

Name

Period

Date

Unit
1

Handout

Lesson 7: Observing Bacteria

Purpose: To observing living species of bacteria and to apply our knowledge of bacteria to answer questions about these species

Guiding Questions: What are bacteria?
How are bacteria classified?

General Instructions: Prepare and observe four wet mount slides of the four different bacteria at high magnification. Make detailed drawings of each and then answer the questions that follow. No labels are necessary.

Take pictures of your scientific drawings and place them on this page. You will have 4 drawings in total! Answer questions on the next page.

Reflecting Questions. Answer the following questions below.

1. What shape is the **Anabaena** bacteria?

English Circle Latin Coccus

2. What arrangement is the **Anabaena** bacteria?

English Chain Latin Strepto

3. Combine the Latin shape and arrangement names to describe the appearance of the **Anabaena** bacteria. Streptococcus or Streptococci

4. What shape is the **Oscillatoria** bacteria?

English _____ Latin _____

5. What arrangement is the **Oscillatoria** bacteria?

English _____ Latin _____

} Exception:
} Filament

6. Combine the Latin shape and arrangement names to describe the appearance of the **Oscillatoria** bacteria. Filament

7. What shape is the **Merismopedia** bacteria?

English Circle Latin Coccus

8. What arrangement is the **Merismopedia** bacteria?

English Groups of four Latin Tetra

9. Combine the Latin shape and arrangement names to describe the appearance of the **Merismopedia** bacteria. Tetracoccus (-i) or Tetrad

10. What shape is the **Spirulina** bacteria?

English _____ Latin _____

11. What arrangement is the **Spirulina** bacteria?

English _____ Latin _____

} Exception:
} Spirila

12. Combine the Latin shape and arrangement names to describe the appearance of the **Spirulina** bacteria. Spirila or Spirochete

(Continue to next page!)

13. What color were the bacteria? Green

14. What does that color likely tell you about the bacteria you observed? Connect this to other green microorganisms we've seen.

These bacteria are autotrophs. The bacteria are green because they likely contain chlorophyll. We have observed this in other microorganisms such as spirogyra, volvox, and euglena. Chlorophyll carries out photosynthesis, a process that creates food for the organisms. Organisms that produce their own food are autotrophs.

15. What niche do these bacteria have? (What is their role within an ecosystem)?

These bacteria are producers. These bacteria are autotrophs that use photosynthesis to create their own food. Another product of photosynthesis is oxygen. Producers create oxygen and serve as a source of food for other organisms.

16. Hopefully you observed the Oscillatoria moving. What benefit do you think the movement gives to the Oscillatoria?

The movement aids in photosynthesis. These bacteria use photosynthesis to create their own food. Light is required for photosynthesis. By moving, the bacteria increase their chance of being exposed to light.