Photosynthesis and Respiration Notes

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| **How are Photosynthesis and Cellular Respiration are connected?** | * The products of one process are the \_\_\_\_\_\_\_\_\_\_\_ of the other. * The equation for cellular respiration is the direct \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of photosynthesis: * Cellular Respiration:   C6H12O6 + 6O2 → 6CO2 + 6H2O   * Photosynthesis:   6CO2 + 6H2O → C6H12O6+ 6O2 |
| **How are Photosynthesis and Cellular Respiration are connected?** | * Photosynthesis makes the **\_\_\_\_\_\_\_\_\_\_\_\_** that is used in cellular respiration * The glucose is then turned back into **\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_,** which is used in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.** * While \_\_\_\_\_\_\_\_\_\_ is broken down to form oxygen during photosynthesis, in cellular respiration oxygen is combined with hydrogen to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| How do cells get the ingredients for Photosynthesis and Respiration? | * CO2 goes into plant through the **\_\_\_\_\_\_\_\_\_\_\_\_\_** on underside of leaves. They are pores. The excess O2 also goes out this way. * Water comes into the plant via the **\_\_\_\_\_\_\_\_\_\_\_\_**. Capillary action is the upward force that delivers it to the chloroplasts. * The \_\_\_\_\_\_\_\_\_\_\_\_ or gills bring in the O2 which is then delivered via the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to the cells. The glucose is delivered by the blood as well after digestion. |
| How can cells undergo Respiration without Oxygen? | * We breathe in that oxygen, which is carried through our **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to all our cells. In our cells, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** allows cellular respiration to proceed. **Cellular respiration works best in the presence of oxygen.** * Without oxygen, much less ATP would be produced. * This is called **anaerobic** (without oxygen) **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.** * There are 2 types: alcoholic AND lactic acid * Produces ethyl alcohol (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fermentation) * Produces lactic acid (\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ fermentation) |
| Why are they important? | * Cellular respiration and photosynthesis are important parts of the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** cycle. * The carbon cycle is the pathways through which carbon is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** in the biosphere. |