

Name: _____

Period: _____

Cell Processes Review
Cell Transport, Photosynthesis, Respiration

Pre-Concept Mastery

Fill in the meaning of the prefixes below:

Prefix	Meaning
Chloro-	
Pro-	
Endo-	
Exo-	

Cell Transport

Match the descriptions with the following types of membrane transport:

active transport passive transport

1. Molecules travel from high to low concentration _____
2. Requires ATP/energy _____
3. Osmosis is an example _____
4. Does not require ATP/energy _____
5. Molecules travel from low to high concentration _____

Fill in the blanks below (note all terms will not be used). Use the following terms:

active transport diffusion endocytosis exocytosis osmosis passive transport

6. _____ is the process during which a cell takes in a large molecule by surrounding it with the cell membrane.
7. _____ is the movement of substances from an area of higher concentration to an area of lower concentration.
8. _____ is the movement of substance through a cell membrane only by using the cell's energy.
9. _____ is the process during which a cell's vesicles release their contents outside the cell.
10. _____ is the diffusion of water molecules only through a membrane.

Answer the following questions based on the statements below:

11. The paramecium is a fresh water microorganism. The salt content of its cytoplasm is greater than that of the surrounding environment. Does water tend to enter or leave the paramecium? Is this process of passive or active transport?

12. Where does the energy for active transport come from?

13. This movement of oxygen molecules from an area of higher concentration to an area of lower concentration is known as _____.

- a. diffusion
- b. osmosis
- c. respiration
- d. photosynthesis

Answer the following questions below:

Draw a picture using an arrow to help you determine the direction of osmosis

14. A cell has 20% salt and 80% water is in a solution that has 10% salt and 90% water.

a. Where will water move? _____

b. What will happen to the cell? _____



15. A cell has 20% salt and 80% water is in a solution that has 30% salt and 70% water.

a. Where will water move? _____

b. What will happen to the cell? _____



Cell Energy: Photosynthesis and Respiration

Answer the following questions below:

16. Using a microscope, a student observes a small, green organelle in a plant cell. Which energy transformation most likely occurs first within the observed organelle?

- a. light to chemical
- b. heat to electrical
- c. chemical to chemical

17. What are two names for organisms that make their own food?

18. Name two examples of species that make their own food:

1. _____

2. _____

19. What cell processes do organisms that make their own food use to utilize energy?

20. What are two names for organisms that must eat other organisms for food?

21. Name two examples of species that must eat other organisms for food:

1. _____

2. _____

22. What cell processes do organisms that must eat other organisms for food use to utilize energy?

23. List three ways plants' ability to photosynthesize benefits animals.

1. _____

2. _____

3. _____

Questions 24-29 Complete the following table:

	Photosynthesis	Cellular Respiration
Reactants		
Products		
Organelle		

Fill in the blank to complete each statement:

cellular respiration fermentation lactic acid mitochondria reactants

30. When the oxygen levels are low, carbohydrates are broken down for energy and _____ is produced, which can produce a burning sensation in muscles while they're active.

31. Plant and animal cells release energy from food as a result of the process of _____.

32. The energy-releasing process that does not require oxygen is _____.

33. _____ are the powerhouses of the cell because they are the organelles in which the second stage of cellular respiration takes place.

34. The products of photosynthesis are the _____ of cellular respiration.