

Name _____ Date _____ Period _____

Chapter 4 Concept Review

B I O L O G Y

Directions: *Answer the following questions using your notes and textbook*

1. The chemical energy used for most cell processes is carried by _____.
2. All carbon-based molecules in food store chemical energy in their _____.
3. Energy of ATP released when _____ group is removed.
4. When loses _____ phosphate group, ATP becomes _____ (adenosine diphosphate).
5. Number of ATP molecules depends on type of molecule broken down (Carbohydrate, Protein, lipid).
6. _____ most commonly broken down to make ATP.
7. Break down of _____ yields 36 molecules of ATP.
8. Amino acids needed to build new _____.
9. Some organisms use _____ to produce energy (sugars).
10. _____ make their own source of chemical energy.
11. photosynthesis is process that captures energy from _____ to make sugars that store chemical energy.
12. Plants appear green because _____ green light (not absorbed)
13. Photosynthesis in plants occurs in _____.
14. _____ - stacks of coin-shaped, membrane-enclosed compartments called _____.
15. _____ is the fluid that surrounds grana.
16. Light-dependent reactions (capture energy from _____). Occurs within and across membrane of _____.

17. Light _____ reactions (uses energy produced from light-dependent reactions). Occur in the stroma of chloroplasts.
18. Plants produce _____ for themselves and other _____.
19. Animals use _____ produced by photosynthesis in cellular respiration (released stored _____)
20. Cellular respiration makes ATP by breaking down _____ and other carbon-based molecules to make _____.
21. _____ process (does not require oxygen).
22. Chemical equation for cellular respiration is basically the _____ of that for _____.
23. _____ produced (34 to 36 molecules) for a total of 36 to 38 including _____.
24. Fermentation allows _____ to continue.
25. _____ is an anaerobic process.
26. Lactic Acid fermentation- occurs in _____ cells.
27. Glycolysis splits glucose into two _____ molecules.
28. _____ fermentation- similar to lactic acid fermentation. Products of alcoholic fermentation include cheese, bread, yogurt.
29. _____ splits glucose and products enter fermentation.
30. _____ fermentation- Glycolysis splits glucose and products enter _____.