Biology

1) In which plant organelle does photosynthesis take place?

Chloroplasts

In simpler terms:
6 carbon dioxide + 6 water + sunlight taken in by plants will be converted to 6 oxygen and glucose

2) What is the equation for photosynthesis?

$6CO_2 + 6H_2O + \text{Sunlight} \longrightarrow 6O_2 + C_6H_{12}O_6$

3) What are the names of the two sets of reactions of photosynthesis?

(1) Light dependent reactions

(2) The calvin cycle

4) Where does the first set of reactions take place?

Thylakoids

What are thylakoids??: Photosynthetic membranes inside of chloroplasts, which are arranged in stacks (these stacks are called "granums")

5) Where does the second set of reactions take place?

Stroma

What is the stroma?: The space around the thylakoids.

6) What are the reactants of the first set of reactions of photosynthesis?

Sunlight, water, ADP +, NADP

one of the carrier molecules... transfers high energy electrons from chlorophyll to other molecules.

Adenosine diphosphate

NADPH (basically is an NADP molecule with an extra hydrogen attached) is important because it turns ADP into ATP.

7) What are the products of the first set of reactions of photosynthesis?

ATP, NADPH, O_2

8) What are the reactants of the second set of reactions of photosynthesis?

ATP, NADPH, CO_2

9) What are the products of the second set of reactions of photosynthesis?

NADP, ADP, $C_6H_{12}O_6$

10) What is the ultimate product of photosynthesis?

Glucose

ATP: ATP (Adenosine tri-Phosphate) is incredibly important — it is the primary energy molecule in bacteria, animal, and plant cells.