

Science 8
Chapter 1 Review

Name _____

1. The _____ is the basic unit of life
2. An organism that is made of one cell is said to be _____
3. We are made of many cells and are said to be _____
4. The five ways that all living things demonstrate that they are alive
 - a. They _____ to their environment
 - i. A _____ is anything that causes a living thing to respond
 - b. They need _____
 - i. You get energy from the _____ that you eat
 - ii. Plants use the process of _____ to make sugar
 - c. Living things _____
 - i. Your growth is the result of cells increasing in _____
 - d. Living things _____
 - i. _____ provides a way to replace older individuals
 - e. Living things must get rid of _____
 - i. Three wastes that we produce are _____, _____ and _____
5. An example of a simple microscope is a _____
6. A _____ light microscope has two or more lenses
7. A more powerful microscope is the _____ microscope which can be used to make images called _____
8. The proper way to carry a microscope is one hand on the _____ and the other hand under the _____
9. To determine the total magnification of the microscope
_____ lens magnification X _____ lens magnification

10. The image of the letter "G" produced by the microscope is _____
_____ and is _____

11. When changing to higher magnification the

- a. _____ power will increase
- b. Amount of _____ will decrease
- c. The _____ of view will decrease
- d. The _____ of field will decrease

12. There are _____ micrometers in a millimeter

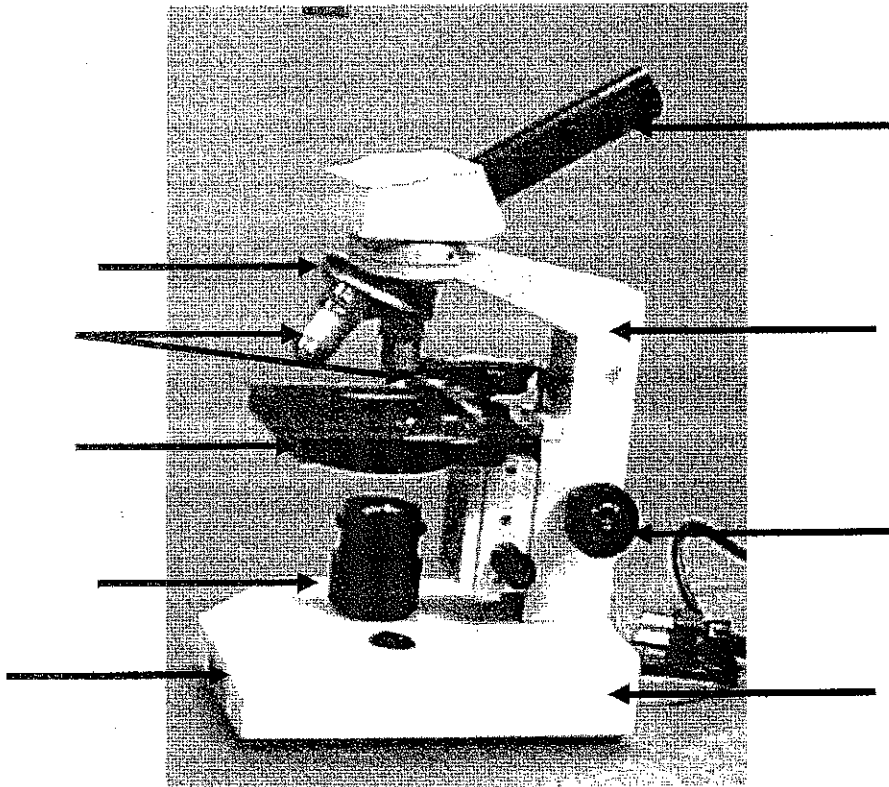
a. Convert the following measurements

i. $120\text{mm} = \text{_____} \mu\text{m}$

13. The low power field diameter measures 4mm. How many micrometers is the low power field? _____

a. If 20 cells can fit across the lower power field how big is one cell?

14. Label the following parts of the microscope and identify their function



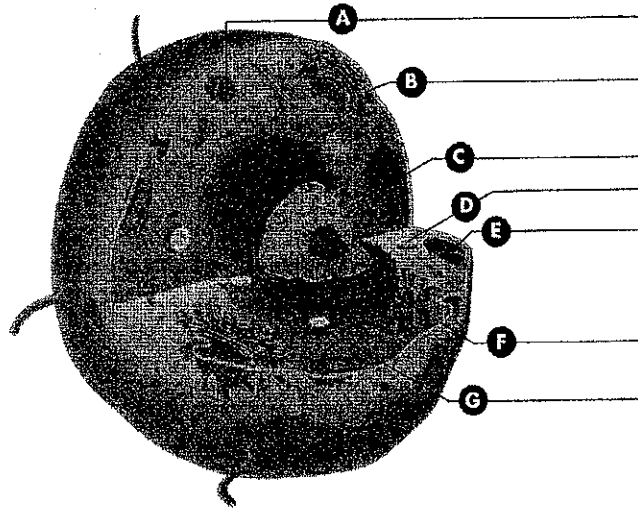
	Part	Function
A		
B		
C		
D		
E		
F		
G		
H		
I		

15. An _____ is a cell structure in which functions are carried out to ensure a cell's _____
16. Many organelles are surrounded by a thin _____
17. The _____ separates the interior of the cell from its surroundings
18. Within the cell is a jelly-like substance called _____, which contains _____ and other materials
19. The _____ is the organelle that carries out all of the activities within a cell. It contains _____ acid or _____.
20. The _____ are the energy producers in the cell. They carry out _____ to produce energy for the cell.
21. The total of all chemical reactions in a cell is called our _____
22. The equation for cellular respiration is

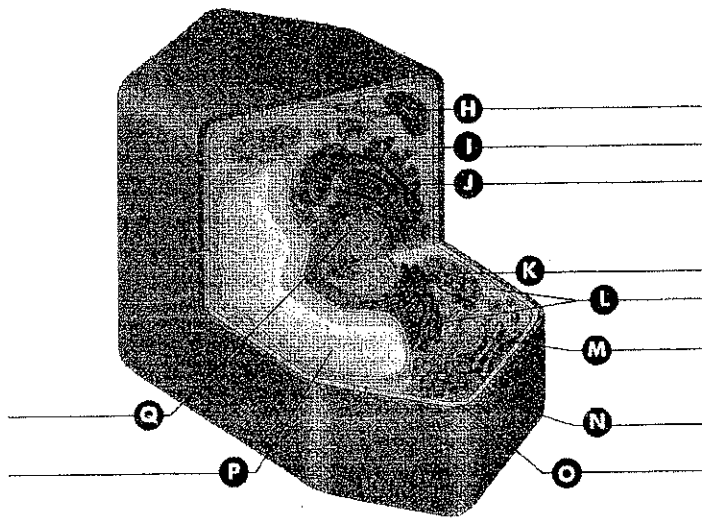


23. Label the following parts of the typical animal and plant cells

Animal Cell



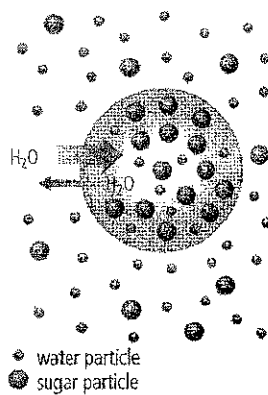
Plant Cell



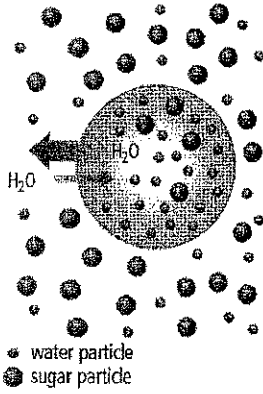
24. _____ are essential to all of life. They are the
 _____ blocks for a variety of structures in a cell.

25. Proteins are assembled by the _____ . Some float in the cytoplasm, others are attached to the _____
26. Folding the endoplasmic reticulum means it has a large _____ in a small space.
27. The _____ sorts the proteins and packs them into structures called _____.
28. _____ are temporary storage compartments that sometimes store _____
29. Organelles are broken down and _____ by the _____
30. Plant cells have two structures not found in animal cells, the _____ and the _____
31. The _____ is a tough rigid structure that protects the cell. The _____ trap energy from the _____ and change it into _____ energy, by a process called _____.
32. The equation for photosynthesis is
 _____ + _____ + _____ → _____ + _____
33. The cell theory states that
- The _____ is the basic unit of life
 - All _____ are composed of one or more _____
 - All _____ come from other living _____
34. There are two different groups of cells
- _____ cells have organelles that are surrounded by _____
 - _____ cells have organelles that are not surrounded by _____
35. _____ cells are smaller than _____ cells
36. _____ are prokaryotic cells

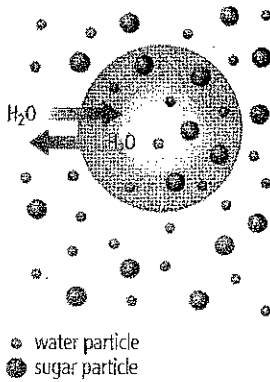
37. Bacteria can be classified according to their _____. The three types are _____, _____ and _____.
38. _____ are tiny, non-living particles that reproduce when they are inside a _____ cell.
39. A virus particle has no _____ or any other _____, it only contains information in the form of _____.
40. _____ is the movement of particles from an area of _____ concentration to an area of _____ concentration.
41. _____ refers to the amount of a substance in a given _____.
42. The cell membrane is said to be a _____ membrane.
43. Over time, the concentrations will be equal on both sides of a membrane. This is called _____.
44. _____ is the diffusion of water through a _____ membrane.
- 45.



In this example of osmosis, there is more sugar _____ (inside/outside) the cell, so water particles move _____ (into/out of) the cell causing it to swell.



In this example of osmosis, there is more sugar _____ (inside/outside) the cell, so water particles move _____ (into/out of) the cell causing it to shrink



In this example of osmosis, there is equal sugar on both sides, so water moves in and out at the same _____ and cell retains its shape