

Name: \_\_\_\_\_

Biology

## Making Biological Drawings

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### Background

One important function of lab in biology is to provide opportunities for you to learn first-hand about form, function and relationships among organisms. To do this you must be able to make and record accurate observations. This is achieved by practice. Throughout your studies in biology, you will be expected to record, in original drawings, the details of organisms or materials you observe.

Study the material carefully **before** beginning to draw and frequently while making the drawing. **Do not copy from books nor from the work of other students, as copying (or plagiarism) defeats the purpose of the lab - actual observation by you.** Reference books should be used only as guides for what to look for. Draw only what you see. Previous drawings may be inaccurate, but the specimen is **always** right! As you draw and label each part, try to know what it is, and what its functions are.

### **Rules of creating an accurate biological drawing:**

1. Biological drawings are done using plain, white, unlined paper.
2. Either one or two drawings can be done on a single page, but never more than two.
3. The drawing title is placed at the bottom left of the page and the drawing magnification calculation is shown beneath the drawing title.
4. If two drawings are to appear on a single page, the page can be divided in half so that the drawings will be one above the other.
5. All structures which you are illustrating should be clearly and accurately labeled.
6. Lines are to be drawn with a ruler and should appear neat and tidy. Do not use arrowheads.
7. Label lines should never cross one another.

### **Hints**

1. Be sure to draw only what you see. Don't give in to the temptation to draw what you "think" you should have seen.
2. If you can't locate some of the structures you have been asked to find, ask for help from a friend or your teacher.
3. It is not necessary to draw all the cells in a given section of tissue or organism. Indicate the boundaries of each different tissue using lines only. It is acceptable to draw a few cells (3+) representative of those found in the tissue.
4. Don't rush. Take your time and produce a good drawing. You do not have to be an artist, but you will not get full marks for sloppy work or drawings that appear to have been done in a hurry.

### Task

You will practice making biological drawings of 3 different types of cells. You will locate and label the following structures in each of the cells:

Plant Cell – cell wall, cytoplasm, chloroplast, nucleus

Animal Cell – cell membrane, cytoplasm, nucleus

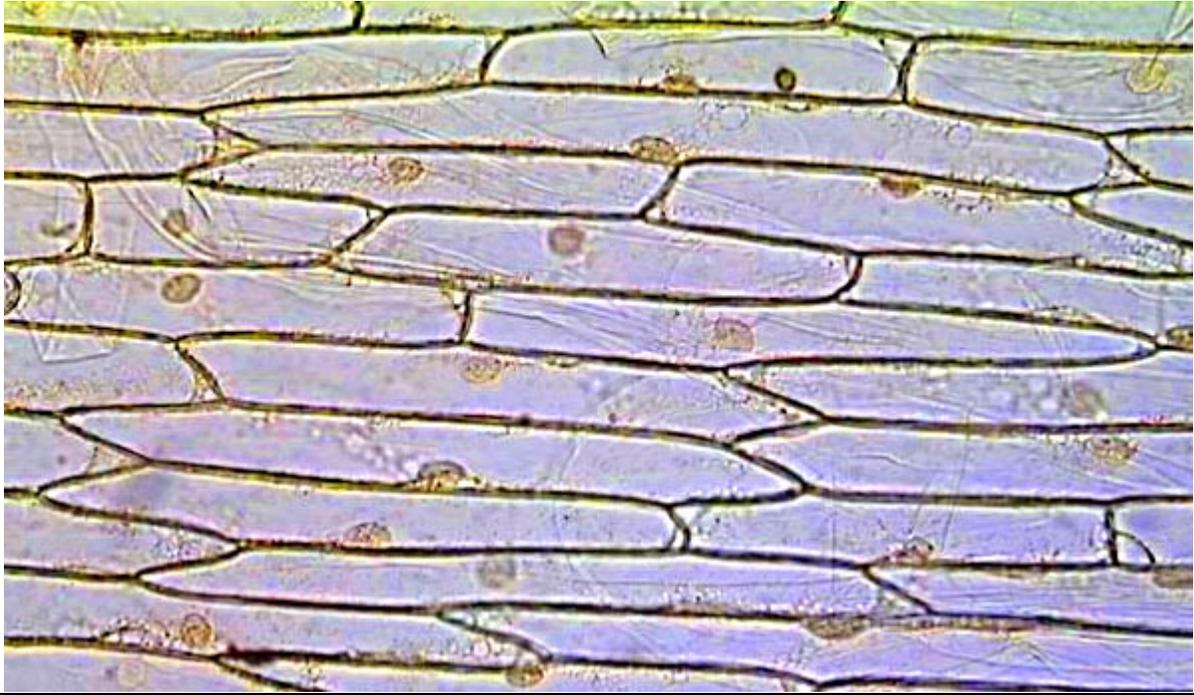
**Elodea Cells (Aquatic Plant)**



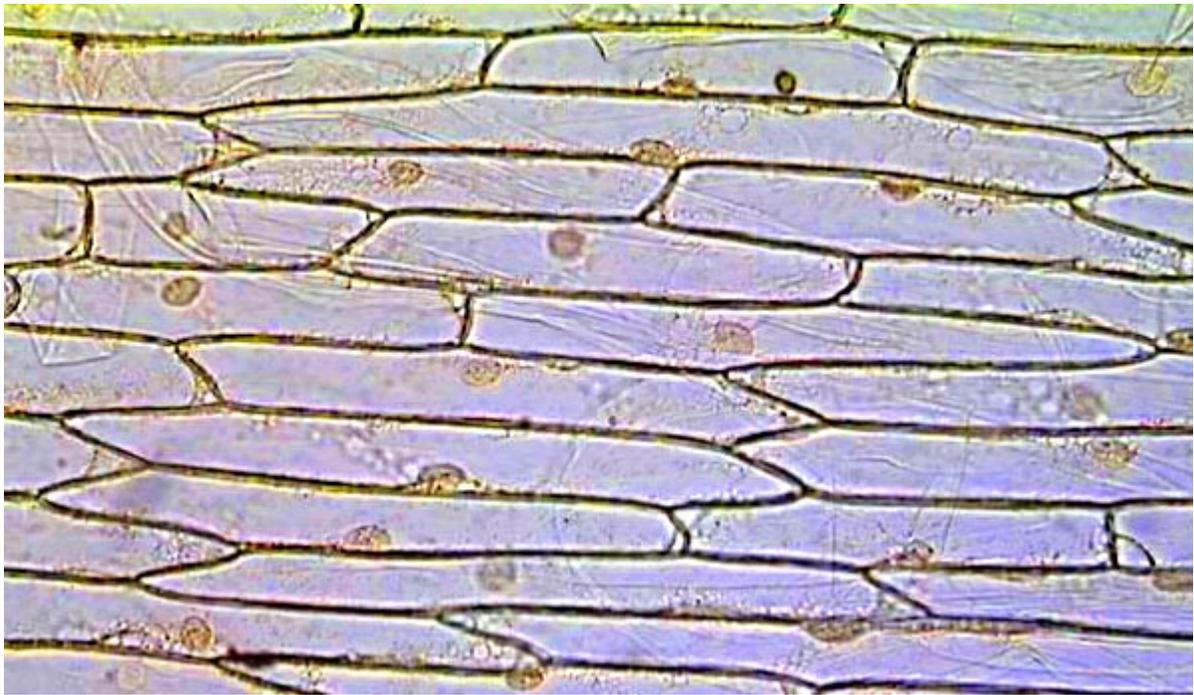
**Elodea Cells (Aquatic Plant)**



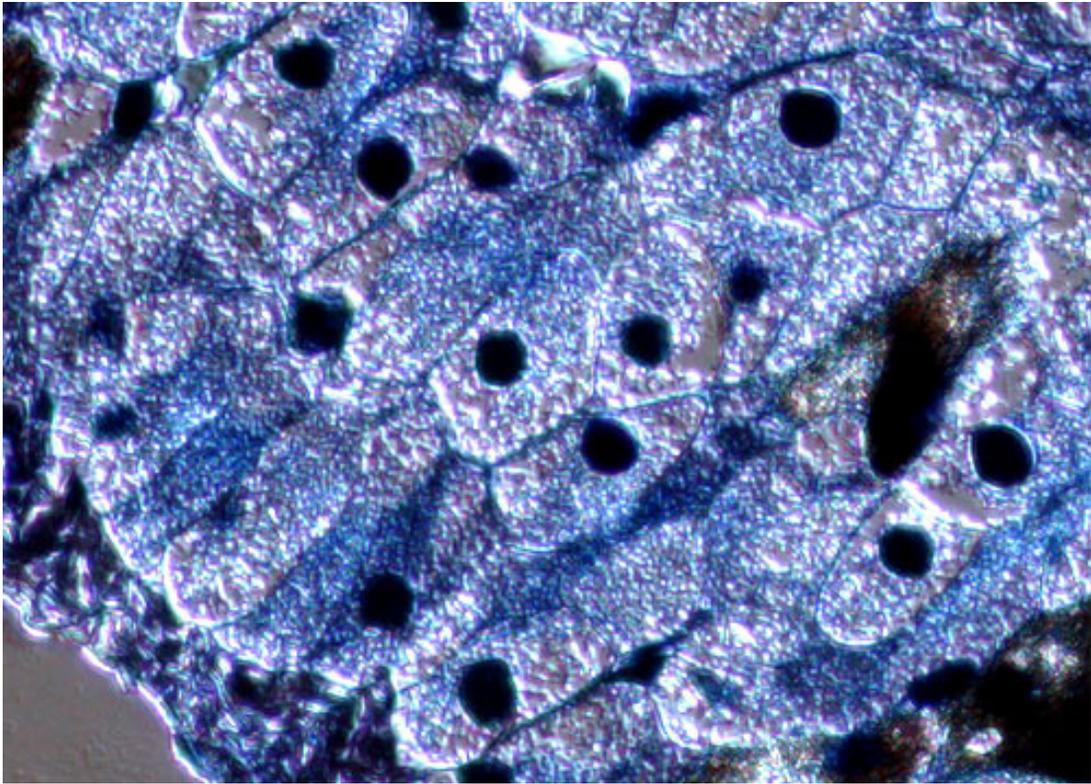
**Onion Cells (Epidermis tissue)**



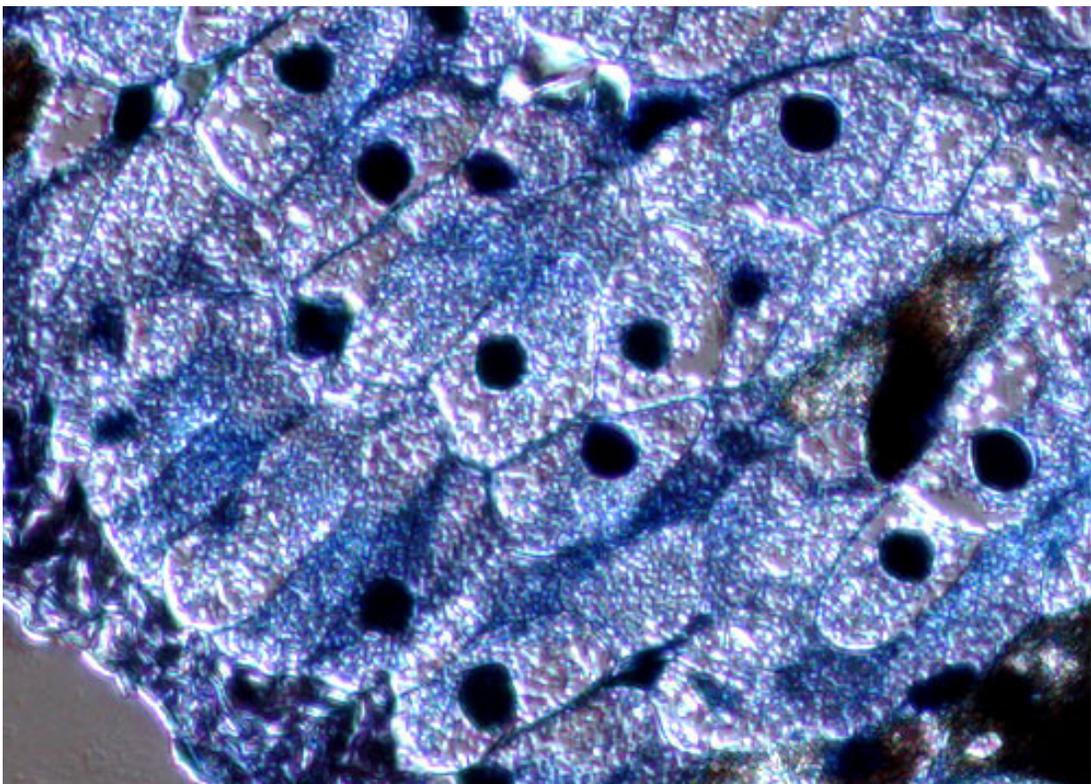
**Onion Cells (Epidermis tissue)**



**Animal Cells (Salamander Liver Tissue)**



**Animal Cells (Salamander Liver Tissue)**



**Animal Cells (Bird Blood)**



**Animal Cells (Bird Blood)**

