

Answers

1. What is photosynthesis?

How autotrophs use sunlight to convert  $CO_2 + H_2O$  into food (glucose)

The chloroplasts do most of the work. Chloroplast

Plants need chloroplast to trap sunlight and convert it food in the chloroplast. Chloroplasts have lots of chloroplasts to capture sunlight.

1. What about the equation for photosynthesis and complete the following

Reactants needed for photosynthesis:  $CO_2 + H_2O$

Products produced by photosynthesis: glucose (C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>) + O<sub>2</sub>

2. What is cellular respiration?

How cells convert food (glucose) into ATP energy (cellular energy)

1. What about the equation for cell respiration and complete the following

Reactants needed for cellular respiration: C<sub>6</sub>H<sub>12</sub>O<sub>6</sub> + O<sub>2</sub>

Products produced by cell respiration:  $CO_2 + H_2O$

What is the "energy" source that is released? ATP

2. In what cell organelle does respiration take place in eukaryotes? Mitochondria

How does respiration relate to photosynthesis?

Mitochondria has lots of inner membranes (folded up) and the membrane contains the enzymes that build ATP. The more inner membrane the more ATP produced!

What about? 1. Explain what is meant by this

The mitochondria produced by each process are what's needed for the other process! products of photosynthesis are the reactants of cell respiration and products of cell respiration are the reactants of photosynthesis!

2. How do the two processes relate to each other?

Energy from one feeds the other

Sunlight uses food energy and ATP is used energy

in the chloroplast

