Photosynthesis and Cellular Respiration Study Guide

**Photosynthesis:**

1. Where does phase 1 occur? Phase 2?
2. Write out the chemical equation for photosynthesis.
3. Which reactants (things going into photosynthesis) are used in which phase?
4. Which products (things coming out of photosynthesis) are produced in which phase?
5. Where do the ATP and NADPH molecules that are produced in phase 1 go and why?
6. Which molecules (NADPH, NADP+, ATP, ADP) are high energy and which are lower energy?
7. What does ATP stand for?
8. What are all the chemical reactions in a cell called?
9. What are the organisms that make their own food called? Where do they get that food?
10. What is the light-independent phase in photosynthesis called?
11. Which biochemical process (cycle) does photosynthesis help with?

**Cellular Respiration:**

1. Where does phase 1 occur? Phase 2 and 3?
2. Write out the chemical equation for cellular respiration.
3. Which reactants (things going into cellular respiration) are used in which phase? (You can label on the equation!)
4. Which products (things coming out of cellular respiration) are produced in which phase? (You can label on the equation!)
5. Where do the NADH molecules that are produced in phase 1 go and why?
6. Where do the Pyruvate molecules that are produced in phase 1 go and why?
7. Which molecules (NADH, NAD+, ATP, ADP) are high energy and which are lower energy?
8. What does glycolysis mean?
9. What are the organisms that obtain their food from other organisms called? Where do they get their energy?
10. Draw a picture of a mitochondrion and label where phase 1, 2, and 3 happen.