

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

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

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

These 2 molecules needed for photosynthesis: $CO_2 + H_2O$

These 2 molecules produced by photosynthesis: glucose (C₆H₁₂O₆) + O₂

3. What is cellular respiration?

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

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

These 2 molecules needed for cellular respiration: C₆H₁₂O₆ + O₂

These 2 molecules produced by cell respiration: $CO_2 + H_2O$

What is the "energy" molecule that is produced? ATP

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

These organelles contain a membrane in the shape of

Mitochondria has lots of inner membranes (it folded up)

and this membrane contains the enzymes that build ATP

It has small pores that allow in things like oxygen!

What other organelle is used by the

The mitochondria produced by each process

are what's needed for the other process!

products of photosynthesis are the reactants of cell

and products of cell respiration are the reactants of photosynthesis!

6. How do the two processes connect together?

Energy from one feeds the other

Sunlight uses food energy and ATP is used energy

for the other process

