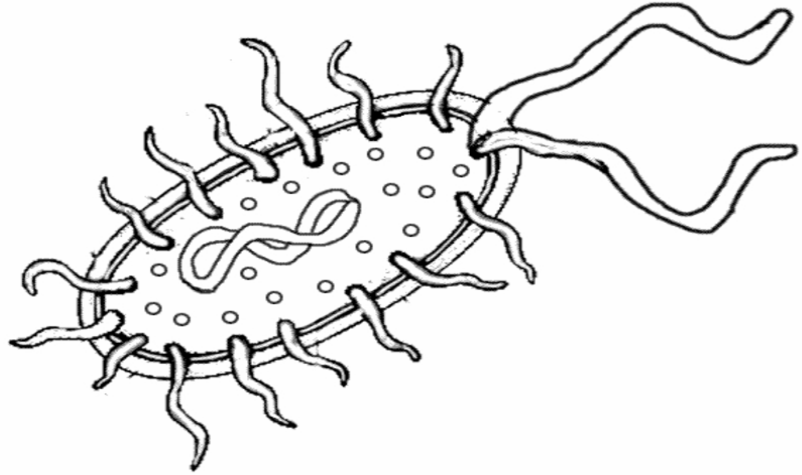


Name _____ Period _____ Date _____

Prokaryote Coloring and Review

Bacteria have a very simple cell design. Most of them have a thick outer covering called the cell wall. On the picture, color the cell wall purple (it's the outermost layer). Just within the cell wall is the cell membrane. Color the cell membrane pink. Along the surface of the bacteria cell, you might encounter structures called pilus, whose job is to help the bacteria stick to surfaces. Color all the pilus light green. Bacteria might also need to move around in their environment, so they can have structures called flagella, which resemble tails. Find the two flagella pictured and color them dark green. The watery interior of the cell is called cytoplasm, and it has the texture of jello. Color the cytoplasm light blue. Sprinkled throughout the cell are small roundish structures called ribosomes. Ribosomes make proteins for the cell. Color all of the ribosomes red. Every prokaryote cell has DNA floating within the cytoplasm, which usually looks like a twisted strand of spaghetti. DNA contains the instructions for the cell, basically it is the control center. Find the DNA and color it yellow.



Read 18.4, 18.5 and 18.6. Then answer the following questions.

1. Single celled organisms that lack membrane-bound organelles are called _____ because they lack a true nucleus.
2. _____ are found in extremely harsh environments.
3. What are the three shapes that bacteria are classified?

4. What shape does Staphylococci have? _____
5. Why are bacteria and archaea classified into different domains?

6. The single chromosome mass found in bacteria is called a _____.
7. Small extra loops of DNA found in a bacterium are called _____.
8. Prokaryotes will take up foreign DNA. How is this characteristic used in genetic engineering?

9. Scientists estimate that only 1 percent of prokaryotes can be grown in the lab. What does this suggest about our knowledge of bacteria and archaea?

10. Bacteria that require oxygen to live are called _____.
11. Bacteria that would die in the presence of oxygen are called _____.
12. Bacteria that can live with or without oxygen are called _____.