

Name: _____ Date: _____ Period: _____

Cellular Respiration Worksheet

1. C Where glycolysis occurs in the cell.
2. I Type of respiration the requires oxygen.
3. K Breakdown of carbohydrates without oxygen.
4. A ATP after it releases a phosphate.
5. B Electron acceptors
6. D 2 ATP, 2 Pyruvic acid +H₂O, 2NADH+2H⁺
7. G Pyruvic acid after it reacts with coenzyme A.
8. H Cycle that breaks down acetyl CoA
9. N 6-NADH, 2-FADH, two ATP, H⁺
10. O Protons move down the concentration gradient to make ATP
11. L Enzyme used in the electron transport chain to produce ATP.
12. M Number of ATP that can be made during aerobic respiration.
13. F Creates a burning sensation in your muscles.
14. E Used by yeast and bacteria.

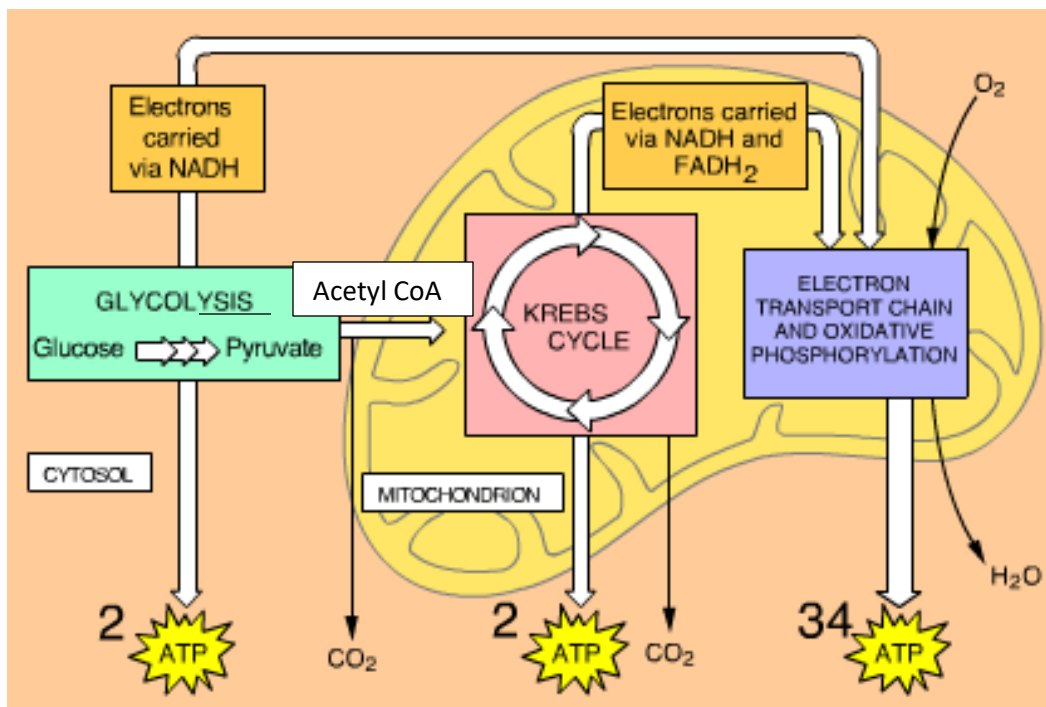
- A. ADP
- B. NADH, FADH
- C. Cytosol
- D. Glycolysis result (net)
- E. Ethyl Alcohol Fermentation
- F. Lactic Acid
- G. Acetyl CoA
- H. Krebs
- I. Aerobic
- J. 22
- K. Fermentation
- L. ATP Synthase
- M. 38
- N. Krebs Cycle result (net)
- O. Chemiosmosis
- P. Cristae

Complete the table.

3 Processes of Cellular Respiration:	# ATP produced:
GLYCOLYSIS	2
KREBS CYCLE	2
ELECTRON TRANSPORT CHAIN	28-34

Name: _____ Date: _____ Period: _____

Label the diagram using the word bank below. All terms/phrases are used.



Word Bank: Glucose, Pyruvate, 2 ATP, 34 ATP, 2ATP, Electron Transport Chain, NADH and FADH₂ carries Electrons, Electrons carried via NADH, Krebs Cycle, Glycolysis, Acetyl CoA

Draw in the diagram where CO₂ is released.

Name: _____ Date: _____ Period: _____

Write the chemical equation for cellular respiration.

Write the chemical equation for photosynthesis.

EQUATION 1. PHOTOSYNTHESIS.

$$6 \text{CO}_2 + 6 \text{H}_2\text{O} \xrightarrow{\text{chlorophyll sunlight}} \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2$$

carbon dioxide water chlorophyll sunlight sugar oxygen

EQUATION 2. RESPIRATION.

$$\text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2 \longrightarrow 6 \text{CO}_2 + 6 \text{H}_2\text{O}$$

sugar oxygen carbon dioxide water

Explain how photosynthesis and cellular respiration are related.

The product of one are the reactant of the other.

Critical Thinking:

The inner membrane of the of the mitochondria has folds called the cristae. How would the function of the mitochondria be different if the inner membrane were not folded?

Inner membrane increases surface area and also the rate of productivity since there is more membrane surface area for the reactions to occur on.

Create a concept map using the following terms: fermentation, ethyl alcohol fermentation, lactic acid fermentation, anaerobic pathway, glycolysis, pyruvic acid.

