

Photosynthesis - fact sheet

Question	Answer
List three plant organs	<ul style="list-style-type: none"> a. Roots b. Stem c. Leaf
Name the tissues in the cross section of the leaf (5)	<ul style="list-style-type: none"> 1. Upper epidermis 2. Palisade mesophyll 3. Xylem 4. Phloem 5. Stomata
Give the functions of the plant tissues (5)	
Plant tissue	Function
Phloem	Transports sugars
Palisade mesophyll	Carries out photosynthesis
Stomata	Allows gases in and out of the leaf
Xylem	Transports water
Epidermis	Covers the plant
Write the word equation for photosynthesis. (4)	Carbon dioxide + water → Glucose + Oxygen
Where does photosynthesis take place?	In the chloroplasts within the plant cells
How does the plant store the product of photosynthesis?	As insoluble starch
What can be made from the products of photosynthesis? (3)	<ul style="list-style-type: none"> a. Fats / oils b. Cellulose c. Proteins
What additional chemical does the plant need in order to produce protein and where does it get it from? (2)	Nitrate ions from the soil
List the three limiting factors of photosynthesis. (3)	<ul style="list-style-type: none"> a. Light intensity b. Carbon dioxide availability c. Temperature
How can farmers manipulate the conditions to increase the rate of photosynthesis and increase growth? (3)	<ul style="list-style-type: none"> a. Increase light intensity b. Increase carbon dioxide concentration c. Increase temperature (up to a point)