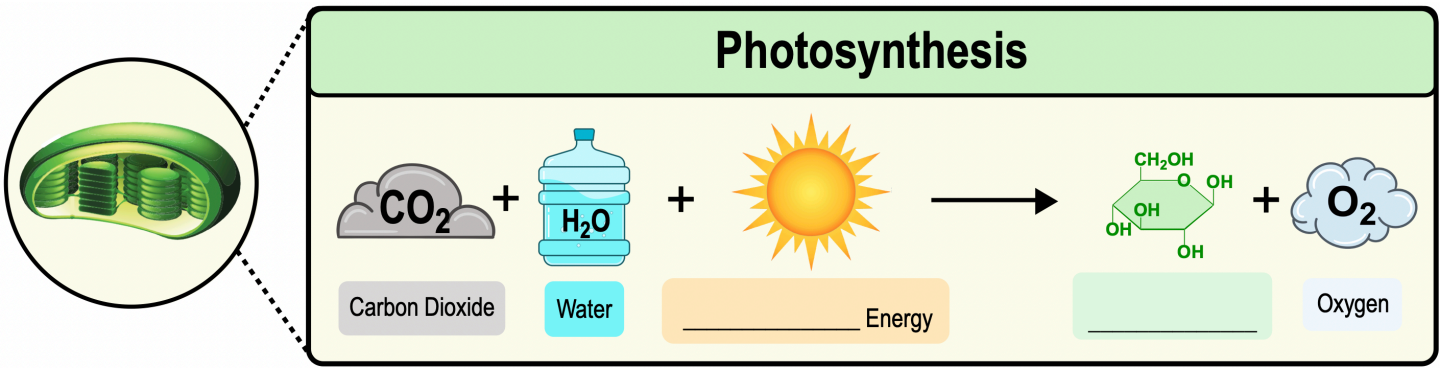
CONCEPT: INTRODUCTION TO PHOTOSYNTHESIS

- **Photosynthesis**: process that uses energy from _____ to synthesize sugars (*glucose*).
  - □ CO_2, H_2O & *light energy (sunlight)* are used to *make* _____ ($C_6H_{12}O_6$) & Oxygen gas (O_2).
  - □ **Chloroplasts**: *green* organelles that function as the *site of* _____.
  - □ Recall: photosynthetic organisms are called _____ (since they make their own food).

EXAMPLE: Overall Chemical Equation for Photosynthesis.



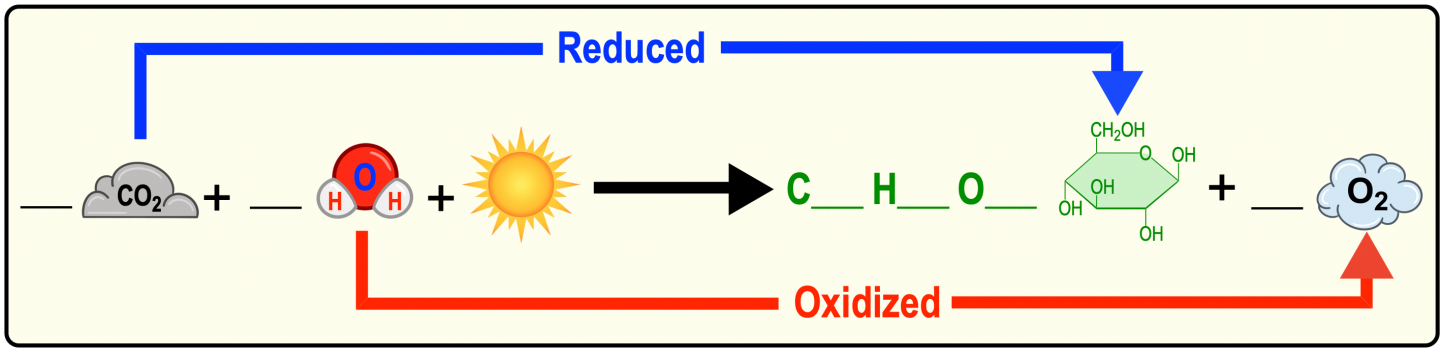
PRACTICE: The main product of photosynthesis is:

a) Glucose. b) Oxygen. c) Carbon dioxide. d) Water. e) Sunlight.

Photosynthesis is a Redox Reaction

- The overall chemical equation for *Photosynthesis* is a _____ *reaction.*
  - □ By the end of the process, CO_2 is _____ while water is _____.

EXAMPLE: Chemical Equation for Photosynthesis.



PRACTICE: Which of the following reactants is reduced during the process of photosynthesis?

a) Oxygen gas. b) Photons of light. c) Carbon Dioxide. d) Water.

CONCEPT: INTRODUCTION TO PHOTOSYNTHESIS

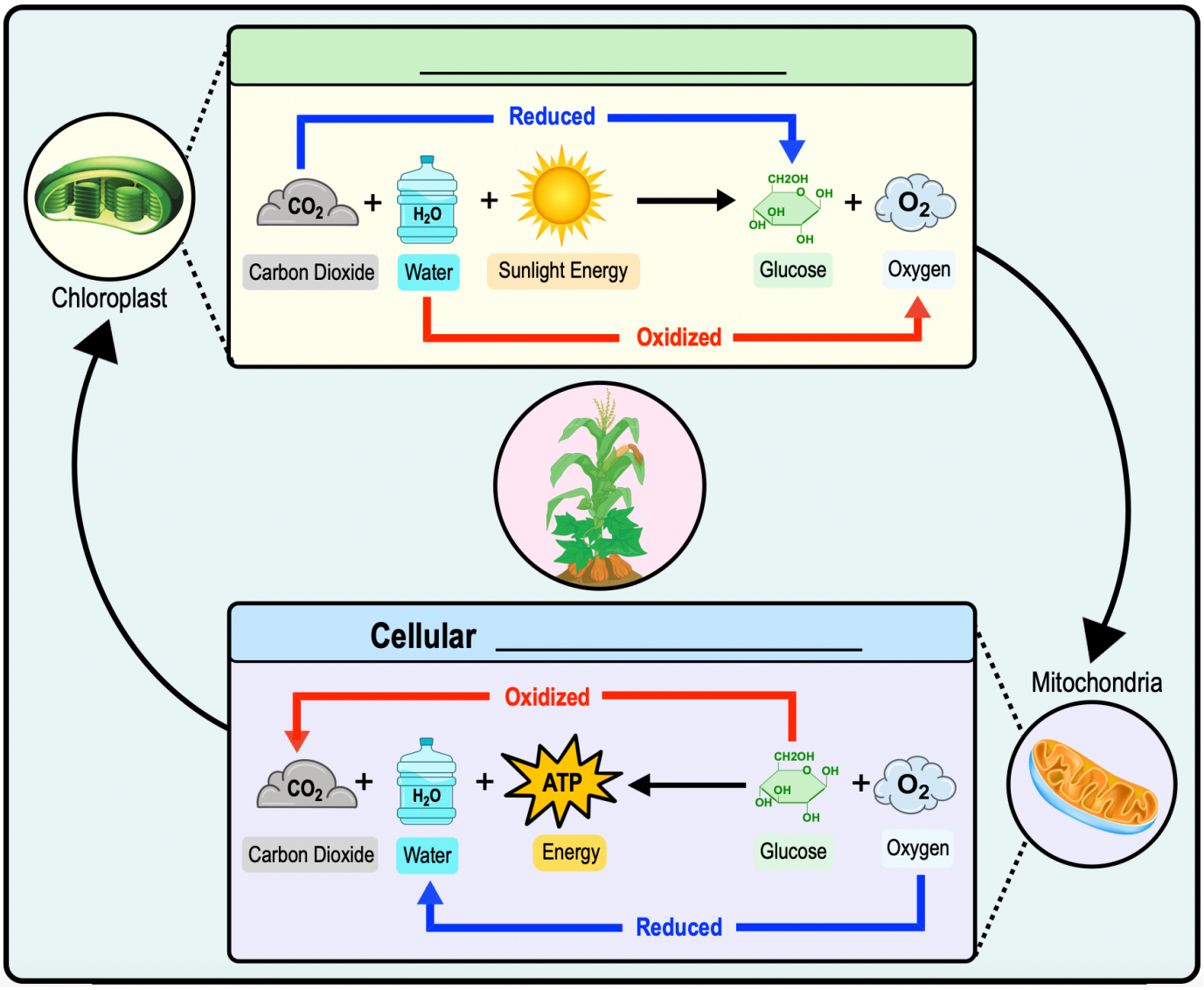
Photosynthesis vs. Cellular Respiration

●Photosynthesis & Cellular Respiration are *ancient* pathways that are highly *connected*.

□ Each process produces the _____ needed for the other.

□ Photosynthesis & Cellular Respiration are almost exactly the _____ of each other.

EXAMPLE: Connecting Cellular Respiration & Photosynthesis.



PRACTICE: Energy used to power photosynthesis & ultimately cellular respiration originates from which energy source?

a) Glucose.

b) ATP.

c) Carbon dioxide.

d) The sun.