

**Resources:** Use your textbook, pages 56-65, and your notes, packet 8.2, to help you answer the following questions.

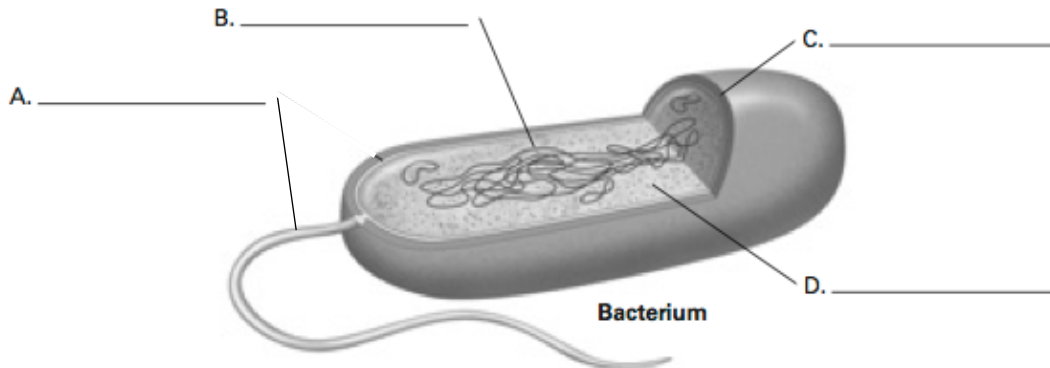
**Short Answer.** Answer the following questions. Use complete sentences and include enough detail to support your reasoning.

1. How are bacterial cells different from the cells of other types of organisms? (List at least 3 differences!). \_\_\_\_\_  
\_\_\_\_\_
2. Name the two kingdoms of bacteria. \_\_\_\_\_  
Why are they classified differently? \_\_\_\_\_  
\_\_\_\_\_
3. List two specific ways bacteria are helpful to people. (Ex: bacteria make a toxin which can be used to treat people. Do not write "medicine" or "cleaning.")  
\_\_\_\_\_  
\_\_\_\_\_

**Vocabulary.** Match each term with its definition.

- |                               |   |
|-------------------------------|---|
| _____ 4. endospore            | a. where two parents combine their genetic material to produce a new organism that differs from both parents. |
| _____ 5. binary fission       | b. where one bacterium divides to form two identical bacteria cells   |
| _____ 6. decomposer           | c. a small, thick-walled resting cell that forms inside a bacterial cell                                      |
| _____ 7. sexual reproduction  | d. organism that breaks down the large chemicals in dead organisms into small chemicals                       |
| _____ 8. asexual reproduction | e. where one bacterium transfers genetic material into another bacterial cell                                 |
| _____ 9. flagellum            | f. produces protein for the cell  |
| _____ 10. conjugation         | g. whiplike structure that helps a cell to move   |
| _____ 12. ribosome            | h. where one parent reproduces offspring identical to that parent   |

**Diagrams.** Label the following diagram with the correct part.



**Concept Table.** Fill in the missing table with the correct information. For A, C and E name the type of bacteria that best matches the description below. For B, D, and F, write one or two characteristics of that bacterium.

Archaea			Bacteria		
a.	Halophiles	c.	Producers	e.	Parasites
produce methane; live in mud swamps and in cow or termite stomachs	b.	live in extreme heat or cold such as deep-sea heat vents, hot springs, or deep in the ice	d.	break down chemicals in dead or decaying organisms	f.

According to this table and the lecture, archaea are classified by their \_\_\_\_\_ and bacteria are classified by their \_\_\_\_\_.

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