(Copy the following lab activity set up in your science notebook.)
Title: Activity 8 Photosynthesis and Cellular Respiration
Challenge Question: How do cells get and use energy?

## Background:

- All organisms need energy. The cells of organisms use energy to carry out life activities.
- Photosynthesis is the process in which plants and other organisms make their own food using light energy from the sun.
- Cellular respiration is the process in which cells use molecular oxygen to break down food and release stored energy.


## Vocabulary:

| Term | Definition | Picture or Example |
| :--- | :--- | :--- |
| photosynthesis |  |  |
| cellular <br> respiration |  |  |
| chlorophyll |  |  |

## Materials:

Cells and Heredity book

## Procedures:

1. Read pages 66-75 in Cells and Heredity book.
2. Do questions 1, 2, and 5-15. Write answers in Data/Results section in science notebook activity set up.
3. Do Lesson Review on page 77 questions 1-9. Write answers in science notebook set up in Data/Results section.

## Data/Results:

(Write answers to book questions here.)

## Analysis Question:

1. Trace the path of carbon and oxygen atoms through the process of photosynthesis. For each element, show how it changes form but is still conserved.
2. How is chloroplast like a solar panel on a house? Explain.
3. Write the general equations for the processes of cellular respiration and photosynthesis. What do you notice about these equations? Explain.

Conclusion: How do cells get and use energy? Use data, evidence and examples from the reading to support your answer.
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