**How Do Photosynthesis & Cellular Respiration Compare?**

**I. Introduction**

Photosynthesis and cellular respiration are complementary processes. During photosynthesis, plants combine energy from the Sun with carbon dioxide and water, and convert it into chemical energy in the form of sugars, with oxygen being given off. During cellular respiration, animals use the sugars and oxygen to create energy, with carbon dioxide and water being given off.

In this Virtual Lab, you will review and order the processes that make up photosyn thesis and cellular respiration. Use the photosynthesis and cellular respiration guide to help you remember the steps in each process.

**II. Procedure**

1. Start the activity by going to the following website :

<http://glencoe.mheducation.com/sites/dl/free/0078802849/383932/BL_25.html> .

2. Read the photosynthesis and cellular respiration guide to review the steps in these processes.

Pay attention to the elements that go into a process (inputs) and the elements that come out of

a process (outputs). The outputs from one process are the inputs for the next process. Four

steps, electron transfer, the Calvin Cycle, Glycolysis, and the Krebs Cycle are covered in the

tile activity.

3. Arrange the input process, the output tiles in the correct order. Start with photosynthesis

followed by cellular respiration. To do this, slide the tiles by dragging them to adjacent open

spots.

4. The correct order should start in the upper left corner. It flows to the right, and then wraps to

the left of the next row again. Open spots will be ignored when checking the correct order.

5. When you have finished arranging the processes and products, click the “Check” button.

**III. Data**

1. Record the order of your tiles.

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**IV. Analysis & Conclusions**

**1. What is the importance of the light and dark reactions in photosynthesis?**

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**2. What happens to food energy during photosynthesis? During cellular respiration?**

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**3. Why is photosynthesis important to you?**

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**4. What are the processes in cellular respiration?**

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**5. Why are photosynthesis and cellular respiration viewed as complementary processes?**

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**6. Describe the similarities and differences between photosynthesis and cell respiration.**

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