

Note: this lab is completed online. Visit the following address and click on “Lab 2”

<http://labs.7bscience.com/unit-9.html>

Purpose: In this lab you will explore the three basic shapes of bacteria. Although there are more than 3 shapes of bacteria, we will observe the 3 most common. We will do this by exploring bacteria in yogurt.

Part One – Background

Fill in the missing blanks using the information on the web site.

Bacteria have three basic shapes.

- _____, or rod-shaped
- _____, or sphere-shaped
- _____, or spiral shaped

Bacteria can also arrange themselves into colonies. Each arrangement is given a special name.

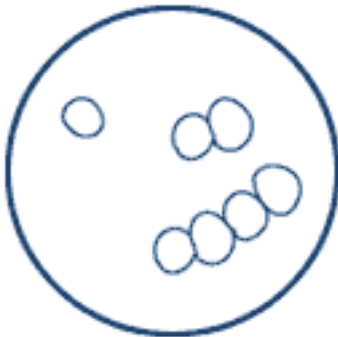
- (prefix) Diplo-, meaning _____
ex: *diplococcus*, a pair of sphere-shaped bacteria
- (prefix) Strepto-, meaning _____
ex: *streptobacilli*, a chain of rod-shaped bacteria
- Tetrad, meaning _____
note: this is not a prefix. You would just say "tetrad cocci bacteria"
- (prefix) Staphylo-, meaning random
ex: *staphylococcus*, a random arrangement of sphere-shaped bacteria

Scientists and doctors can identify bacteria by their shape and arrangement. For example, if you've ever had strep throat, the doctor probably took a sample from your mouth or throat. They are looking for bacteria that are spherical and in chains. The technical name of this is streptococcus. Hence the name: strep throat.

Go on to the next page of the worksheet.

Part Two - Practice Identifying

For each picture below, indicate the bacterial shape.

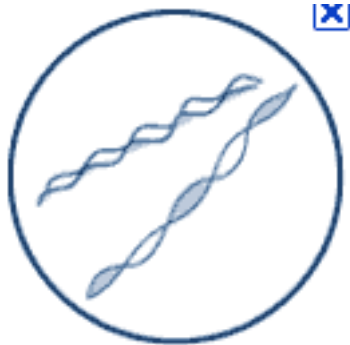


Picture 1:

Which shape does this picture show?

- a. Bacilli
- b. Cocci
- c. Spirilla

Answer: _____



Picture 2:

Which shape does this picture show?

- a. Bacilli
- b. Cocci
- c. Spirilla

Answer: _____

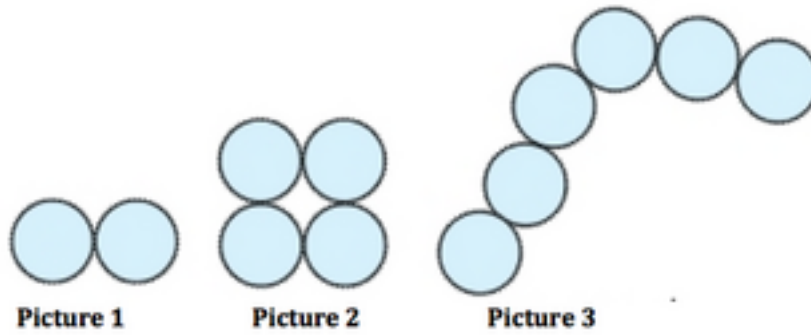


Picture 3:

Which shape does this picture show?

- a. Bacilli
- b. Cocci
- c. Spirilla

Answer: _____



Picture 1:

Which arrangement does this show?

- a. Diplo-
- b. Strepto-
- c. Tetrad

Answer: _____

Picture 2:

Which arrangement does this show?

- a. Diplo-
- b. Strepto-
- c. Tetrad

Answer: _____

Picture 3:

Which arrangement does this show?

- a. Diplo-
- b. Strepto-
- c. Tetrad

Answer: _____

Part Three - Observing the Shapes

On the website is a picture of bacteria found in yogurt. Draw three different bacteria from the picture and indicate their shape. For example, if you find a chain of bacilli bacteria, you would draw them and say they are "streptobacilli."

Drawing 1:

Drawing 2:

Drawing 3:

Shape:

Shape:

Shape:

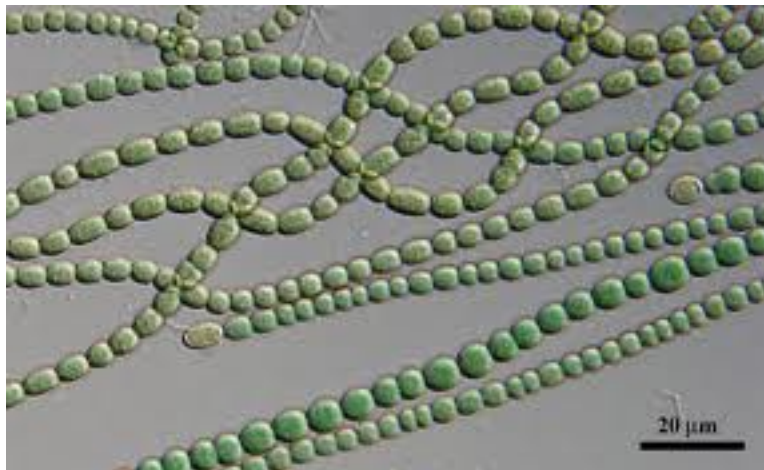
Part Four - Application

In lab 1 from unit 9 you drew pictures of three cyanobacteria. Look at your pictures of merismopedia and anabaena. What are their shapes (bacilli, cocci, or spirilla)? What are their arrangements (diplo-, strepto-, or tetrad)? What is their shape-arrangement name (ex: diplococcus, streptobacillus, etc.) *Note: to make the shape-arrangement name, just combine the prefix, with the shape.* For reference the pictures have been included below.

**Merismopedia:**

Shape: _____

Arrangement: _____

Shape-arrangement name:
_____**Anabaena**

Shape: _____

Arrangement: _____

Shape-arrangement name:
