Photosynthesis Worksheet:

- What is photosynthesis?
- What types of organisms/cells utilize photosynthesis?
- What is the generalized reaction for photosynthesis?
- What is the structure of the eukaryotic chloroplast? How does a photosynthetic prokaryote differ?
- Does a eukaryotic cell that contains a chloroplast have a mitochondria?
- What is light?
- What is wavelength? Frequency? How does this apply to light?
- What is color(s) and what colors are found are in light? dark?
- How do we observe color of an object?
- What is the light dependent reaction? Where does the reaction occur?
- What is chlorophyll and bacteriochlorophyll? Where are they located? How do they capture light energy?
- What do the accessory pigments carotene, xanthophylls and phaeophytin do?
- What is a photosystem? Where is it located? What does it do? What is the difference between Photosystem I and Photosystem II?
- What are the steps of the light dependent reaction? Where does each step occur?
- What is the difference between cyclic photophosphorylation and noncyclic photophosphorylation?
- What is the next reaction equation for the light-dependent reactions?
- What is the light-independent reaction? Where does the reaction occur?
- What are the steps of the Calvin-Benson cycle (light-independent reaction)?
- What is the overall equation that is produced from the Calvin cycle?
- Where did the ATP and the NADPH used in the Calvin cycle come from?
- What is the carbohydrate produced as a result of the Calvin cycle?
- How can glyceraldehydes-3-phosphate be used to produce glucose?
- What is the overall equation of photosynthesis (light dependent + light independent)?
- How does photosynthesis differ among C_3, C_4 and CAM plants?