Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cellular Respiration WS

Despite the name, cellular respiration is not about cells breathing. What is it? (p. 162)

Write the word that each chemical formula represents in the equation below. (p. 162)

C6H12O6 + 6O2 6CO2 + 6H2O

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This equation should look familiar to you. Which process is the opposite of cellular respiration?

Glycolysis (p. 174)

Where does this process take place?

Glycolysis produces 4 ATP, but our “net gain” is only 2 ATP. Explain why this happens.

During glycolysis, glucose is broken down into 2 molecules of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acid.

Fermentation (p. 177)

Fermentation occurs when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is not present.

What is the term for processes that do not require oxygen?

|  |  |  |
| --- | --- | --- |
| Type of Fermentation | Organisms That Use it | End Products |
|  |  |  |
|  |  |  |

Cellular (Aerobic) Respiration (p. 175)

What does the term “aerobic” mean?

The first step of aerobic respiration is called the Kreb’s cycle or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acid cycle.

Name the gas that is released in your breath as a result of the citric acid cycle.

In the absence of oxygen, how many ATP are produced from each molecule of glucose?

How many total ATP can be produced from one molecule of glucose when oxygen is present?

|  |  |  |
| --- | --- | --- |
| Comparing Photosynthesis and Cellular Respiration | | |
|  | Photosynthesis | Cellular Respiration |
| Function |  |  |
| Location |  |  |
| Reactants |  |  |
| Products |  |  |