

**Name** \_\_\_\_\_

*Directions: Complete the study guide – study, think about what you are studying, do well on the test. This is due on the day of the test.*

What are the three domains? What separates them?

Archaea & Bacteria (Prokarya - DNA is not in a nucleus.) Eukarya – DNA IS in a nucleus.

1. What two major parts are a virus is composed of? DNA/RNA & a Protein Coat
2. An organism within which a virus “lives” is called a(an) Host.
3. What does a virus inject into a cell in order to make it start producing more viruses?  
DNA/RNA
4. A virus that infects bacteria is called a (an) Bacteriophage.
5. What is an organism that can make its own food called? Autotroph.
6. The structure that allows a bacterium to stick to different surfaces is Pili.
7. Today, most classification systems place single celled organisms without a nucleus that live in normal conditions in the Domain Bacteria.
8. Chemicals produced by bacteria that kill or weaken disease-causing microorganisms are called Antibiotics.
9. Who created the Polio vaccine? Dr. Jonas Salk.
10. What is bacteria used for? Make a list Make food, make antibiotics, aid in digestion, clean up the environment (decomposers).
11. Some bacteria have structures called Flagella that help them move in watery environments.
12. Organisms that break down dead organisms into simpler substances are called Decomposers.
13. Bacteria that can make their own food are called Autotrophs.
14. Name two examples where bacteria have a mutualistic relationship
  1. In human intestines – we give them a place to live, they make vitamins for us.
  2. In Cow Intestines – they have a place to live & help the cow break down complex carbohydrates.
15. Viruses can only reproduce within a(an) Living Cell/Host.
16. Name extreme places Archaea bacteria can live. Geysers, Hydrothermal vents, Antarctica.
- 16a. Some bacteria can reproduce every 20 minutes. How many bacteria would exist after 2 hours of reproduction? 64 On a separate sheet of paper, graph your results with time on the X axis and bacteria number on the Y.

17. How does a virus reproduce? I am looking for the name of this cycle and a sentence explaining all three of the steps. And what happens after the third step. (This is a 5 point question on the test!!!)

\_\_Lytic Cycle – Virus attaches to a living cell, injects its DNA/RNA into the cell. Cell stops producing proteins & begins producing viral particles. Viral particles accumulate & cause the cell to burst. Viral particles go infect other cells.\_\_

18. Less than what percent of bacteria are harmful to humans? \_\_<1%\_\_

19. What is the name of the process by which bacteria reproduce? (Binary) Fission\_\_

20. Is the process by which bacteria reproduce sexual or asexual? \_\_Asexual\_\_

21. Is AIDS an example of a virus or bacteria? \_\_Virus\_\_ Common cold? \_\_Virus\_\_

22. What labels harmful bacteria and viruses for destruction? \_\_Antibodies\_\_

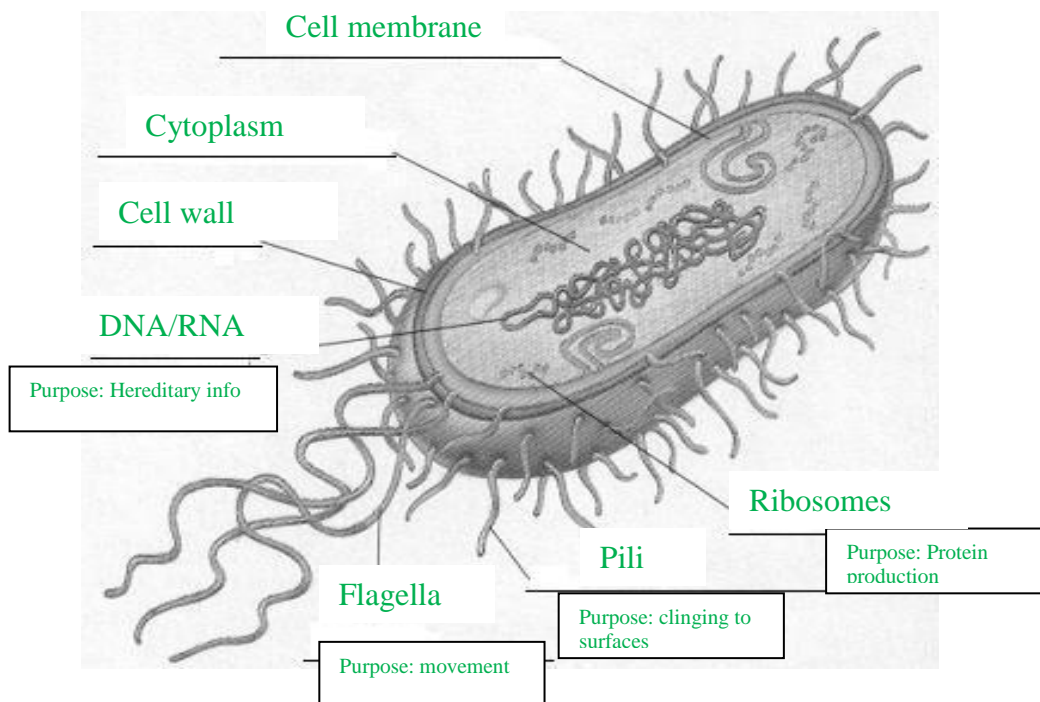
23. Smallpox has been eradicated. What does that mean? You don't have to worry about contracting it. Remember, we have some of it at Fort Detrick, MD.

24. Describe a mutualistic relationship. \_\_Two organisms live together & both benefit.\_\_

25. What are some of the uses of bacteria? \_\_Food, insulin production, environmental cleanup\_\_

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Fill in the blanks of the bacterial cell diagram (including the purposes...not porpoises)



Draw a staphylococcus bacterium:  
bar shape in clump

Sketch Lactobacillus:  
long bar shapes

Draw a Streptococcus bacterium:  
spherical in chain