Plant nutrition

IGCSE Biology · Vocabulary in context

Word	Example
photosynthesis /ˌfəʊtəʊˈsɪnθəsɪs/	Plants make sugar by **photosynthesis**.
carbohydrates /ˌkɑːbəʊˈhaɪdreɪts/	Bread and rice are rich in **carbohydrates**.
raw materials /rɔː məˈtɪərɪəlz/	Carbon dioxide and water are the **raw materials** for photosynthesis.
energy /ˈenədʒi/	Food gives your body the **energy** it needs to move.
carbon dioxide /ˈkɑːbən daɪˈɒksaɪd/	We breathe out **carbon dioxide**.
glucose /ˈgluːkəʊs/	Cells use **glucose** for energy.
oxygen /ˈɒksɪdʒn/	Your cells need **oxygen** to release energy.
chlorophyll /ˌklɔːrəʊˈfɪl/	**Chlorophyll** makes leaves green.
pigment /ˈpɪgmənt/	Chlorophyll is a green **pigment**.
chloroplasts /ˈklɔːrəʊplæsts/	**Chloroplasts** make the leaf green.
starch /stɑːtʃ/	Potatoes contain a lot of **starch**.
cellulose /ˈseljuːləʊs/	Plant cell walls are made of **cellulose**.
cell walls /sel wɔːlz/	**Cell walls** stop plant cells from bursting.
respiration /ˌrespɪˈreɪʃn/	**Respiration** releases energy from glucose.
sucrose /ˈsuːkrəʊs/	Plants move sugar around as **sucrose**.

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phloem /ˈfləʊɪm/	The **phloem** carries sugar through the plant.
nectar /ˈnektə/	Bees drink **nectar** from flowers.
insects /ˈɪnsekts/	Bees and ants are **insects**.
pollination /ˌpɒlɪˈneɪʃn/	Bees help **pollination** by carrying pollen.
ions /ˈaɪɒnz/	Water molecules surround the **ions** as they dissolve.
nitrate ions /ˈnaɪtreɪt ˈaɪɒnz/	Plants need **nitrate ions** to make proteins.
amino acids /əˈmiːnəʊ ˈæsɪdz/	Proteins are made of **amino acids**.
magnesium ions /mægˈniːzɪəm ˈaɪɒnz/	Plants need **magnesium ions** to make chlorophyll.
rate /reɪt/	The **rate** of reaction is faster when it is warm.
light intensity /laɪt ɪnˈtensɪti/	Photosynthesis is faster at a higher **light intensity**.
concentration /ˌkɒnsənˈtreɪʃn/	The **concentration** of the acid is 2 mol/dm^3. 2 mol/dm^3
temperature /ˈtemprɪtʃə/	The thermometer shows the water's **temperature**.
limiting factor /ˈlɪmɪtɪŋ ˈfæktə/	On a dark day, light is the **limiting factor** for photosynthesis.
control /kənˈtrəʊl/	Use boiled enzyme as a **control**.
destarching /diːˈstɑːtʃɪŋ/	**Destarching** means keeping a plant in the dark for two days.

Word	Example
variegated	A **variegated** leaf has green and white parts.
soda lime	**Soda lime** takes carbon dioxide out of the air.
gas exchange /gæs eks'tʃeɪndʒ/	**Gas exchange** happens in the leaves.
indicator /'ɪndɪkeɪtə/	The **indicator** changes colour at the end point.
adapted /ə'dæptɪd/	A cactus is **adapted** to dry places.
surface area /'sɜːfɪs 'eərɪə/	Smaller solid pieces provide more **surface area** for reaction.
mesophyll /'mesəfɪl/	The **mesophyll** is the middle layer of the leaf.
cuticle /'kjuːtɪkl/	The waxy **cuticle** stops the leaf losing water.
epidermis /ˌepɪ'dɜːmɪs/	The **epidermis** covers the leaf.
palisade mesophyll /'pælɪseɪd 'mesəfɪl/	The **palisade mesophyll** has many chloroplasts.
spongy mesophyll /'spʌndʒi 'mesəfɪl/	The **spongy mesophyll** has air spaces between its cells.
air spaces /eə 'speɪsɪz/	Gases move through the **air spaces** in the leaf.
stomata /'stəʊmətə/	Gases enter the leaf through the **stomata**.
guard cells /gɑːd selz/	**Guard cells** open and close the stomata.
vascular bundles /'væskjʊlə 'bʌndlz/	The **vascular bundles** contain xylem and phloem.

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Word	Example
xylem /'zaɪləm/	The **xylem** carries water up the plant.