Name_____ Class_____ Date_____

Conceptual Biology

Chapter 3: The Cell

Prokaryotic Cells and Eukaryotic Cells

1. State whether the following features are found in prokaryotic cells, eukaryotic cells, or both.

   a. nucleic acids _____

   b. cell membrane _____

   c. nucleus _____

   d. organelles _____

   e. mitochondria _____

   f. chloroplasts _____

   g. circular chromosome _____

   h. cytoplasm _____

2. State whether these are prokaryotes or eukaryotes.

a. _____ b. _____ c. _____

d. _____ e. _____

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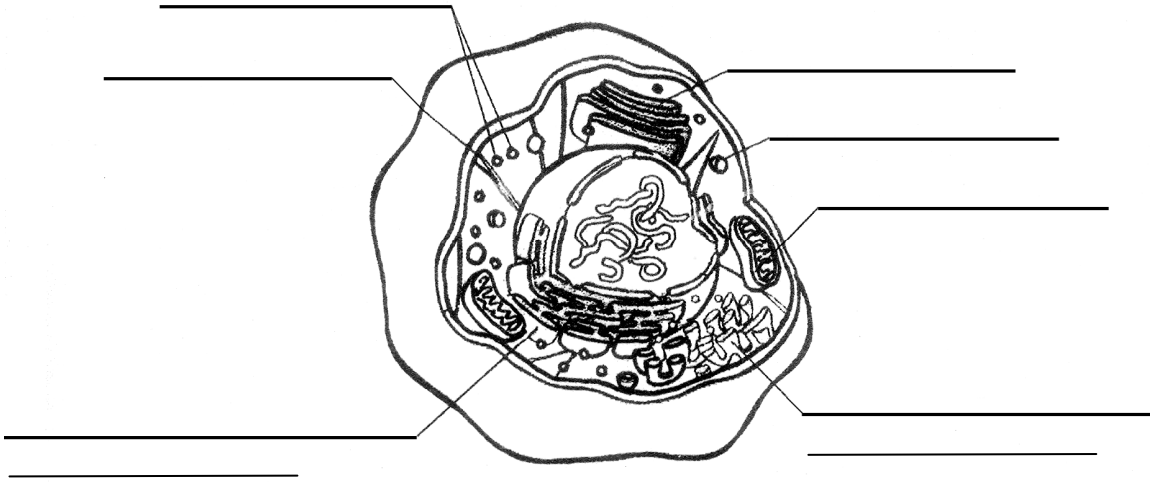
Eukaryotic Organelles

1. Label the organelles in the animal cell with the following terms:

Cytoskeleton	Ribosomes
Golgi apparatus	Rough endoplasmic reticulum
Lysosome	Smooth endoplasmic reticulum
Mitochondrion	



2. Match the organelles with their functions (a through h).

a. Contains ribosomes for building certain types of proteins
b. Breaks down organic molecules to obtain energy
c. In plant cells, captures energy from sunlight to build organic molecules
d. Receives products from the endoplasmic reticulum and packages them for transport
e. Helps cell hold its shape
f. Builds membranes
g. Builds proteins
h. Breaks down organic material

_____ Ribosome
_____ Rough endoplasmic reticulum
_____ Smooth endoplasmic reticulum
_____ Golgi apparatus
_____ Lysosome
_____ Mitochondrion
_____ Chloroplast
_____ Cytoskeleton

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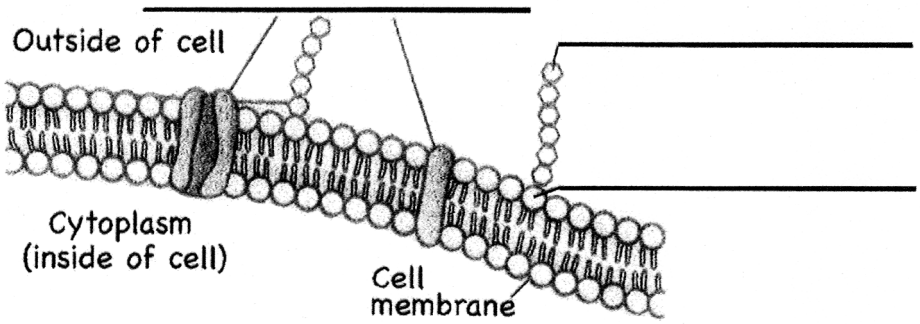
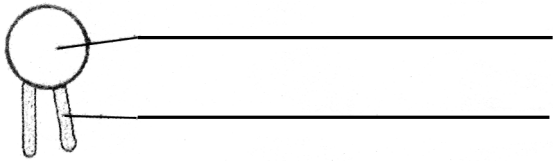
The Cell Membrane

1. Label the three components of the cell membrane in the figure.



2. a. Label the hydrophilic part and the hydrophobic part of the phospholipid.



b. Explain how the phospholipids are arranged in the cell membrane.

3. What do the membrane proteins do?

4. What do the short carbohydrates do?

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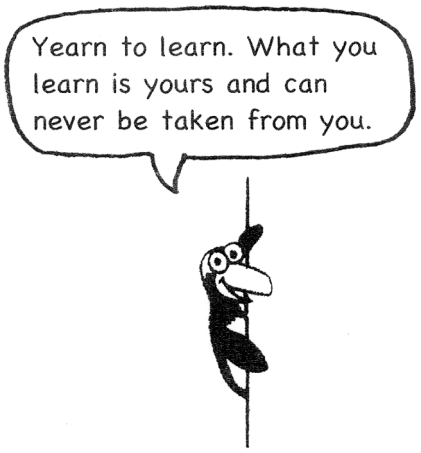
Yearn to learn. What you learn is yours and can never be taken from you.