Master 12

Photosynthesis

Basic Concepts

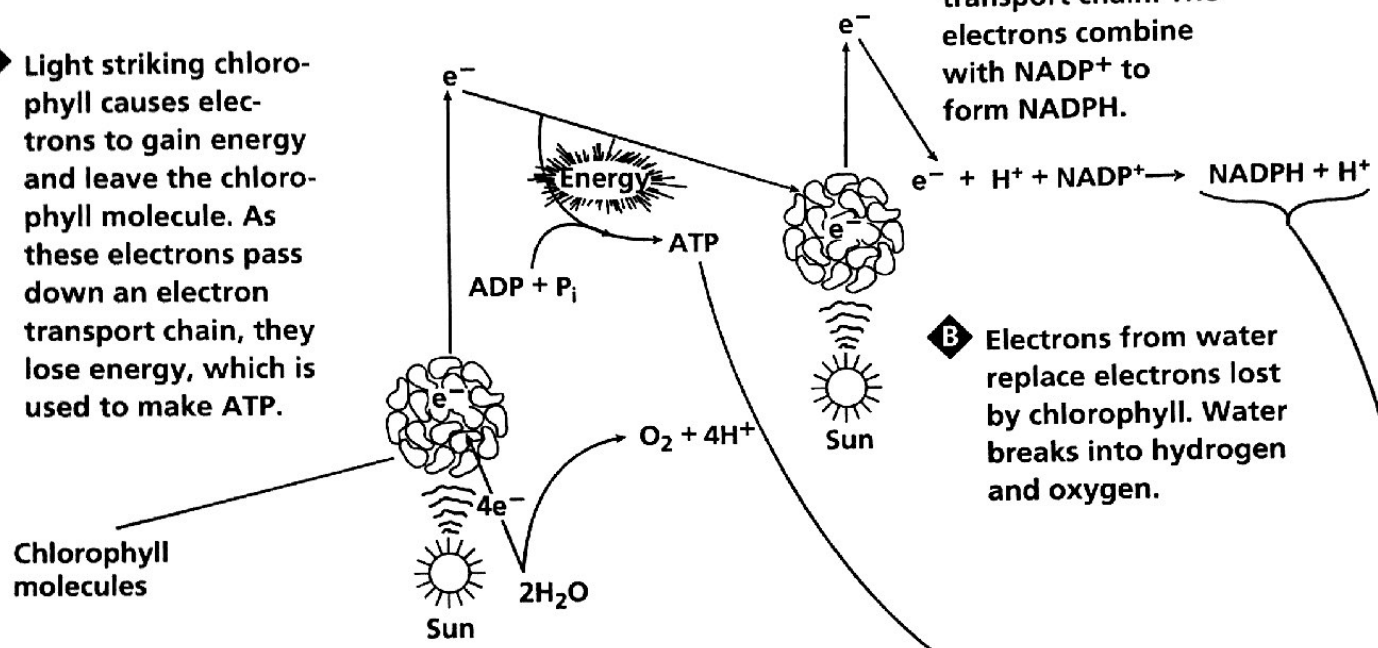
Use with Chapter 9, Section 9.2

Light-Dependent Reactions

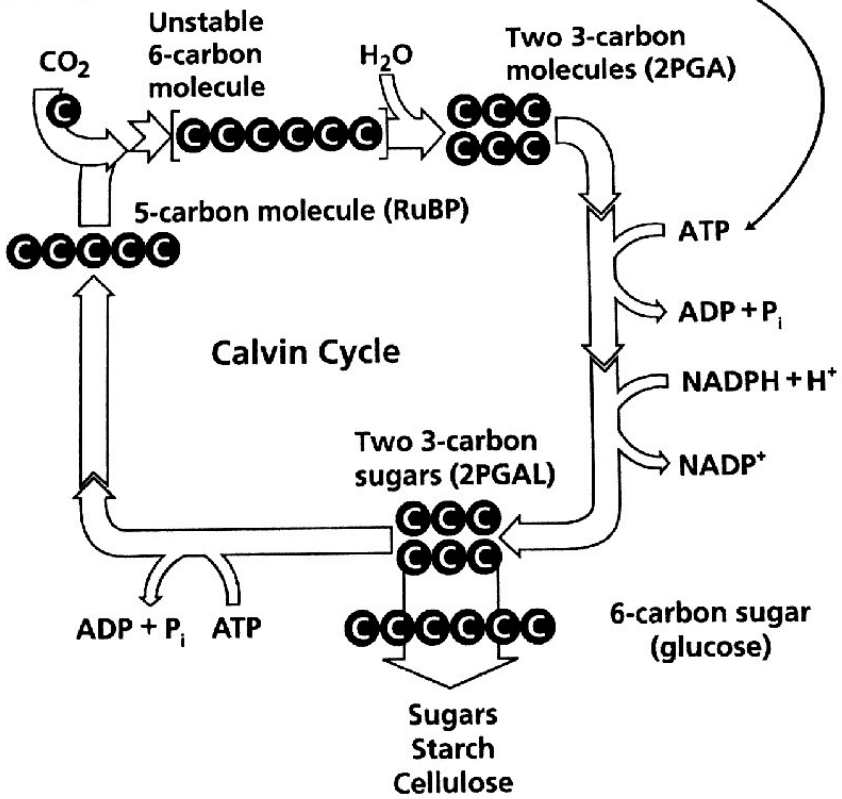
A Light striking chlorophyll causes electrons to gain energy and leave the chlorophyll molecule. As these electrons pass down an electron transport chain, they lose energy, which is used to make ATP.

C Electrons move down another electron transport chain. The electrons combine with $NADP^+$ to form NADPH.

B Electrons from water replace electrons lost by chlorophyll. Water breaks into hydrogen and oxygen.



Light-Independent Reactions



Name Date Class

Worksheet 12

Photosynthesis

Basic Concepts

Use with Chapter 9, Section 9.2

1. Describe what happens when sunlight strikes chlorophyll.

2. What happens as an electron moves down an electron transport chain?

3. What is produced from the splitting of water during the light-dependent reactions? What is this process called?

4. What is the importance of the oxygen produced during the light-dependent reactions?

5. What products of the light-dependent reactions are used in the light-independent reactions?

6. When does carbon fixation occur?

7. What is the source of energy for converting PGA into PGAL during the light-dependent reactions?

8. What is the final product of the light-dependent reactions? What kinds of substances are formed from it?