



Words that grow

Own a science word: what it means, what it is like, what it is not.

NAME _____ CLASS _____ DATE _____

LEARNING GOAL

I can explain what photosynthesis means and use the word accurately in science writing.

SUCCESS CRITERIA

- ☐ I can split a science word into parts to unlock its meaning.
- ☐ I can fill all four squares of a Frayer model.
- ☐ I can judge true or false ideas about plant food, with a reason.

1 Meet the words

Say it, split it, see it

Say each word aloud (**capitals** show the stressed part), then see how its parts build the meaning.

photosynthesis

SAY foh-toh-SIN-thuh-sis

photo + **synthesis**
light putting together

From Greek: using **light** to **put together** food.

chlorophyll

SAY KLOR-uh-fil

chloro + **phyll**
pale green leaf

From Greek: the green substance in leaves that absorbs light.

producer

SAY pruh-DYOO-ser

pro + **ducere**
forward to lead

From Latin *producere*, to bring forth: it makes its own food.

2 A Frayer model, done for you

WORKED MODEL

Read all four squares. Notice that each Non-example says **why** it does not fit.

D Definition

An organism that **makes its own food**. Green plants and algae are producers: they use light energy to make glucose by photosynthesis.

Green plant examples

C

- Green plants and the algae in these examples: contain chlorophyll in chloroplasts; use light,
- carbon dioxide and water for photosynthesis.
-

TARGET WORD

producer

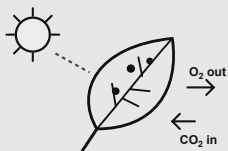
noun

E Examples

- (YES) grass in a meadow
- (YES) an oak tree
- (YES) seaweed (an alga)
- (YES) phytoplankton in the sea

Non-examples N

- (NO) **rabbit**: eats plants, so it is a consumer
- (NO) **mushroom**: a fungus that feeds on dead material
- (NO) **human**: we must eat other organisms



SCIENCE YOU WILL NEED ON PAGE 2

carbon dioxide + **water** $\xrightarrow[\text{chlorophyll}]{\text{light energy}}$ **glucose** + **oxygen**

It happens in **chloroplasts** (the dots), which contain green **chlorophyll**. Most are in leaf cells.

**Your Frayer model: photosynthesis****3 Example or non-example?**

4 marks

Is photosynthesis happening? Write **E** (example) or **N** (non-example) in each box.☐ A sunflower leaf making glucose in sun☐ A rabbit digesting grass☐ Pondweed bubbling oxygen in light☐ A mushroom on a rotting log☐ Roots taking up water from soil☐ Seaweed in sunlit shallow water☐ Yeast fermenting sugar☐ A green cactus stem in sunlight**4 Build your Frayer model**

8 marks

WORD BANK

light energy

chlorophyll

chloroplasts

carbon dioxide

water

glucose

oxygen

D Definition Start: Photosynthesis is the process ...Needs? Where? Makes? **C Characteristics****E Examples**Say why **N Non-examples**

TARGET WORD

photosynthesis

noun

5 Use it in a sentence: include the word producer

2 marks

Animals depend on photosynthesis because _____

6 Quick check: circle T or F, then say why

3 marks

a Plants get their food from the soil.☐ T ☐ F**b** Oxygen is made during photosynthesis.☐ T ☐ F**c** Plants only photosynthesise; they do not respire.☐ T ☐ F

Because _____

Because _____

Because _____