

Cell Taxonomy: How are organisms grouped?

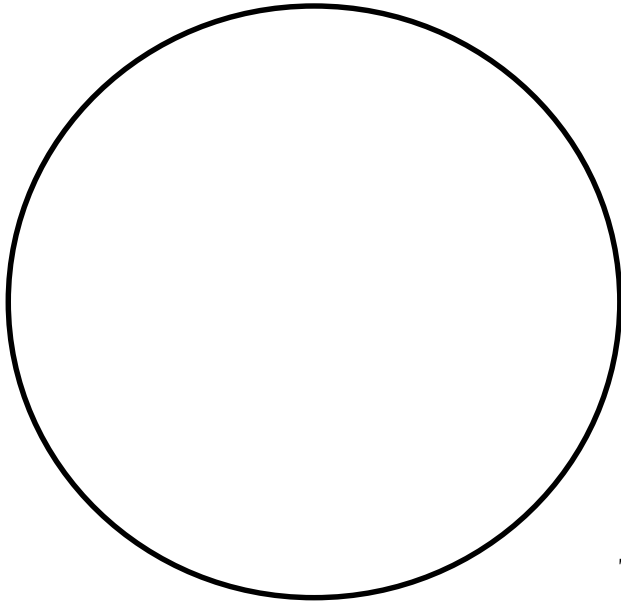
Microscopes allow us to look closely at cells. There are many different types of organisms: three Domains comprised of Bacteria, Eukarya, and Archeae; and 4 Kingdoms of Eukarya: Plantae, Animalia, Fungi, and Protista. Each of the Domains has characteristic cell types, which you may have learned about in Biology class. Today, we are going to look at cells from Bacteria, Protists, Fungi, Plants, and Animals. Based on what you've learned about taxonomy and how scientists group things, see if you can figure out the differences (and likenesses) in these cells from different types of organisms.

What we will do today:

1. Your instructor will give your group a slide labeled bacteria, protist, fungus, animal, or plant. Each group will have a different sample. Your job is to examine the tissue, draw and label (if possible) what you see and take detailed notes. Pay especial attention to the characteristics of the cells that you see.
2. Once you have done this for one slide, look at another slide of a different type of organism.
3. Try to find the characteristics of the cells of each type of organism that make it different from the other types of organisms. What do you see that is different? What do you see that is the same?
4. We will share what we find with each other, so be sure to take good notes.

I. What type of organism is this? Write the type of organism on the slide here: _____

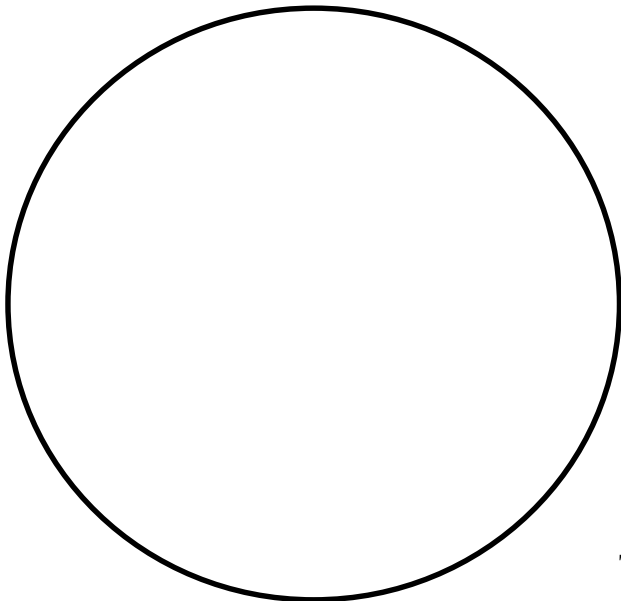
1. Examine the slide of tissue or cells given to you by your instructor. Draw what you see at 100x and 400x. Try to label at least three structures and describe what you see in the space beside your drawings.



Notes:

Total Magnification: _____x

Notes:

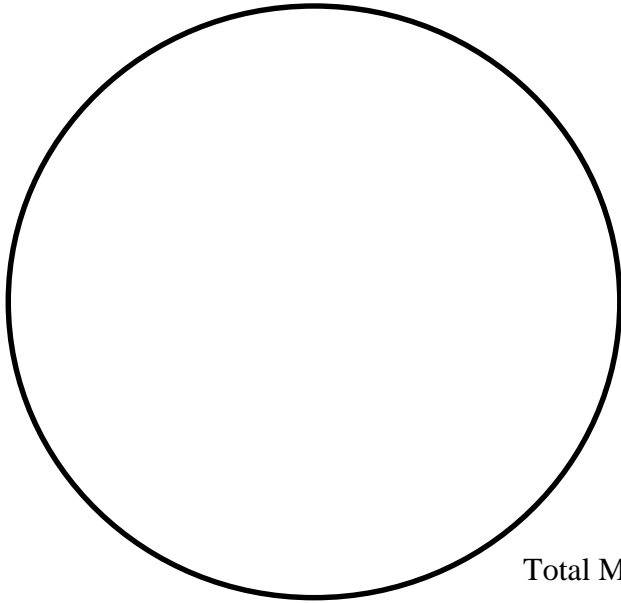


Total Magnification: _____x

2. What do you think is different about this organism's cells? Circle the parts of your notes or drawing (above) that helped you figure it out.

II. What type of organism is this? Write the type of organism on the slide here: _____

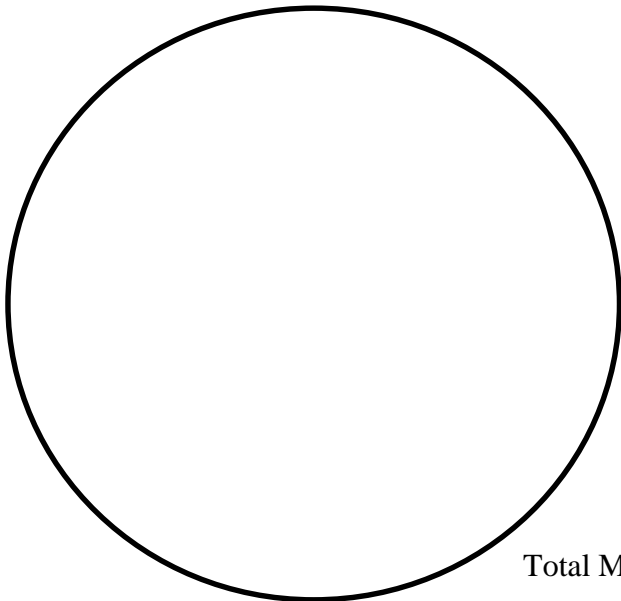
1. Examine another slide of tissue or cells given to you by your instructor. Draw what you see at 100x and 400x. Try to label at least three structures and describe what you see in the space beside your drawings.



Notes:

Total Magnification: _____x

Notes:



Total Magnification: _____x

1. **What do you think is different about this organism's cells? Circle the parts of your notes or drawing (above) that helped you figure it out.**

III. Characteristics of cells:

1. What did you notice about the bacteria cells that was different from the others?
2. What did you notice about the protist cells that was different from the others?
3. What did you notice about the fungus cells that was different from the others?
4. What did you notice about the animal cells that was different from the others?
5. What did you notice about the plant cells that was different from the others?
6. What similarities did you see in the different types of cells?