

Name: \_\_\_\_\_

### TOPIC 5: Cellular Energy

Please use the Council Rock Video Podcast to guide you

1. What are examples of autotrophs?
2. What are examples of heterotrophs?
3. The most instant form of energy is known as \_\_\_\_\_.
4. Why is ATP a high energy molecule?
5. Complete the photosynthesis equation below  
$$\text{___ CO}_2 + \text{___ H}_2\text{O} + \text{_____}/\text{enzymes} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{___ 6O}_2$$
6. If the photosynthesis equation is reversed, then it is the formula for \_\_\_\_\_.
7. The \_\_\_\_\_ dependent reactions and the light \_\_\_\_\_ reactions make up photosynthesis.
8. Place a "D" if the statement refers to the light dependent reactions and an "I" if it refers to the light independent reactions  
\_\_\_\_ water is split into oxygen, protons, and electrons  
\_\_\_\_ CO<sub>2</sub> is taken in and converted into carbohydrates  
\_\_\_\_ light energy is not needed  
\_\_\_\_ light energy is needed
9. What initial process splits a molecule of glucose into 2 3-carbon molecules? \_\_\_\_\_
10. What is the NET ATP yield from glycolysis? \_\_\_\_\_
11. What are the two different types of fermentation mentioned?
  - a.
  - b.
12. (Circle one) CO<sub>2</sub> is created during **electron transport chain** / **Kreb's cycle**
13. In the electron transport chain, oxygen joins with electrons and protons to make \_\_\_\_\_.
14. By going through glycolysis, Kreb's Cycle, and Electron transport chain, a cell can make between \_\_\_\_\_ and \_\_\_\_\_ ATP as opposed to just the 2 of glycolysis.