Photosynthesis: Cellular Energy & Processes

1. Distinguish between autotrophic and heterotrophic nutrition.
2. Identify the electron acceptor for photosynthesis.
3. Identify the energy/electron carriers in photosynthesis.
4. Describe the structure of chloroplasts. Include why they are so conducive to these energy processes. Identify the specific location of each step in photosynthesis.
5. Explain what happens in photosystems I and II. Trace the electron flow. LONG
6. Compare cyclic and noncyclic electron flow.
7. Explain how an electrochemical gradient of hydrogen ions (protons) across the thylakoid membrane is established. Several sentences here
8. Explain how the light dependent and light-independent (Calvin Cycle) reactions rely on each other.
9. Briefly describe the Calvin-Bensen cycle.
10. Identify the fate of photosynthetic products.
11. Describe what happens to Rubisco when the oxygen concentration is much higher than carbon dioxide. Define photorespiration.
12. Describe two important photosynthetic adaptations that minimize photorespiration (C4 photosynthesis and CAM plants).