

ENERGY TEST REVIEW

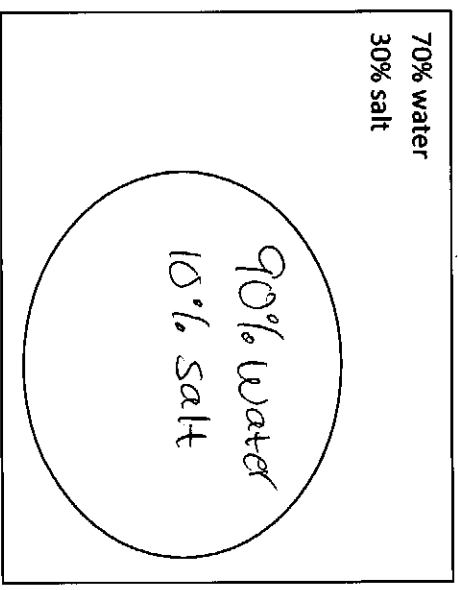
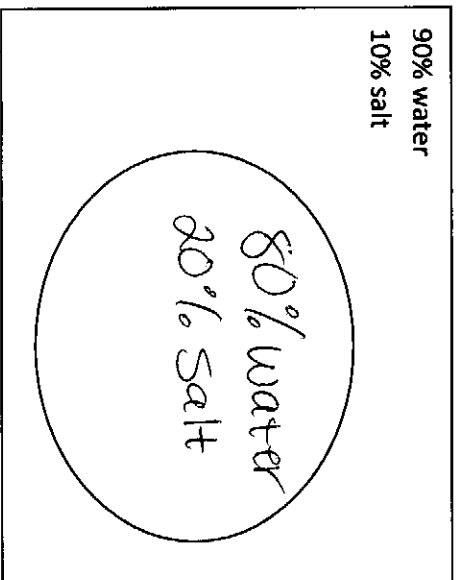
1. Which type of cell transport (active or passive) requires the cell to use energy? _____
2. Which type of transport moves substances with a concentration gradient? _____
3. Which type of transport moves substances against a concentration gradient? _____
4. What is the main function of phospholipids in your body? _____
5. Draw and label a phospholipid: _____

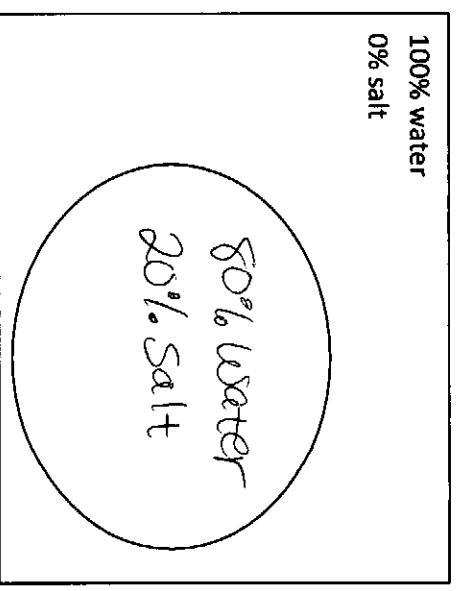
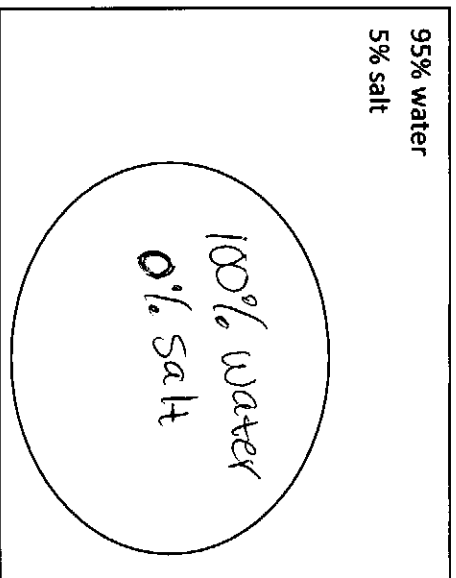
6. Which part of a phospholipid is hydrophilic? _____
7. Which part of a phospholipid is hydrophobic? _____
8. How is the phospholipid bilayer like a sandwich? _____

9. List the four components of a cell membrane

- a. _____
- b. _____
- c. _____
- d. _____

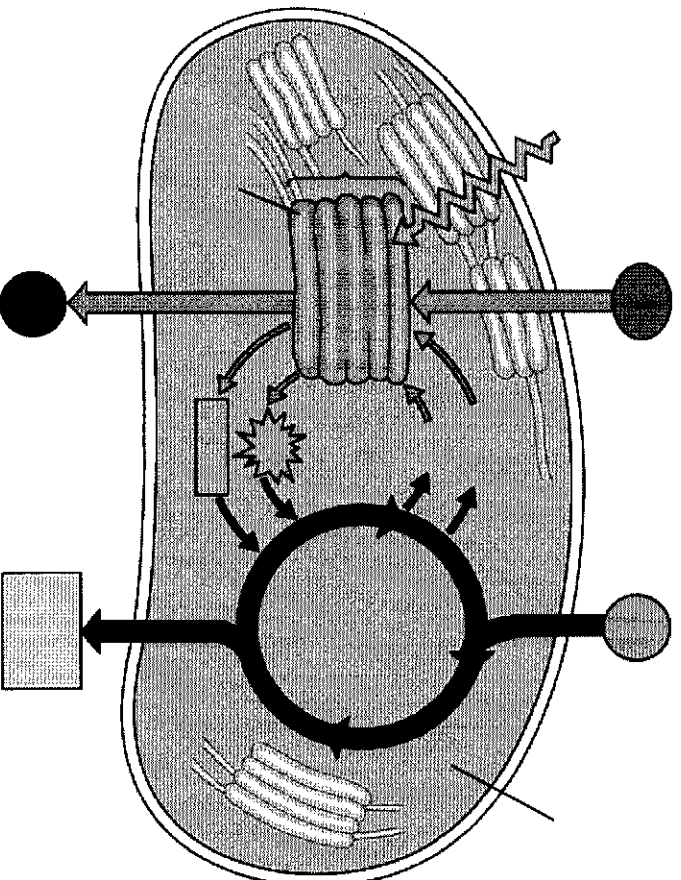
10. Which component is for cell-cell recognition? _____
11. Which component is for making the membrane flexible? _____
12. Which part forms channels? _____
13. How is the cell membrane like a window screen in your house? _____
14. What is osmosis? _____
15. For the following diagrams, use arrows to show the direction of water flow, and indicate the percent of water that will move. Also label each cell and solution as hypotonic, hypertonic, or isotonic.





16. When a cell expands, it's called _____
17. When a cell shrinks, it's called _____
18. Explain, using osmosis terms (hypotonic and hypertonic), why you should never drink sea water.
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19. Explain, using osmosis terms (hypotonic and hypertonic), why leftover salad gets soggy if you bring it home from a restaurant with dressing already on it. _____
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20. Explain, using osmosis terms (hypotonic and hypertonic), what happens to your cells if you drink too much water. _____
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21. Explain, using osmosis terms (hypotonic and hypertonic), what happened to the gummy bear in distilled water, and why. _____
-
22. Describe one source of error from the Gummy Bear lab. _____
-
23. Which type of cells (plant, animal, or both)...
- | | |
|----------------------------|--------------------------------|
| Contain a cell wall _____ | contain water vacuoles _____ |
| contain chloroplasts _____ | Perform cell respiration _____ |
| Contain mitochondria _____ | perform photosynthesis _____ |

24. Fill in the following diagram of a chloroplast



25. Write the equation for photosynthesis in WORDS: _____
26. Write the equation for photosynthesis in CHEMICAL FORMULAS: _____
27. Write the equation for cell respiration in WORDS: _____
28. Write the equation for cell respiration in CHEMICAL FORMULAS: _____
29. What are the REACTANTS in photosynthesis? _____
30. What are the PRODUCTS in photosynthesis? _____
31. What are the REACTANTS in cell respiration? _____
32. What are the PRODUCTS in cell respiration? _____
33. How are the reactants and products of photosynthesis and cellular respiration related? _____
- _____
34. What molecule is the energy source which is used by all living cells? _____
35. During glycolysis, glucose splits into two molecules of _____
36. Where in the cell does glycolysis occur? _____
37. How many molecules of ATP are released during glycolysis? _____
38. Respiration which uses oxygen is known as _____
39. Respiration which does not use oxygen is known as _____
40. What process produces ethanol in living cells? _____
41. What process produces lactic acid in living cells? _____
42. The TOTAL output of ATP during aerobic respiration is _____
43. The TOTAL output of ATP during anaerobic respiration is _____
44. What word is a synonym for autotroph? _____

Process	Photosynthesis	Cellular Respiration
What happens to glucose?		
What happens to energy?		
What happens to CO_2 ?		
What happens to O_2 ?		
What are the reactants?		
What are the products?		
Which organelle is involved?		



1. Which equation shows photosynthesis? _____
2. Which equation shows cellular respiration? _____
3. Which equation shows the production of water and carbon dioxide? _____
4. Which equation occurs only in plant cells? _____
5. Which equation would stop operating during a period of long extended darkness? _____
6. Which equation shows the production of a simple sugar that is stored for later use? _____
7. Which equation shows the breakdown of glucose to cellular energy? _____
8. Which reaction occurs in chloroplasts? _____
9. Which reaction occurs in mitochondria? _____
10. Which reaction is endothermic? _____
11. Which reaction is exothermic? _____

46. Where do all autotrophs get their energy from? _____

47. What is the ultimate source of ALL energy on earth? _____