

Name \_\_\_\_\_

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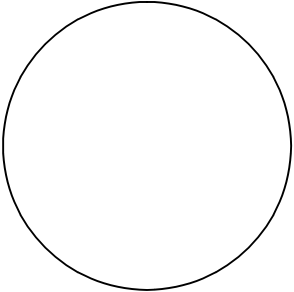
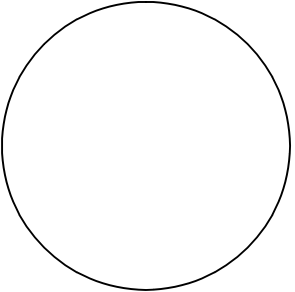
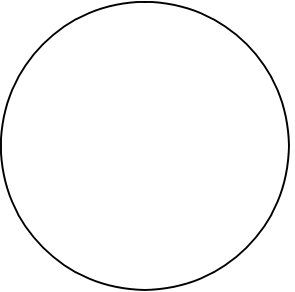
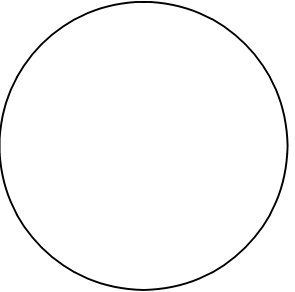
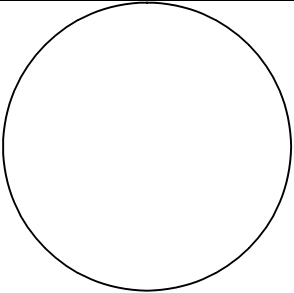
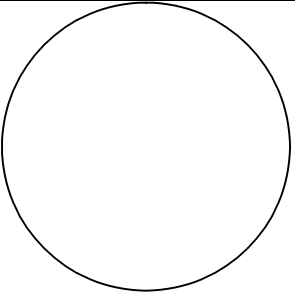
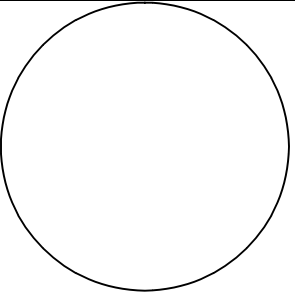
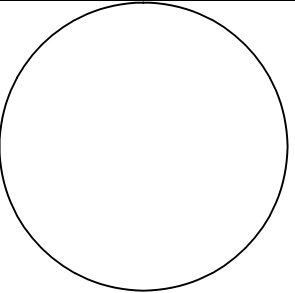
### Hay Infusion Lab Handout

Today we're going to closely examine our pond water sample for the presence of protists, especially protozoa. These are interesting micro-organisms that are easy to study under the microscope due to their relatively large size. Most are motile through means of cilia, flagella, or pseudopodia.

**Note: Wash your hands after you have completed the lab due to the pond water bacteria.**

#### Procedure

1. Use a pipette to obtain a sample from the **top** of the pond water.
2. Place a drop of liquid specimen on a microscope slide.
3. Focus starting at 4x and magnify up to 10x.
4. Use the dichotomous key and diagrams provided to help identify organisms.
5. Note the means of motility (cilia, flagella, pseudopodia).
6. Sketch any organisms you identify.
7. Repeat all steps using a sample from the **bottom** of the pond water.

		Drawings from Pond water								
Top										
	Name	Motility	Name	Motility	Name	Motility	Name	Motility		
Bottom										
	Name	Motility	Name	Motility	Name	Motility	Name	Motility		

Summary Questions

1. Were you surprised with the amount of microorganisms you found in the pond water?

Explain. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. In our sample, what do the protists feed on? \_\_\_\_\_

1. List the protists you found that are protozoa. \_\_\_\_\_

\_\_\_\_\_

4. What makes a protist more animal-like? \_\_\_\_\_

\_\_\_\_\_

5. List the protists you found that are plant-like. \_\_\_\_\_

\_\_\_\_\_

6. What makes a protist more plant-like? \_\_\_\_\_

\_\_\_\_\_

7. Now that you know the importance of various protists, explain what you think would happen if they did not exist. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Dichotomous key for Protists

1	Contains green pigment Does not contain green pigment	2 3
2	Lives in a colony Does not live in a colony	4 5
3	Has cilia or flagella Does not have cilia or flagella	6 Amoeba
4	Colony is long and filamentous Colony is spherical	8 Volvox
5	Has a flagellum Does not have a flagellum	7 Gleocapsa
6	Has cilia Has flagella	9 10
7	The flagellum is at one end The flagellum wraps around it's equator	Euglena Ceratium
8	Filament of cells is tube-like Filament of cells is like a string of beads	11 12
9	Cilia cover the entire outer surface Cilia surround only an opening at one end	13 14
10	Pear-shaped with a posterior nucleus Slipper shaped with a central nucleus	Chamydomonas Chilomonas
11	Has spiraled strips of chloplasts Does not have chloroplasts in spirals	Spirogyra Oscillatoria
12	All bead-like cells are the same size Some bead-like cells are longer than others	Nostoc Anabaena
13	Cell has a star-shaped vacuole at one end Cell does not have a star-shaped vacuole	Paramecium Blepharisma
14	Has a spiraled, stem-like structure Does not have a spiraled stem-like structure	Vorticella Stentor

