Key Concept

1. What is the key concept for section 3-1? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Main Idea: Early \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ led to the development of the cell theory.

Matching: Match each scientist in the table with the statement listed below that describes what he did to help develop the cell theory. ADD one additional piece of information from your text!

a. concluded that animals and, in fact, all living things are made of cells.

b. was the first to identify cells and name them.

c. proposed that all cells come from other cells.

d. concluded that plants are made of cells.

e. observed live cells and observed greater detail.

|  |  |
| --- | --- |
| Scientist | Letter of Statement that Completes the Sentence |
| 1. Hooke |  |
| 2. Leeunwenhoek |  |
| 3. Schleiden |  |
| 4. Schwann |  |
| 5. Virchow |  |

Circle the word that best completes the statement about cell theory.

6. The cell theory states that:

i. All organisms are made of organelles / cells.

ii. All existing cells are produced by other living / dead cells.

iii. The atom / cell is the most basic unit of life.

7. Cell theory is one of the great unifying theories of biology / chemistry.

Main idea: Prokaryotic cells \_\_\_\_\_\_\_\_\_\_\_a nucleus and most internal structures of eukaryotic cells.

8. For each of the following cell characteristics, place a check mark in the appropriate box or boxes to indicate whether it is a characteristic of eukaryotic cells, prokaryotic cells***, or both.***

|  |  |  |
| --- | --- | --- |
| Characteristic | Eukaryotic cells | Prokaryotic cells |
| Surrounded by a cell membrane |  |  |
| Contains cytoplasm |  |  |
| Contains a nucleus |  |  |
| Contains membrane-bound organelles |  |  |
| Tends to be microscopic in size |  |  |
| Either single-celled or multicellular |  |  |
| Only single-celled |  |  |

Vocabulary Check - Fill in the blank with the word or phrase that best completes the sentence. Choose from: *cytoplasm, eukaryotic cell, organelle, or prokaryotic cell.*

9. The jellylike substance that contains dissolved molecular building blocks and, in some types of cells, organelles, is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells have no nucleus.

11. How did improvements in the microscope help scientists form the cell theory? \_\_\_\_\_\_\_\_

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12. In what ways are cells similar to atoms. Give at least two ways. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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13. Suppose a certain poison kills human cells by blocking pores in the nuclear membrane. Explain why it would or would not kill bacteria.

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24. Go to your online student edition of the text and go to “interactive review” and then on “self-checks”. Take the 3-1 Self-Check Quiz and record your score below. Write out the most difficult question and answer next to your score.