

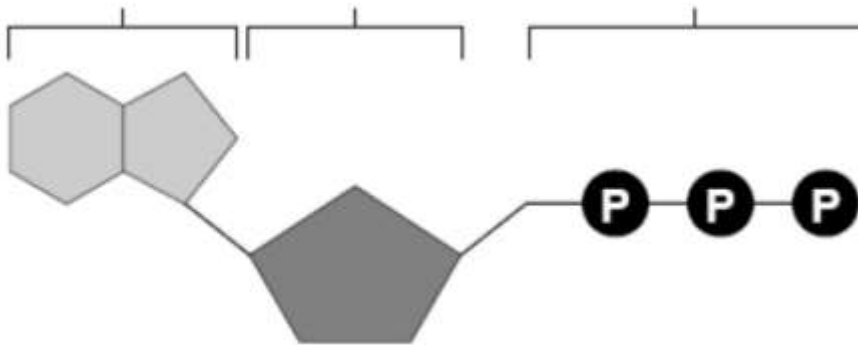
Name: _____ Period: _____ Date: _____

Biology Mid-Year Review Packet: Energy, Photosynthesis, Cellular Respiration

ATP

1. What is the difference between an autotroph and a heterotroph?

2. What is the name of the molecule that provides energy? _____
3. What is the FULL name of ATP? _____
4. Identify the part of an ATP molecule below: (Label **adenosine**, **ribose**, and **phosphate molecules**)



5. Where is energy stored in the ATP molecule?

6. What does an ATP molecule release when a phosphate group is removed? _____
7. What does ATP turn into when a phosphate group is removed? _____
8. Name 2 cellular jobs that need ATP?

9. How do plants produce ATP? (hint: it's *NOT* photosynthesis) _____

Photosynthesis:

1. What is the equation for photosynthesis?
2. What goes into a plant? _____
3. What does the plant make for itself, making it an autotroph? _____
4. What does the plant make that it gives to animals? _____
5. Where in the cell does photosynthesis take place? _____
6. Draw a picture of photosynthesis happening in a plant:

Cellular Respiration

1. What is the purpose of cellular respiration? _____
2. What is the equation for cellular respiration?
3. What 2 things do cells need to do cellular respiration? _____
4. What 3 things do cells make during cellular respiration? _____
5. Where in the cell does aerobic cellular respiration take place? _____
6. What types of organisms do cellular respiration? _____

7. What are the 2 main steps of cellular respiration and how many ATPs are made in each step?

Step of Cellular Respiration & Location	# of ATPs made
TOTAL	

Anaerobic Respiration

8. What is anaerobic respiration?

9. What is another name for anaerobic respiration? _____

10. What happens after glycolysis if oxygen is present? Is this process aerobic or anaerobic respiration?

11. What happens after glycolysis if oxygen is NOT present? Is this process aerobic or anaerobic respiration?

12. What are the 2 types of fermentation (anaerobic respiration)? _____

13. What are the products of lactic acid fermentation? _____

14. When and in what type of organism does lactic acid fermentation occur?

15. What are the products of alcohol fermentation? _____

16. Give examples of organisms where alcohol fermentation occurs? _____

17. What is the difference between aerobic and anaerobic respiration?

Label the chart below with the following:

Glycolysis, mitochondria, cytoplasm, 2 ATP (use twice)

