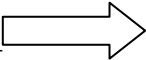


Chapter 7 Thematic Review - Photosynthesis and Cellular Respiration

VIDEO QUESTIONS

1. _____  _____
(raw materials of glycolysis) (energy-rich products)

2. Glucose molecules are broken down into
_____.

3. What are the products at the end of cellular respiration?

4. Fermentation is

_____.

5. Summary of ATP synthesis:

a.

b.

c.

d.

e.

6. Describe the structure of a chloroplast.

7. How is light energy used to produce energized electrons?

8. _____ and _____ are the energy carriers of the light-dependent reactions of photosynthesis.

9. What molecule is the universal building block of sugars and starches?

10. Summary of photosynthesis:

a.

b.

c.

d.

e.

Overview of Photosynthesis (Web/CD Activity 7B)

Reaction Overview	Ingredients or products
<u> </u> B 1. oxidized in the light reactions	A. Carbon dioxide, CO ₂
<u> </u> 2. reduced in Calvin Cycle	B. Water, H ₂ O
<u> </u> 3. carries H and electrons from light reactions to Calvin Cycle	C. Glucose, C ₆ H ₁₂ O ₆
<u> </u> 4. food produced by photosynthesis	D. Oxygen, O ₂
<u> </u> 5. source of H and electrons in glucose	E. ADP + P
<u> </u> 6. source of O atoms in glucose	F. ATP
<u> </u> 7. where O atoms from water end up	G. NADP ⁺
<u> </u> 8. oxidized in Calvin Cycle	H. NADPH
<u> </u> G 9. reduced in light reactions	I. Light
<u> </u> 10. supplies energy to Calvin Cycle	
<u> </u> 11. Where C and O atoms in carbon dioxide end up	
<u> </u> 12. recycled from Calvin Cycle to make ATP	
<u> </u> 13. supplies energy to light reactions	
<u> </u> 14. gas produced by reactions in the thylakoids	
<u> </u> A 15. gas consumed by reactions in the stroma	
<u> </u> 16. source of carbon for carbon fixation	
<u> </u> 17. source of H for the Calvin Cycle	
<u> </u> 18. picks up energized electrons from reactions in the thylakoids	

Photosynthesis in Dry Climates (Web/CD Activity 7F)

Plants employ a variety of ways of fixing CO₂ and saving water. State whether each of the following statements relates to **C₃** plants, **C₄** plants, or **CAM** plants.

- ___ **C₃** ___ 1. may waste energy on photorespiration on a hot day.
- _____ 2. trap carbon in four-carbon compound, which donates it to Calvin Cycle
- _____ 3. corn and sugarcane
- _____ 4. open stomata and trap CO₂ at night
- _____ 5. most plants
- _____ 6. soybeans, oats, wheat, rice
- _____ 7. can grow in hot, dry climates
- _____ 8. also can grow in hot, dry climates
- _____ 9. pineapple and many cacti
- _____ 10. Calvin Cycle uses CO₂ directly from the air