Photosynthesis & Cellular Respiration Puzzle Activity

Identify Your Puzzle Pieces

1. Write the *name* of the *molecule*, *word*, or *symbol* next to the line.

CO_2 _____ O_2 _____

H_2O _____ **Energy** _____

$C_6H_{12}O_6$ _____ ⇨ _____

Put Your Pieces Together for PHOTOSYNTHESIS

1. Write this equation below:

_____ + _____ + _____ → _____ + _____

2. Use the NAMES and NUMBERS of the molecules to describe photosynthesis.

_____ plus _____ plus _____

yields _____ plus _____.

3. What type of energy is used in photosynthesis? _____
4. Photosynthesis typically occurs in what type of organism? _____
5. Where are CO_2 and O_2 found in our environment? _____
6. Given what you know about plants and photosynthesis, why does the position for CO_2 and O_2 in the equation make sense?

7. What is the overall purpose of photosynthesis?

Rearrange Your Pieces AGAIN for CELLULAR RESPIRATION

1. Write this equation below:

_____ + _____ → _____ + _____ + _____

2. Use the NAMES and NUMBERS of the molecules to describe cellular respiration

_____ plus _____ yields

_____ plus _____ plus

_____.

3. In cellular respiration, chemical energy is released from the bonds of _____ and transferred to the bonds of _____, which cells use to provide energy for cellular processes.
4. Was it difficult to rearrange the pieces to produce the equation for cellular respiration? **Why or why not?**

5. Cellular respiration occurs in both plants and animals. Given what you know about animals, why does your position for CO_2 and O_2 in the equation make sense?

6. What is the overall purpose of cellular respiration?

7. What are the two main differences between the chemical reactions for photosynthesis and cellular respiration?