

# Lab: Photosynthesis Books

## BIOLOGY: UNIT 2 (CELLS)

**BACKGROUND:** All living organisms on earth consist of one or more cells. Each cell runs on the chemical energy found mainly in carbohydrate molecules (food), and the majority of these molecules are produced by one process: **photosynthesis**. Through photosynthesis, certain organisms convert solar energy (sunlight) into chemical energy, which is then used to build carbohydrate molecules. The energy used to hold these molecules together is released when an organism breaks down food. Cells then use this energy to perform work, such as cellular respiration.

The energy that is harnessed from photosynthesis enters the ecosystems of our planet continuously and is transferred from one organism to another. Therefore, directly or indirectly, the process of photosynthesis provides most of the energy required by living things on earth.

Photosynthesis also results in the release of oxygen into the atmosphere. In short, to eat and breathe, humans depend almost entirely on the organisms that carry out photosynthesis.

**OBJECTIVE:** To enhance your understanding of photosynthesis through the completion of a fully illustrated children's' book. Accuracy is critical. Creativity is extremely encouraged! (see pages 104-105 in your textbook for diagram and summary of photosynthesis)

**YOUR BOOK MUST INCLUDE:**

- Cover page including title, illustration, and your name & period # (1 page) \_\_\_\_\_/10
- Original energy source for photosynthesis (1 page) \_\_\_\_\_/10
- Light Dependent Reaction- (2-4 pages) \_\_\_\_\_/20
  - Where it occurs
  - Energy Source
  - Reactants (materials that start the process)
  - Products (materials that are made)
- Light Independent Reaction- (2-4 pages) \_\_\_\_\_/20
  - Where it occurs
  - Energy Source
  - Reactants (materials that start the process)
  - Products (materials that are made)
- Equation for photosynthesis (1 page) \_\_\_\_\_/5

Total = \_\_\_\_\_/65

**GUIDELINES FOR EACH PAGE:**

- ✓ Use complete and easy to understand sentences (no more than 3 per page).
- ✓ One or two concepts maximum per page.
- ✓ At least one neat, colorful, and original drawing of each concept