

**PLANT PHYSIOLOGY Lecture 6 - Overview of Plant Metabolism**

- I. What is metabolism?**
  - A. The sum of biochemical processes in living cells involved in the synthesis, breakdown, and inter-conversion of constituents in the cell**
- II. Why is metabolism important?**
  - A. Metabolism enables conversion of energy from one form to another**
  - B. In plants, metabolism "transfers" light energy to chemical energy**
  - C. Energy obtained by plants ultimately gives energy to the rest of the living world**
  - D. Life today, would not exist as we know it, without plants**
- III. Metabolic reactions and cycles of metabolism**
  - A. Components of plant metabolism**
    - 1. "Photosynthesis" - can refer to just light reactions but sometimes loosely refers to light and dark reactions**
      - a) Non-cyclic photophosphorylation**
      - b) Cyclic photophosphorylation**
    - 2. Calvin cycle**
    - 3. Glycolysis**
    - 4. TCA, citric acid, Krebs cycle**
    - 5. Electron transport**
    - 6. Oxidative phosphorylation**
    - 7. Other metabolism**
  - B. Metabolism is a continuum, not a sequence of scheduled events**
- IV. Diagrammatic representation of metabolism**