

Cell Theory I - 3 Practice Test

Name: *Key*

Date:

Block:

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

- (1) *On your own*
- (2) *With your notes*
- (3) *With another student*



Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

1. List the 7 characteristics of living things.

- *Made up of cells*
- *Responds to stimuli*
- *Grows*
- *Needs nutrients*
- *Reproduces*
- *Moves*
- *Eliminates waste*

2. An explorer from another galaxy has arrived on Earth and believes cars are living things.

a. Which characteristic(s) of a living thing would a car show?

Moves, eliminates waste, needs energy (gas)

b. How would you explain that a car is not a living thing?

Does not have the other 4 characteristics

- ↳ *Not made up of cells*
- ↳ *Does not reproduce*
- ↳ *Does not grow*
- ↳ *Does not respond to stimuli*

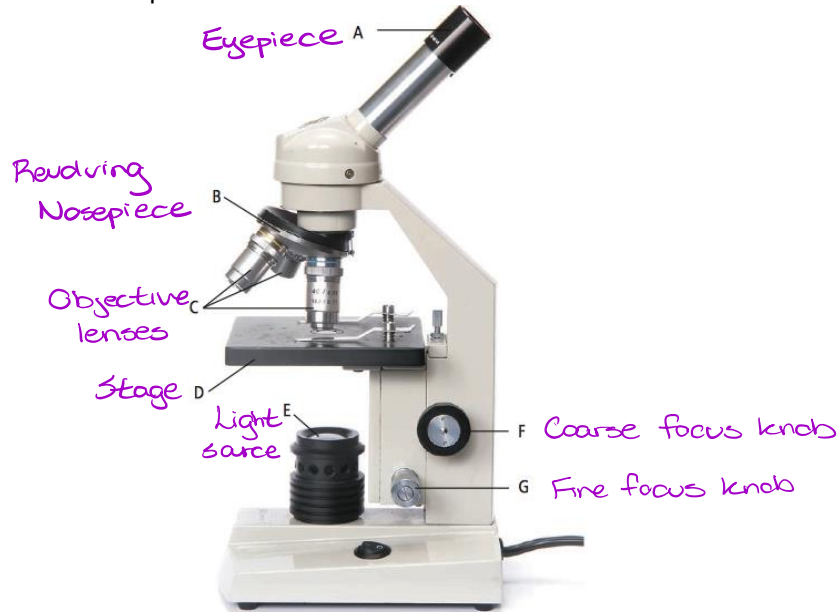
3. The **coarse focus knob** on a microscope should be used with which objective lens(es)?

Low and medium power

4. A slide on the microscope is moved toward you. In which direction does the object you are viewing through the eyepiece move?

Away from you

5. Label the parts of the microscope below.



6. Animal cell vs. plant cell.

a. Which two organelles do plants have that animals do not?

Cell wall and chloroplasts

b. What are their functions?

Cell wall - rigid protective barrier

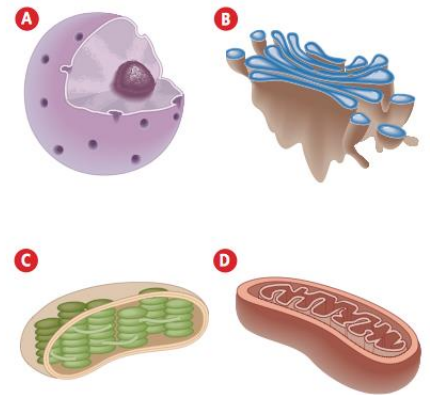
Chloroplast - location where photosynthesis occurs

7. Which organelle stores food and waste?

Vacuole

8. Identify each cell structure below and write its function.

	Structure	Function
A	Nucleus	Control center of the cell
B	Golgi body	Stores, modifies, packages protein
C	Chloroplast	Where photosynthesis occurs (in plant cells)
D	Mitochondria	Powerhouse of the cell. Cellular respiration occurs here → makes ATP



9. Animal cells do not have chloroplasts. Explain why.

Animal cells do not photosynthesize

10. Compare and contrast the processes of cellular respiration and photosynthesis.

Cellular respiration

↳ Occurs in mitochondria

↳ In animal + plant cells

↳ Oxygen + Food (glucose) → CO₂ + water + energy (ATP)

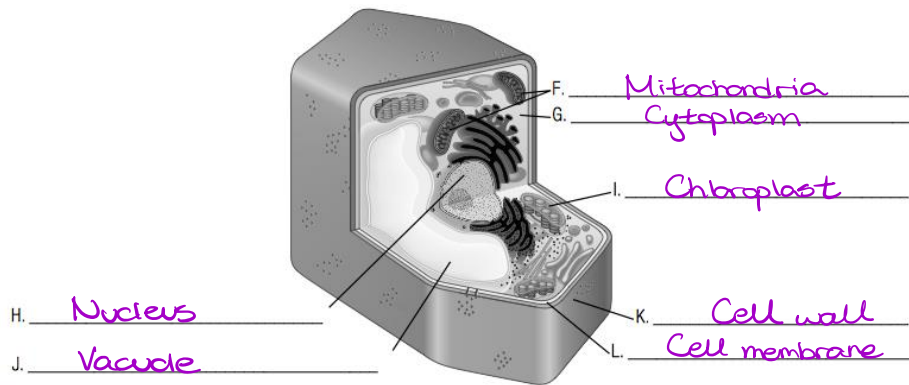
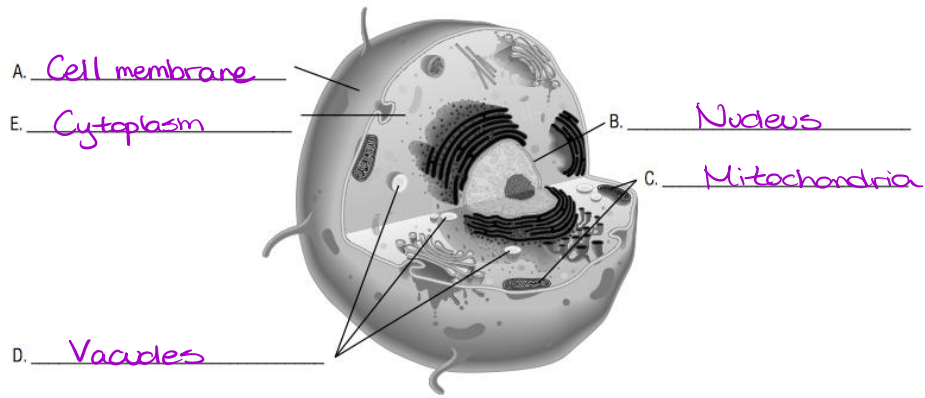
Photosynthesis

↳ Occurs in chloroplasts

↳ Only in plant cells

↳ CO₂ + water + energy (sun) → oxygen + food (glucose)

11. Identify the follow cells as either a plant or animal cell and then label the organelles.



12. What is the difference between a prokaryotic and eukaryotic cell? Give an example of each.

Prokaryotic

- ↳ Small + simple cell
- ↳ No membrane bound nucleus
- Ex : bacteria

Eukaryotic

- ↳ More complex cell
- ↳ Contains a membrane bound nucleus
- Ex : Animal and plant cells .