

Objectives: to determine what we already know about bacteria; to observe bacteria using the microscope.

Part One - Background

In the box below, write three statements or facts of what you know about bacteria.

Part Two - Research

Today we will be observing up to three different strands of bacteria. Scientists classify bacteria on several characteristics: _____.

All bacteria have the following in common:

- they are all _____ and _____
- they all have one of three _____
- Most move by: _____ (if they don't have this, they don't move on their own!)

In early classification systems, scientists classified these bacteria as plants. See if you can determine why they thought these organisms were plants.

Part Three - Observations

Procedure

1. Create a wet mount slide for each of the bacteria. Only observe one genus at a time. Be sure you remember which you have!
2. Focus the specimen as needed. You have permission to go to high power. Use whichever power is best for observing!
3. Draw a detailed picture of the bacteria. You should use color to help you diagram what you see. **Your diagrams must be checked by Mr. Ower before you obtain a new specimen.** Remember, speed is not important. Take your time and draw the cells as carefully as possible.
4. When you have completed all specimens, or when time has run out, please:
 - a. Clean up your area (wash/dry slide, throw away cover slip)
 - b. Shut down your microscope correctly (do not put the cover on until it has been checked)

Name _____

Period _____

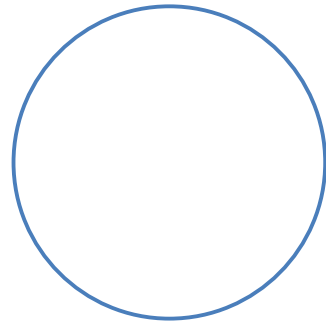
Date _____

Specimen One

Organism name: _____

Magnification: _____

Observations: _____

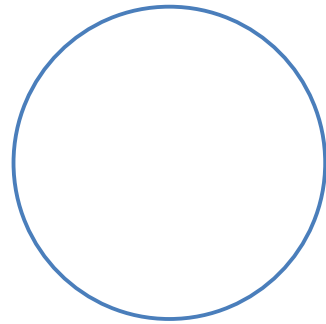


Specimen Two

Organism name: _____

Magnification: _____

Observations: _____

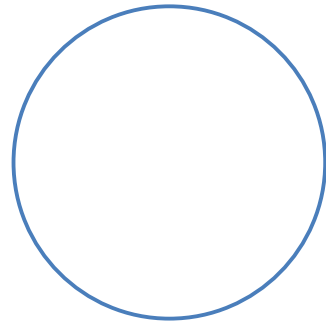


Specimen Three

Organism name: _____

Magnification: _____

Observations: _____



Part Four - Analysis

1. Each of these organisms are bacteria. What observations did you make that let you know these organisms are bacteria? _____

2. These organisms are called cyanobacteria, or blue-green bacteria. Use the Life Science book (pg. 104-106) to explain how these bacteria are similar to and different from plants. _____
