

Biology Quest #1 Review Package

Topics to Review :

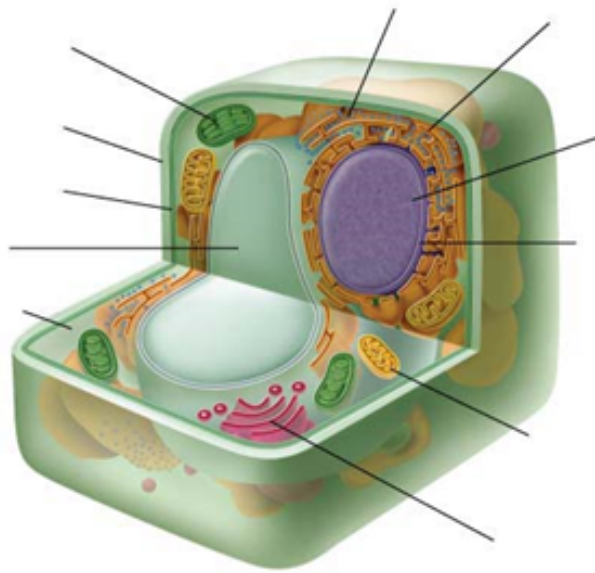
- o Cell organelles and functions
- o 5 basic functions of life
- o Hierarchy of biological parts (from smallest to largest)
- o Cell Theory
- o Microscopes – parts of a microscope & how to calculate magnification
- o Cell membrane (fluid mosaic model; parts of the membrane & function)
- o Cellular Transport (passive – 3 types, active & bulk transport – endocytosis; diffusion; facilitated diffusion; osmosis; osmotic solutions – isotonic, hypotonic, hypertonic)
- o Factors that affect the rate of diffusion

The quiz/test = Quest will consist of the following format:

- Labeling
- Mix and match
- Short answer
- Multiple choice

Practice questions:

1. Label the parts of the plant cell :



2. Match the following animal cell parts to the functions. Note that not all the cell parts are listed.

	Cell Organelle		FUNCTION
	Nucleus	A	Cellular respiration to make energy available
	Mitochondrion	B	Controls movement of materials in and out of cell
	Golgi Body	C	Packages materials
	Endoplasmic reticulum	D	Enzyme storage
	Ribosomes	E	Controls all cellular activities
	Cell membrane	F	Production and transport of materials throughout cell
		G	Genetic information
		H	Makes ribosomes
		I	Site of protein synthesis
		K	Makes mucus

3. Complete the following three statements that make up cell theory.

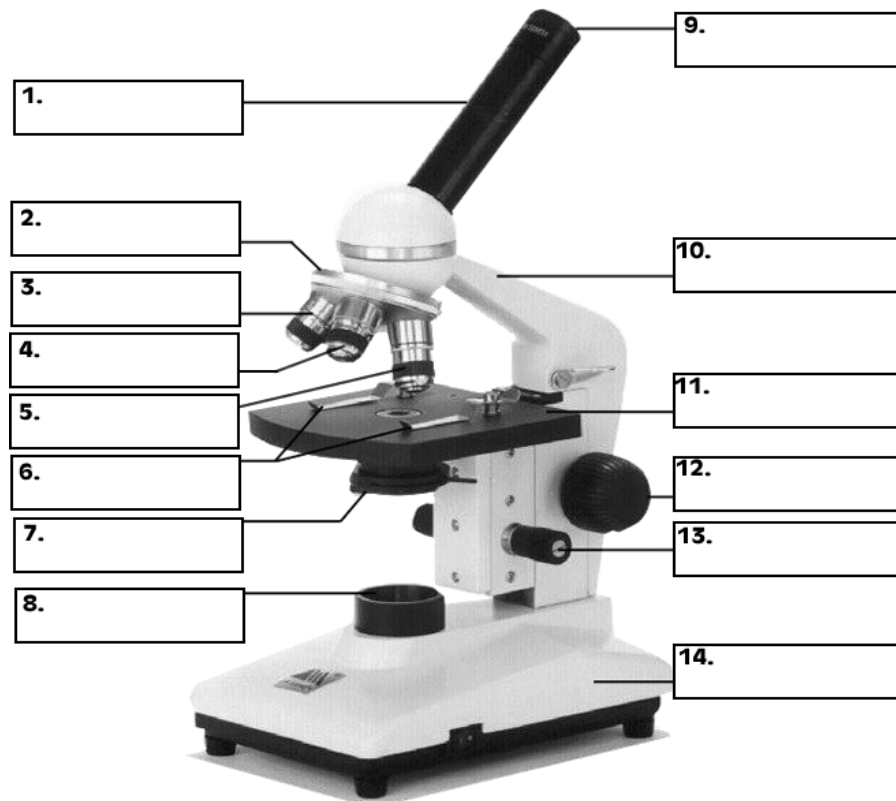
a) All living things are _____.

b) Cells are the basic _____ and _____ units of life.

c) All cells come from _____.

4. Name the three parts of a cell membrane and explain their function.

5. Label the parts of the microscope.



6. Answer the following questions:

a. What is diffusion?

b. What three factors affect the rate of diffusion?

7. Explain the difference between active, passive and bulk transport.

Multiple Choice:

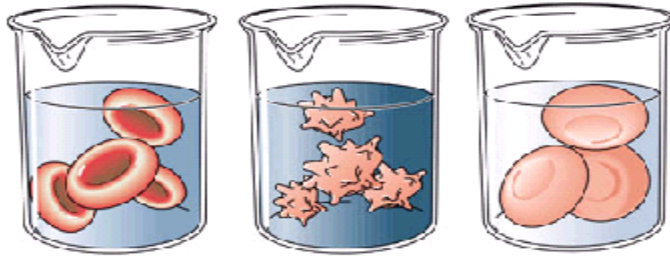
Choose the best answer for each of the following questions and place your choice in the space provided.

- ___1. The process of maintaining a constant internal environment despite changing external conditions is called:
a) passive transport b) active transport
c) permeable d) homeostasis
- ___2. The term used to describe the movement of only certain substances through the cell membrane is called:
a) passive transport b) active transport
c) selectively permeable d) homeostasis
- ___3. Which of the following processes require energy to transport molecules across the membrane?
a) simple diffusion b) osmosis
c) facilitated diffusion d) active transport
- ___ 4. Cellular respiration occurs in which of the following organelles?
a) the nucleus b) mitochondrion
c) ribosomes d) chloroplasts
3. The cells below are in three different solutions. Review the images and answer the questions below.

Beaker A

Beaker B

Beaker C



A: _____ B: _____ C: _____

(a) In the space below each beaker, identify each solution as hypotonic, hypertonic or isotonic.

(b) Explain what has happened to the cells in beaker B?

(c) What is the name given to describe the cells in beaker B? _____

Please remember to study ALL the notes from class – this is just a guide.