the organism or system. Be sure to write them down. They may be important later.

14. **Ideas.** What do you think is going on? These are conjectures.

15. **Next Step(s).** What should/might you do next in connection with your research question?

16. **Summary.** Main points of your observation and investigation.

Taken from Gourley, Catherine, "Do Elephants Have Feelings?" Writing! Volume 24, No. 4, January 2002.

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Date _____ Observation # _____

Topic _____ Day number _____

Question _____

Diagram: draw, label, measure, count, color, scale, time, close-up, vocabulary

Detailed Description of Organism: _____

Behavior: _____

Conditions: _____

Change/Growth: _____

Evidence/Data: _____

Graph (on back):

More Questions: _____

Ideas: _____

Next Step(s): _____

Summary: _____
