AP Biology: Things to Know for Unit 4 Test:

Pages Chapter 6: 113-121

1. Light Dependent Reactions
	1. Where they occur and Chloroplast Structure
		1. Thylakoids (Chloroplast Coloring Activity)
	2. What happens in Photosystem II
		1. Needed: Water and Light
		2. Produced: Oxygen and Proton Gradient that Drives ATP Synthase
	3. What happens in Photosystem I
		1. Needed: Light
		2. Produced: NADPH
2. Light Independent Reactions
	1. The Calvin Cycle
		1. Three major phases (fixation, reduction, and regeneration)
		2. Needed: Carbon Dioxide, NADPH, and ATP
	2. Where/When they occur
		1. In Stroma for C3 plants
		2. In Bundle Sheath cells for C4 plants
		3. At night in CAM Plants
	3. Overall Product: Sugars or Starches (long term storage)
3. Major Differences between C3, C4, and CAM Plants
	1. Where fixation happens and when
	2. The inefficiency of Rubisco (as in oxygen competes with carbon dioxide)
4. Chemical Formula for Photosynthesis
	1. 
5. What can affect photosynthesis rates
	1. Light intensity
	2. Amount of CO2 available
	3. Amount of Water available
6. Cyclic vs. Noncyclic Photophosphorylation
7. Other things to remember:
	1. Temperature effects on reactions
	2. Protons have a low pH, and pH trends in general
	3. Differences between ATP and GTP