

Bacteria Lab

Purpose: To identify, draw and classify different types of bacteria.

Materials: prepared slides of bacteria, compound light microscope.

Background Information: Use your textbook.

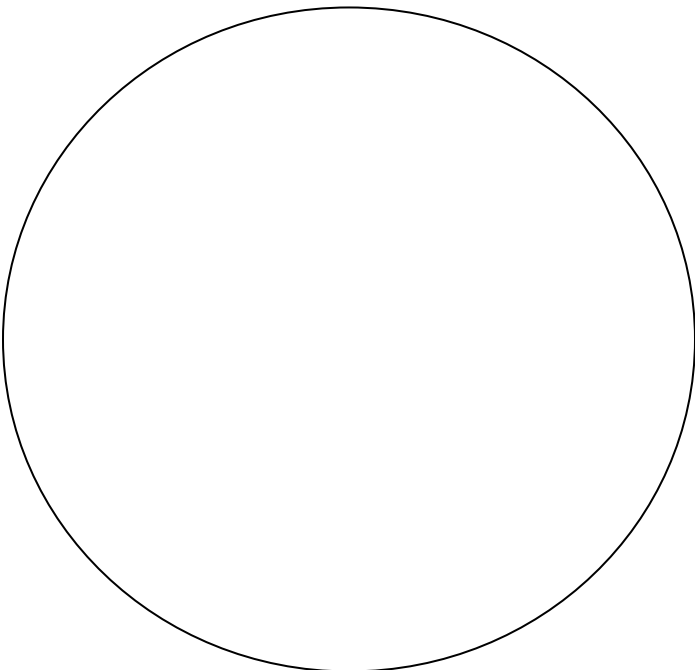
1. Describe the field of microbiology. (p. 214)
2. What are the characteristics of bacteria? (p. 215)

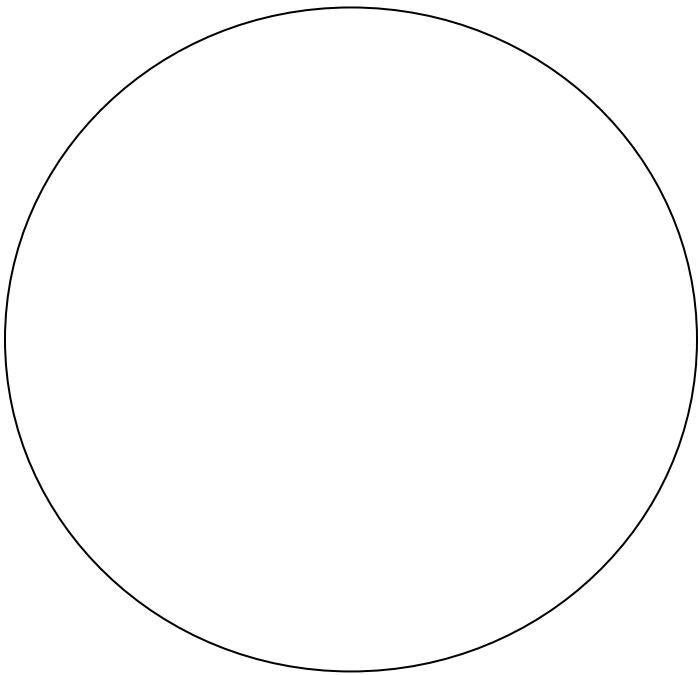
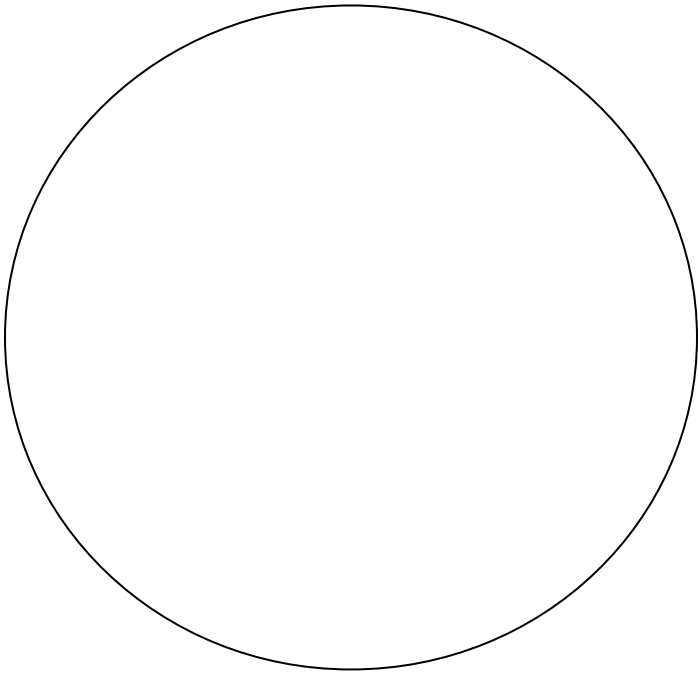
Procedure:

All work can be done on blank white paper. Use a pencil and proper biological drawings.

Part A: Three basic shapes of bacteria - use your text reference p. 215.

1. View the prepared slides of bacteria under high power.
 2. Identify and draw each bacteria type - cocci, bacilli, spirilla
 3. Under your drawings, label each bacteria type and list the identifying characteristics (e.g. round, rod, spiral shaped) of each type of bacteria.
- You should have 3 scientific drawings. Complete drawings at high power for your microscope.
 - Don't forget the 'requirements' for a scientific drawing: field of view, title, magnification, etc...





Part B: Classifying bacteria

1. Use the dichotomous key (on the last page) to identify the bacteria provided.

Use the dichotomous key to classify each of the following Bacteria



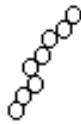






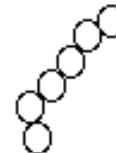


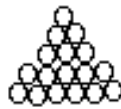












1. What would it mean if a person had a strep infection?
2. What would it mean if a person had a staph infection?

Classifying Bacteria - Dichotomous Key

If the general shape of a bacterium is round, go to section I (skip II and III)

If the general shape of a bacterium is rod, go to section II (skip I and III)

If the general shape of a bacterium is spiral, go to section III (skip I and II)

Section I

If in pairs, go to a or a' only

If in chains, go to b or b' only

If in clumps, go to C only

a - without a heavy capsule (cover) - **Diplococcus meningitidis** (spinal meningitis)

a' - with a heavy capsule - **Diplococcus pneumoniae** (Pneumonia)

b - large in size - **Streptococcus pyogenes** (Tonsillitis)

b' - small in size - **Streptococcus lactis** (Buttermilk)

c - **Staphylococcus aureus** (boils)

Section II

If in chains, go to d only

If in pairs, go to e only

If single, go to f or f' or f''

d - **Bacillus anthracis** (Anthrax)

e - **Bacillus lactis** (Sauerkraut)

f - with flagella (hairs) - **Bacillus typhosa** (Typhoid fever)

f' - with a bulge (spore) in middle - **Bacillus botulinum** (Botulism poisoning)

f'' - with a bulge (spore) at end - **Bacillus tetani** (Tetanus)

Section III

Treponema pallidum (Syphilis)

