Photosynthesis and Cellular Respiration Review

- What is the chemical formula for photosynthesis and cellular respiration?

How do photosynthesis and cellular respiration show energy capture and conversion?

What is the difference between ADP and ATP, how is ATP regenerated from ADP?

- What provides the initial source of energy for photosynthesis and what is the energy converted to?

- What is the difference between an autotroph and heterotroph?

- Draw a chloroplast and label the parts and where each stage of photosynthesis occurs.

- How are the chlorophyll and pigment molecules related?

- What are the colors of the visible spectrum, which color has the most energy?

- What is the difference between chlorophyll a, chlorophyll b, and carotenoids?

- What happens when leaves change color in the fall?

- List the 2 stages of photosynthesis. For each write down the inputs and outputs.

- Describe in detail the light-dependent reaction.

- Why is a double membrane so important for the Electron Transport Chain?

Briefly summarize the Calvin Cycle (light-independent stage).

- What are the factors that affect the rate of photosynthesis? Draw a graph for each.

- What is the starting molecule for cellular respiration?

- What are the 3 stages of cellular respiration, where do they take place, which stages need oxygen present. What are the inputs and outputs for each stage?

- What happens in Glycolysis?

- What happens to the pyruvic acid before it enters the Krebs Cycle?

- Summarize the Krebs Cycle.

- What happens in the ETC during cellular respiration?

- Create a Venn diagram comparing the ETC of light-dependent stage of photosynthesis and the ETC of Cellular Respiration.

- How much ATP is produces for each stage of cellular respiration, what is the total?
- What about fermentation?

- What is the difference between aerobic respiration and anaerobic respiration?

- What is fermentation? Discuss the 2 types of fermentation.