

Cell Organelle Worksheet

Name _____

Period _____

Organelle Review

Fill in the boxes below with either the name of the organelle or its function.

1

2

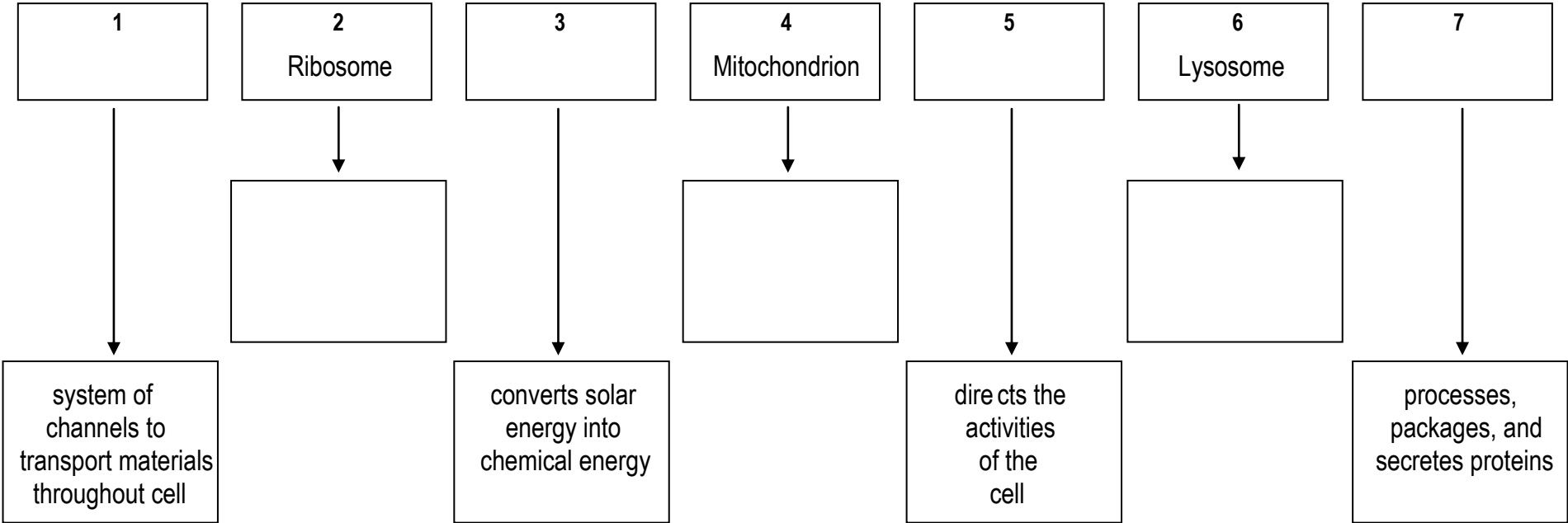
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Cell Worksheet

Name _____

Period _____

At the Edge of the Cell

1. What name is given to the tiny compartments that make up both plants and animals? _____
2. How many living cells are found in the smallest microscopic organisms? _____
3. The outer surface of a cell is called the _____. It separates materials inside from those outside the cell. The complex machinery that is inside the cell cannot function unless _____ continuously enter into the cell and destructive _____ promptly leave the cell. The cell membrane helps to _____ the internal environment of the cell.

What Limits the Size of a Cell?

4. About how many cells does your body have? _____
5. Why must the structures (organelles) inside a cell be close to the cell membrane? _____

6. Can one cell grow indefinitely? _____
7. What happens to the relationship between the surface area and volume of a cell as it gets larger?

8. Cells cannot grow so large that their surface areas become too _____ to take in enough food and to remove enough _____.
9. True or False Small size allows efficient movement of materials in and out of the cell.
10. True or False It is best for an organism to have only a few structures near the cell membrane.
11. True or False As a cell gets larger, its volume increases at a slower rate than its surface area, giving a large cell more surface area.

Water and the Cell

12. What substance surrounds all cells? _____
13. What is the chemical formula for water? _____
14. What is the name of the type of bond that holds hydrogen atoms and oxygen atoms together in a water molecule? _____
15. Do the hydrogen and oxygen atoms equally share their electrons? _____

16. Since the electrons are closer to the oxygen atom, what type of charge is found near the oxygen end of the water molecule? _____
17. What charge is found near the hydrogen end of the water molecule? _____
18. Since the water molecule has a partial negative end and a partial positive end it is called a _____ molecule.
19. Since they are polar, what do water molecules do to one another? _____
20. The name given to this force of attraction between water molecules is called the _____ bond.
21. What happens to the energy state of water molecules when they form hydrogen bonds? _____

22. **Review**

The water molecule is made of two atoms of _____ bonded to one _____ atom. The _____ shared by these atoms are not shared _____. The shared electrons spend most of their time near the _____ atom, giving the oxygen atom a partial _____ charge and the hydrogen atom a partial _____ charge. A molecule with partial charges on different sides is called a(n) _____ molecule. The positively charged side of one water molecule is attracted to the negatively charged side of an adjacent water molecule, resulting in the formation of a(n) _____ bond between the molecules.

Water and the Cell Membrane

23. Describe what happens when oil is poured into a container of water? _____

Why does this happen? _____

24. Why are lipids nonpolar? _____
25. Oil and water separate upon mixing because water is _____ and oil is _____.
When water molecules cluster together, they force _____ to align in a sheet, forming the cell membrane.