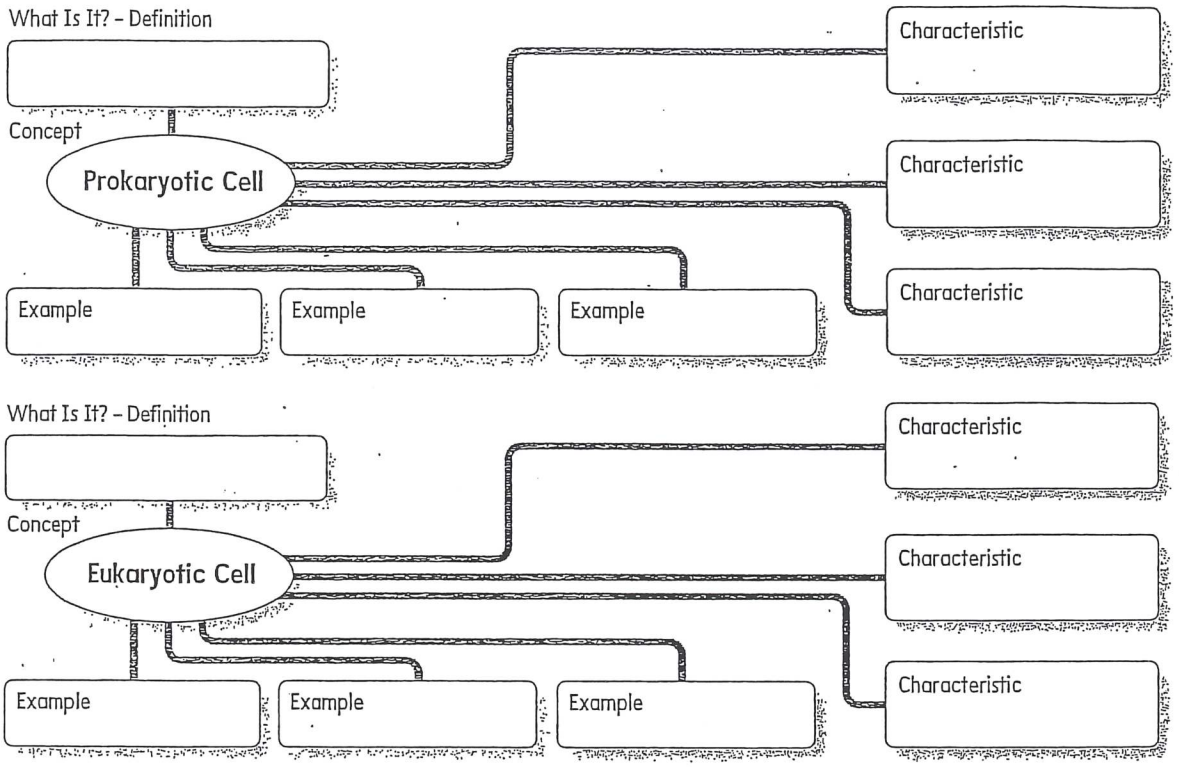
Prokaryotic and Eukaryotic Cells

Use with textbook pages 26–29.

1. Complete the concept definition maps for a prokaryotic cell and a eukaryotic cell. Give the definition, characteristics, and examples for these two main types of cells.



2. What key feature is used to classify cells into two categories: prokaryotic and eukaryotic? _____

3. Describe how prokaryotic cells are different from eukaryotic cells.

_____

4. A student looks at several slides under the microscope of four different cells. Classify these cells as prokaryotic or eukaryotic and explain what characteristic is used to place these cells into each group.

   a) stem cell _____

   b) heart cell _____

   c) halophile (archaea that live in high salt environments)

   _____

   d) streptococcus (bacterium that causes strep throat)

   _____

Name _____ Date _____

The Function of Cell Structures

Use with textbook page 29.

1. Cell structures have a specific role or function that supports the life processes of the cell. In your own words, describe the role of each cell structure and indicate which cell it is found in by circling the appropriate word.

Cell Membrane *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*	**Cell Wall** *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*	**Nucleus** *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*
Chloroplast *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*		**Mitochondria** *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*
Vesicles *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*	**Vacuoles** *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*	**Cytoplasm** *Function:* _____ _____ _____ _____ Found in which cells? *Plant* *Animal* *Both*

2. List one cellular process that the cell would not be able to carry out if the following cell structures were unable to carry out their function:

a) cell membrane _____

b) nucleus _____

c) mitochondria _____

d) chloroplast _____