Cell Energy-Supplementary Review

Autotroph and a heterotroph, producers and consumers

First law of thermodynamics states energy can not be created or destroyed but changes forms. In photosynthesis sunlight energy is converted into chemical energy in the form of glucose.

Exergonic and endergonic reactions, page 3 of PDF notes, there are four slides in total

Oxidation reactions involve the loss of electrons while reduction reactions involve the gaining of electrons

Page 6 of PDF, balanced chemical equation of photosynthesis, including names of reactants and products and type of reaction

Light dependent reaction of photosynthesis, and carbon fixation phase----Page 7 PDF

Page 8 PDF comparison between photosynthesis and cellular respiration

Glycolysis-involves phosphorylation of glucose(addition of a phosphate group) which provides the activation energy to initiate the reaction as glucose will not break down on its own.

Hydrogen acceptors like NADP and FAD pick up hydrogen which has lots of energy. These molecules deliver the hydrogen the electron transport chain where the hydrogen is released and the energy is captured to produce ATP

Differences between aerobic and anaerobic respiration

Aerobic respiration involves the complete breakdown of glucose in the presence of oxygen and produces 36 ATP

Anaerobic respiration involves the breakdown of glucose in the absence of oxygen and produces 2 ATP