**Photosynthesis and Cellular Respiration**

**Photosynthesis**– the process by which plant cells convert \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_ into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This occurs in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

carbon dioxide + water + sunlight (energy) → sugar + oxygen

**Cellular respiration** – how \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ get their \_\_\_\_\_\_\_\_\_\_\_\_. This reaction occurs in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

sugar + oxygen → carbon dioxide + water + energy

What do you notice about the two equations above? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Complete the table to compare photosynthesis and cellular respiration. Refer to the ***information and figure above*** to help you complete the table.

|  |  |  |
| --- | --- | --- |
|  | **Photosynthesis** | **Cellular Respiration** |
| Type of cell(s) it takes place in |  |  |
| Type of organelle it is associated with  |  |  |
| Reactants |  |  |
| Products |  |  |
| Is energy stored or released? |  |  |

1. What are the similarities between cellular respiration and photosynthesis?
2. Do you see any differences/relationships between photosynthesis and cellular respiration

**Note:** When there is no **\_\_\_\_\_\_\_\_\_\_\_\_\_** present, yeast and bacteria do a process called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** in which **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is converted to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. This was the focus of our last lab!