4-1 The History of Cell Biology

The Cell Theory
All living things are made of ____________.

Robert Hooke examined dead __________ cells. _______________ examined microorganisms.

State the three key points of the Cell Theory:

1. 

2. 

3. 

Define homeostasis:

4-2 Introduction to Cells

In cell biology, __________________________ defines ______________________.

Cell Size
What is the limiting factor in determining cell size?
Explain two ways organisms can increase in size:

Briefly explain the three main parts of a cell:
1. 

2. 

3. 

**Two Basic Types of Cells**

What are the two basic cell types? Describe the major difference between the two. What do these cell types have in common? Give an example of each cell type:

List the hierarchy of organization from cell to organism:
4-3 Cell Organelles and Features
Eukaryotes have membrane bound, specialized internal structures called _______________.

Identify the Function of the Following Structures:

Plasma Membrane:

Nucleus:

Cytoplasm:

Endoplasmic Reticulum:

Ribosomes:

Golgi Apparatus:

Lysosomes:

Mitochondria:

Microtubules:

Microfilaments:

Centrioles:

Cilia & Flagella:
4-4 Unique Features of Plant Cells

Identify the Function of the Following Structures:

Cell Wall:

Plastids:

Vacuoles:

What are the key differences between:

a. Prokaryotes and Eukaryotes

b. Plant and Animal Cells
Label the following Animal & Plant Cells:

Cross-Section of an Animal Cell

Cross-Section of a Plant Cell

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