Protozoan Lab

**Purpose:** You figure it out.

**Materials:** Living cultures of: Paramecium, Ameoba, and Euglena, pond water samples, congo red yeast suspension, methyl cellulose, microscope, microscope slide, slide cover slip, and medicine dropper.

**Procedures:**

**Part 1**
1. Obtain a clean, dry microscope slide.
2. Draw a ring of methyl cellulose on the microscope slide.
3. Place a drop of Paramecium culture in the center of the ring.
4. Add a drop of congo red, yeast suspension.
5. Cover with cover slip and observe **immediately**, under the low then high power objective of the microscope.
6. Draw and label the Paramecium at either 200x - 400x magnification. Label the following: cilia, nucleus, pellicle, gullet, food vacuole, cytoplasm and contractile vacuole.
7. Answer questions 1-4.

**Part 2**
1. Give your instructor a clean dry microscope slide, **bring a clean dry cover slip with you.**
2. Your instructor will give you an Ameoba.
3. Examine the Ameoba on low then high power.
4. Draw ameoba at either 200x-400x magnifications. Label the following: pseudopod, cytoplasm, and contractile vacuole.
5. **Answer questions 5 and 6.*** ***If you can't find the Ameoba ask your neighbors if you could look at theirs.***

**Part 3**
1. Make a wet mount of Euglena on a clean dry microscope slide.
2. Examine the Euglena on low then high power.
3. Draw the Euglena on high power. Label the following: eye spot, flagella, cytoplasm, and chloroplasts.
4. **Answer question 7.**

**Part 4**
1. Make a wet mount of a drop of pond water.
   - *make sure to take your sample from the bottom of the jar and try to snag a small piece of straw.*
2. Examine under low then high power.
3. Using the diagram provided on the next page, identify as many organisms as you can.
4. **Answer questions 8 - 9.**

**Data and Results**
1. What takes place when a Paramecium meets or bumps into a yeast cell?
2. What part of the Paramecium acts first when it meets a yeast cell?
3. Describe any color change that takes place in the food vacuole containing yeast. What does it mean?
4. What does the Paramecium do when it encounters a solid object.
5. Describe how the Ameoba moves.
6. What structure does the Ameoba uses for movement.
7. What structures are present in Euglena that are not present in the other two organisms.
8. What is the most common type of organisms in your sample.

**Conclusion: List several differences between protozoans and bacteria.**

Before you leave lab make sure you clean up and dry and replace your microscope slides and cover slips.
Sample invertebrates found in pond water

- Vorticella
- Paramecium
- Roundworm
- Cyclops
- Fragilaria
- Halteria
- Euglena
- Stylonychia
- Daphnia
- Stentor
- Volvox
- Chlamydomonas
- Actinophrys
- Colpidium
- Phacus
- Coleps
- Gonyaulax
- Rotifer
- Synura