Protist Observation Lab

Background:
- Members of Kingdom Protista are ______. (eukaryotic/prokaryotic)
- Protists are ______. (unicellular/multicellular/both)
- Most protists live in ______ environments. (water/land)
- Animal-like protists are ______. (heterotrophic/autotrophic)
- The three ways animal-like protists move are _____, _____, and _____.
- Plant-like protists are ______. (heterotrophic/autotrophic)
- Fungus-like protists are ______. (heterotrophic/autotrophic)

Purpose:
The purpose of this lab is to observe the structure and movement of a variety of living protists.

Hypothesis: None for this lab.

Materials: “See lab handout”
- Microscope, slide, & coverslip
- Protist samples
- Colored pencils
- Biology textbook

Procedure: “See lab handout”
1. Prepare a wet-mount slide of each protist as demonstrated.
2. Observe each protist under low, medium, and high power. Carefully draw each protist under high power and label the required internal structures.
3. Observe and describe how each protist moves (not all of them do.)
4. Rinse off and return your slide and coverslip, return microscope.

Data: You can observe/draw the protists in any order.

AMOEBA
1. Draw/color the amoeba, then use the internet to label the following parts:
   - Pseudopods, nucleus, cell membrane, cytoplasm, & food vacuoles
2. Describe the amoeba’s movement.

PARAMECIUM
1. Draw/color the paramecium, use pg. 543 in your book to label the following parts:
   - Cilia, nucleus, cell membrane, cytoplasm, food vacuoles, contractile vacuole
2. Describe how it moves.
EUGLENA
1. Draw/color the euglena, use page 546 to label the following parts:
   • Flagella, pellicle, nucleus, chloroplasts, eyespot
2. Describe how it moves.

STENTOR
1. Draw/color the stentor.
2. Describe how it moves.

VOLVOX: do not use a coverslip!
1. Draw/color the volvox.
2. Describe how it moves.

SPIROSTOMUM
1. Draw/color the spirstomum.
2. Describe how it moves.

Analysis:
1. Compare and contrast the three basic means of movement used by animal-like protists.
2. What is the function of chloroplasts in algae?
3. Compare and contrast the way animal-like protists obtain energy with how plant-like protists obtain energy.
4. What is purpose of the contractile vacuole in freshwater protozoans?
5. What was your favorite protist to observe? Why?

Conclusion: (Include three of the four parts since there is no hypothesis.)