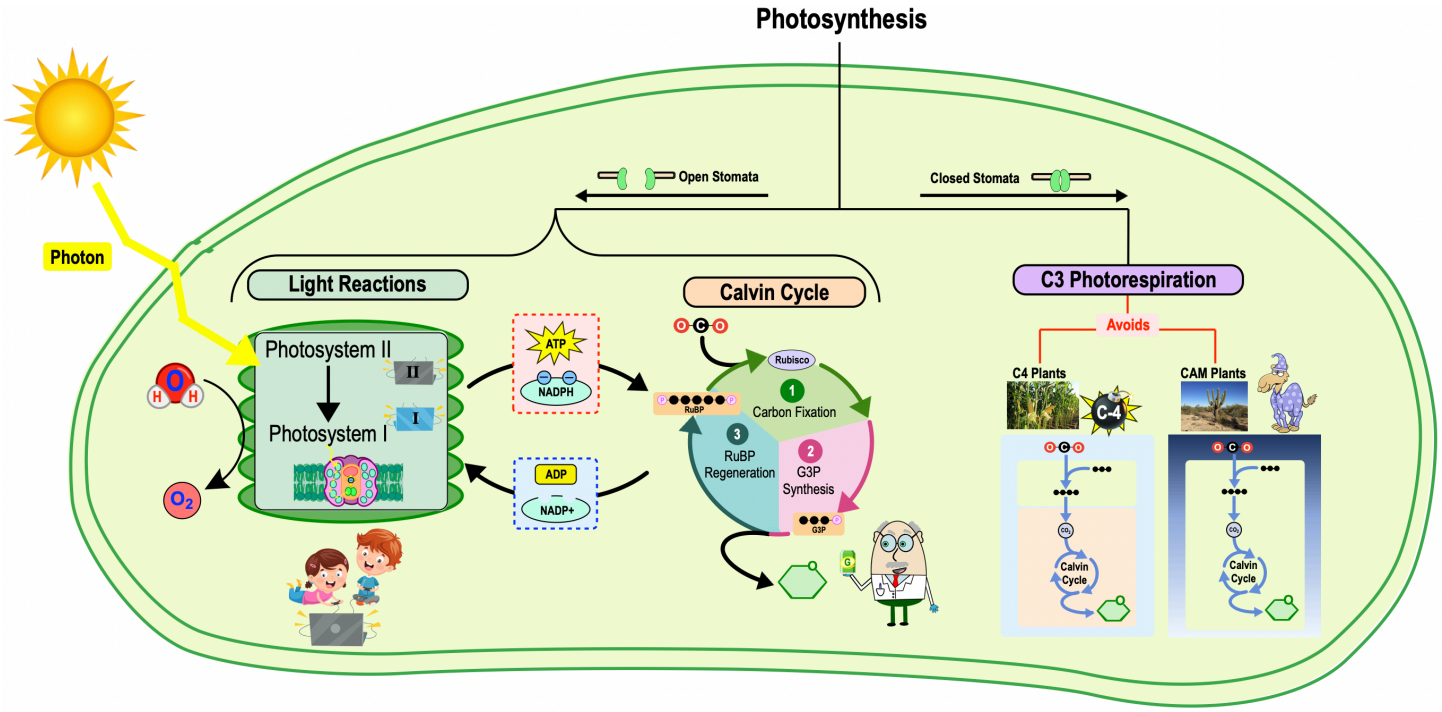
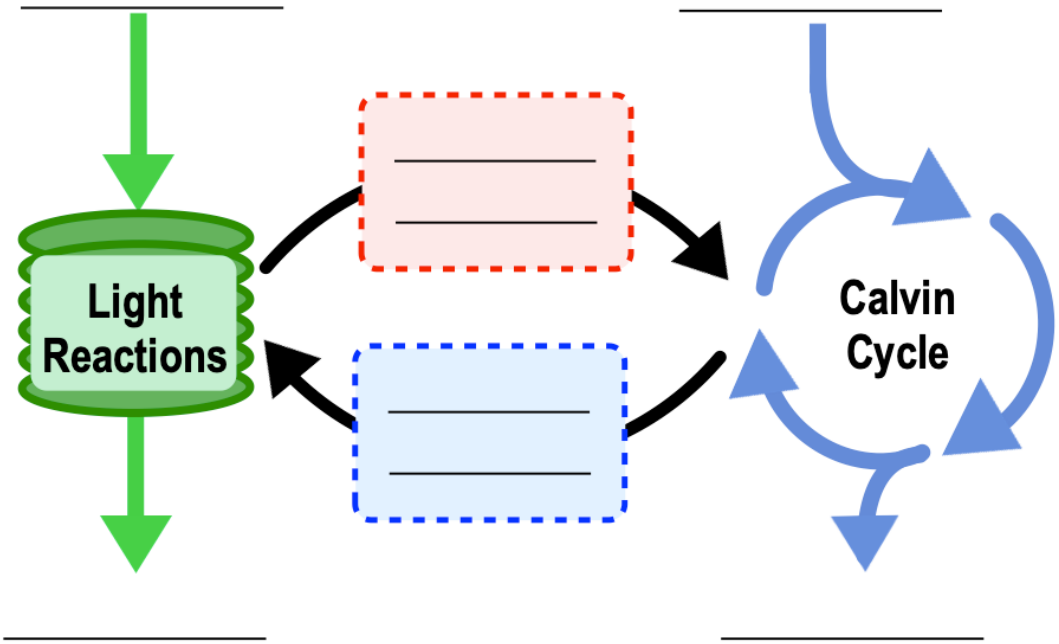
CONCEPT: REVIEW OF PHOTOSYNTHESIS

Recap Map of Photosynthesis



EXAMPLE: Complete the following diagram:



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PRACTICE: All of these are similarities between the light reactions in photosynthesis and the electron transport chain/chemiosmosis in cellular respiration EXCEPT which of these answers?

a) Both create a H^+ concentration gradient.
b) Both possess ATP synthase which uses the potential energy from the H^+ concentration gradient to create ATP.
c) Both reduce electron carriers.
d) Both have the goal of creating energy storing molecules such as ATP.

PRACTICE: A key difference between aerobic cellular respiration and the light reactions of photosynthesis is (are):

a) The light reactions of photosynthesis generate ATP, but aerobic cellular respiration consumes ATP.
b) In aerobic cellular respiration, ATP is produced through chemiosmosis, but in photosynthesis, ATP is produced through substrate level phosphorylation.
c) Aerobic cellular respiration consumes reduced electron carriers (ex: NADH) to make ATP, but the light reactions synthesize reduced electron carriers (ex: NADPH) while also synthesizing ATP.
d) The electron transport chain of aerobic cellular respiration ends with the reduction of NAD^+, while the electron transport chain of the light reactions starts with the reduction of $NADP^+$.