

## Picturing Life

### Making a Biological Diagram

The ability to draw accurately and neatly is a useful skill, especially in science. Most sketch artists follow some basic rules to make their drawings attractive and, most importantly, easy to interpret. Below are some rules that will improve your drawing skills and make your sketches easier to understand. These rules should be followed whenever you make a biological diagram in your science class.

#### PURPOSE

In this activity you will accurately and neatly sketch a biological specimen according to basic rules.

#### MATERIALS

pencil	biological specimen
colored pencils	ruler

#### PROCEDURE

1. Read the rules for sketching a biological diagram below. As you read the rules, refer to Figure 1 for an example of a proper biological diagram.
2. Obtain a biological specimen from your teacher.
3. Follow your teacher's instructions as to which parts to label on your biological diagram.
4. In the space provided on your student answer page draw a biological diagram with the required parts labeled accurately. Work neatly and carefully, following all the rules listed below. Your grade is determined by the neatness of your diagram and your ability to follow the instructions.

*(See pages 309 & 338. Labels young plant, seed coat, & cotyledon)*

#### RULES FOR SKETCHING A BIOLOGICAL DIAGRAM

1. Whenever possible, use white unlined paper.
2. Always draw in pencil. Begin drawing lightly, in case you have to erase. Try to erase as little as possible. Use colored pencils to make complex drawings easier to read.
3. Always print.
4. Leave at least a 2.5 cm (1 inch) margin on all four sides of the paper. [Only the heading should be written within the margin.]
5. Always title your drawing using all capital letters. Center the title above your sketch.
6. Center your drawing on the paper. [Don't forget to leave room for your labels.]

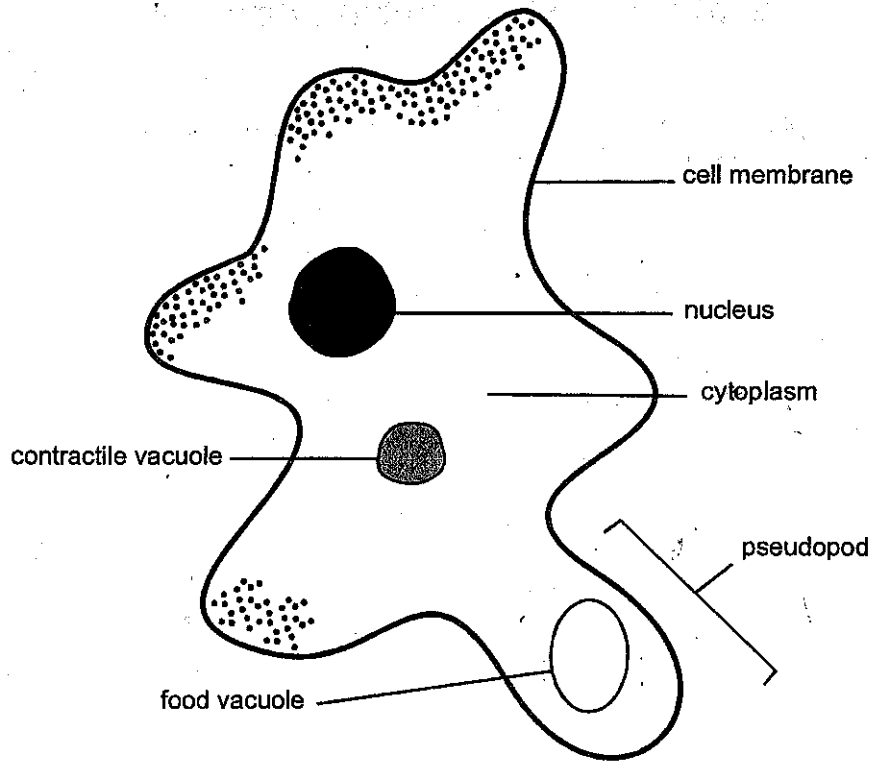
7. Always use a ruler to label the parts of your sketch.
8. Do not underline your labels.
9. Take care to keep the words horizontal; label lines, however, do not need to be kept horizontal.
10. Never allow two label lines to cross.
11. Place one end of the label line directly on the object you are labeling and the other end at the start of the word. Do not use an arrow.
12. Use the singular form of a word when pointing to a single object or part. If you need to point to two of the same parts (for clarity), use the plural form of the word.
13. Print your first and last name, class and period, and date in the upper right-hand corner of your paper in the space provided on your student answer page.
14. Capitalize the first letter of the genus (or first word) of a scientific name when using the scientific name of an organism in places other than the title. The species (or second word) of a scientific name should never be capitalized. For example, *Canis familiaris* is the scientific name for a dog. In a title, it would be CANIS FAMILIARIS. You should also remember that, unless you are typing and can italicize it, the scientific name should always be underlined.
15. Use subtitles ONLY when more clarification is needed. When using a subtitle, use upper and lower case letters as appropriate. The subtitle may be a descriptive sentence, information about the orientation of the sketch, the scientific name, etc.

Suggested  
Bean Seed  
layout

<p style="text-align: center;"><u>Day 1</u></p> <p>Exterior    Interior</p>	<p style="text-align: center;"><u>Day 2</u></p> <p>Exterior    Interior</p>
<p style="text-align: center;"><u>Day 3</u></p> <p>Exterior    Interior</p>	<p style="text-align: center;"><u>Day 4</u></p> <p>Exterior    Interior</p>

**SAMPLE BIOLOGICAL DIAGRAM.**

A TYPICAL PROTOZOAN



Some internal structures of Amoebus proteus

**Figure 1**