

Energy

1. Endergonic Reactions vs. Exergonic Reactions
2. Catabolic and Anabolic Reactions
3. Activation Energy, Catalysis, Reactant, Substrate, Product
4. 2 Laws of Thermodynamics
5. Potential Energy, Kinetic Energy
6. ATP

Photosynthesis

- Know the equation for Photosynthesis and for Cell Respiration
- Dependent and Light Independent Phases of Photosynthesis
- Calvin Cycle
- Parts of the chloroplast (double membranes, stroma, thylakoid, grana)
- During which phase of Photosynthesis is a carbohydrate produced?
- Carotenoids and accessory pigments

Cell Respiration

- Anaerobic and Aerobic Phases and where in the cell each occurs
- Parts of the Mitochondria
- Put in order, Fermentation, Oxidative Phosphorylation, Krebs Cycle, Glycolysis
- Where is greatest amount of ATP produced in this sequence of chemical reactions?

Cell Division:

- Can you explain the cell cycle entirely?
- Define: Synapsis, chromosomes, alleles, chromatids, locus, centromere vs. centriole,
- Types of Mutations , Germ Cell vs. Somatic Cell
- What is apoptosis? The p53 gene?
- Generally describe the events in Mitosis.
- Compare Mitosis with Meiosis

DNA and Protein Synthesis

- Describe the 2 steps of protein synthesis.
- Define intron, exon, codon, anticodon,
- RNA polymerase, Promotor site
- Describe the molecular structure of DNA, What is a pyrimidine vs. purine?
- Chargoff's Rule
- Describe the ribosome