Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HD# 11

**WebQuest: Expedition Bacteria**

Welcome to the webquest! You have this class period to complete as much of the webquest as possible. Start by going to the class website [www.alphascience7.weebly.com](http://www.alphascience7.weebly.com) to access the links that are listed throughout this worksheet. Use each of the links to find the information you need to complete the quest. Hand it in when you have finished.

**Website 1: Microbe World** (http://archives.microbeworld.org/microbes/virus\_bacterium.aspx)

As you read through the webpage, complete the table below comparing and contrasting bacteria and viruses:

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Bacteria** | **Virus** |
| Larger or smaller? |  |  |
| More or less complex? |  |  |
| Cell membrane and/or cell wall?  If not, then what kind of coating do they have? |  |  |
| DNA? |  |  |
| Reproduce independently (on their own)? |  |  |
| Cause disease? |  |  |
| Sketch a diagram of a bacteria and a virus in the corresponding columns on the right. |  |  |

• What is a bacteriophage?

**B. Website #2: Size of Microbes:** http://micro.magnet.fsu.edu/cells/index.html

Look at the “Relative Sizes and Detection Devices” image at the top of the page. Answer the following questions:

1b. Can bacteria or viruses be seen with the naked eye?

2b. Can bacteria be viewed with a light microscope?

3b. Which kind of microscope is needed to view a virus?

**C. Website #3: More Bacteria!** http://archives.microbeworld.org/microbes/bacteria/

1c. What kinds of useful jobs do bacteria perform?

2c. What does the word “prokaryote” mean?

3c. Which two life forms are classified as prokaryotes?

4c. Why are cyanobacteria important?

Still using the third website: On the left toolbar, under the heading “Bacteria”, click on “What They Look Like”

• What are the three main bacterial shapes? Draw examples for each shape (look under the heading “Shape” for examples)

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ example:
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ example:
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ example:

• Are bacteria unicellular or multicellular?

• What is the size of the largest bacterium? Size of the smallest bacterium? (look under“Size”)

On the left toolbar, click on “Where They’re Found”

• Where are some common places bacteria are found?

• What is the name of the type of bacteria that can live in extreme environments?

• How many bacteria are found on one square centimeter of your skin?

Congrats! You’ve completed the bacteria webquest! Wahoo! Just imagine how many bacteria you touched just using this shared computer!!! ☺ Take some time to explore the games on the class website. Give a description and rating for each game you try in the space below (extra credit) Have fun and keep learning!