

# Chap 10: Photosynthesis

## Chap 10

**Define** the term *photoautotroph* and **State** one example.

**Diagram** and **Label** the structure of the chloroplast.

**State** the equation for photosynthesis.

**Describe** what makes up visible light.

**Explain** how *chlorophyll a* and *chlorophyll b* are different.

**Explain** why most terrestrial plants are green.

**Explain** the purpose of a photosystem.

**Explain** where photosynthesis takes place in most terrestrial plants. (A diagram could be useful here)

**Describe** the purpose of photophosphorylation.

**State** and **Describe** the two stages of photosynthesis.

**Describe** the location where the Electron Transport Chain (ETC) is located for the light dependent reaction.

**Describe** the molecule(s) that go into the ETC in a chloroplast, and which ones come out.

**State** which photosystem splits water.

**Describe** where the H<sup>+</sup> ions get pumped to during oxidative phosphorylation in chloroplasts.

**State** which enzyme makes ATP in photosynthesis. (know the mechanical functioning of this molecule)

**State** which molecule is the final electron acceptor from the Thylakoid's ETC.

**Describe** the concept of cyclic electron flow.

**Explain** where the Calvin cycle takes place in the chloroplast.

**Identify** the molecular product of a single cycle in the light independent reaction (Calvin cycle) and **State** how many carbons are in that product.

**Explain** how plants survive in the dark when they cannot photosynthesize. (Look at chapter 9 for answers)