




7.1 Life Is Cellular

Lesson Objectives

-  State the cell theory.
-  Describe how the different types of microscope work.
-  Distinguish between prokaryotes and eukaryotes.

BUILD Vocabulary

A. The chart below shows key terms from the lesson with their definitions. Complete the chart by writing a strategy to help you remember the meaning of each term. One has been done for you.

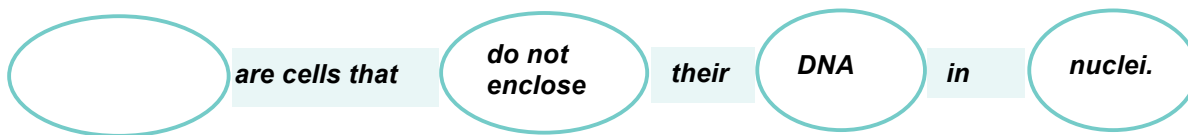
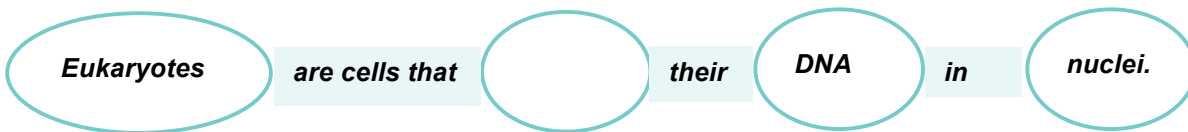
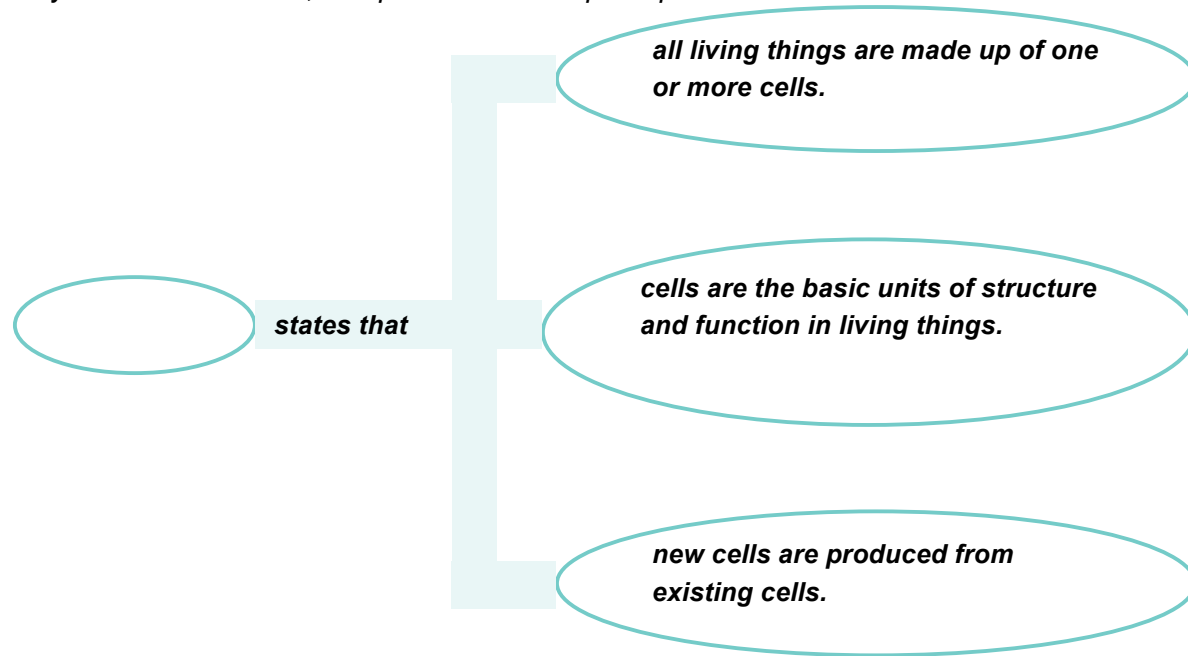
Term	Definition	How I'm Going to Remember the Meaning
Cell	Basic unit of life	<i>I'll think of <u>cells</u> in a jail that are small rooms in a building.</i>
Cell membrane	Thin flexible barrier that separates the cell from its environment	
Cell theory	All living things are made of one or more cells; cells are the basic units of structure and function; and new cells come from previously existing cells.	
Eukaryote	Cell with DNA that is enclosed in a nucleus	
Nucleus	Cell structure that contains genetic material	
Prokaryote	Cell with DNA not enclosed in a nucleus	

B. As you work through this lesson, you may find these terms in the activities. When you need to write a key term or a definition, **highlight** the term or the definition.

BUILD Understanding

Concept Map A concept map can help you organize information and show how ideas are connected. As you read Lesson 1, complete the linear maps below. Add text to the circles to show the most important parts of the concept. Connect the circles with lines.

As you read the lesson, complete the concept maps.



Exploring the Cell

A microscope allows scientists to study very small objects. It magnifies objects by focusing light or electrons. The chart below contains information about three kinds of microscopes. The middle column contains a description of each type of microscope. The third column describes ways each type of microscope is used.

Follow the directions.

1. Use the terms below to complete the chart.

light microscope
scanning electron microscope
transmission electron microscope

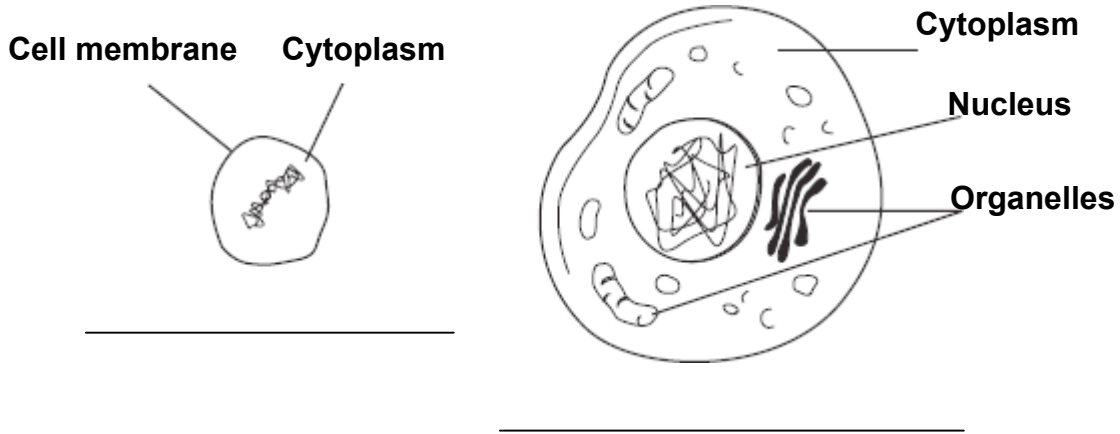
Microscopes		
Type of Microscope	Description of Microscope	Uses of Microscope
	Uses beams of electrons to examine thin slices of material	Provides two-dimensional images of cell structures
	Uses lenses to focus light on a specimen	Enlarges cells or cell parts up to 1000 times
	Uses beams of electrons to view the surface of a specimen	Provides three-dimensional images of cells

Prokaryotes and Eukaryotes

Prokaryotes are simple cells. They lack a nucleus. Your body is made up of eukaryotic cells. Eukaryotes have a nucleus that holds DNA. They also have organelles.

Look at the diagrams below. Follow the directions.

1. Label the prokaryotic cell.
2. Label the eukaryotic cell.



3. Compare and contrast the two types of cells by completing the table.

	Prokaryotic Cell	Eukaryotic Cell
Cell membrane	yes	
Nucleus		
Cell size		larger
Complexity	simpler	

Answer the questions.

4. Circle the correct answer. Your body is made up of _____ cells.
 prokaryotic eukaryotic
5. Circle the correct answer. Bacteria are _____ cells.
 prokaryotic eukaryotic
6. Give two other examples of living things that are eukaryotic. _____
