Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Protista Identification Lab

The Kingdom Protista included unicellular organisms that contain a nucleus, along with some forms of multi-cellular algae. Although all of the protists have a few common characteristics, they are probably the most diverse kingdom and have many differences among one another.

Regarding how they obtain energy, some protists act like plants, some like fungi, and some like animals. Plant-like protists obtain energy from the sun, fungi-like protists obtain energy by absorbing it from other organisms, and animal-like protists obtain energy by eating other organisms. Protists also show a great variety in the manner in which they move. Some protists use a large **flagella** (tail) to whip themselves around. Others use many small hair-like **cilia** to beat around. Finally, some protists can even extend large **pseudopods**, which are jelly-like arms, from themselves and follow it to the next location.

In this laboratory, you will **observe** different protists under the microscope, **diagram** them, use a dichotomous key to **identify** which protist it is, note their **movement** and finally describe their similarities and differences.

Procedure –

1. Move from station to station and draw the protist you see. Make sure to observe for a few minutes to analyze the behavior and movement of the protist. Also, note the color or any unique structures.

2. Draw the protist. You can use colored pencils to draw the details that you see. Identify the cell membrane, nucleus, and if possible, the method of movement (cilia, flagella, pseudopod).

3. After you observed the protist, use the dichotomous key to figure out which protist you just observed.

4. Next, get the teachers initial to ensure that you saw the correct protist and identified it correctly.

5. Repeat steps 1-4 with the rest of the stations.

**Initials**

**Initials**

Protist #1 - Protist #2 –

Protist #3 - Protist #4 –

**Initials**

**Initials**

**Initials**

Protist #5 -

**Analysis** -

1. Create your own comparison chart to identify similarities and differences between the different protists you observed today. The first two characteristics are listed for you. Create 3 more on your own.

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| --- | --- | --- | --- | --- | --- |
| Protist Name | 1- Nucleus present | 2- Method of Movement | 3 | 4 | 5 |
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|  |  |  |  |  |  |

2. What are 2 similarities between all of the protists you observed today?

3. What are two unique differences between the protists you observed today?

4. Do you think the protists should be grouped together as a kingdom or split up into 3 different kingdoms? Defend your answer.