

# Web Mentor

## Basic Science

Basic science questions and knowledge.

Academic / Science

**Category:** Academic

**Subcategory:** Science

**Total Questions:** 21

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### Question 1

What planet is known as the Red Planet?

- ☐ A) Venus
- ☐ B) Mars
- ☐ C) Jupiter
- ☐ D) Mercury

### Question 2

A healthy green plant is supplied with water, minerals, chlorophyll, and sunlight, but carbon dioxide is completely removed from its surroundings. Which process will be directly affected?

- ☐ A) Respiration
- ☐ B) Germination
- ☐ C) Photosynthesis
- ☐ D) Transpiration

**Question 3**

A scientist blocks the xylem vessels of a plant without affecting the phloem. Which event is most likely to occur first?

- ☐ **A)** Food cannot move to roots
- ☐ **B)** Water cannot reach the leaves
- ☐ **C)** Seeds stop germinating
- ☐ **D)** Flowers stop producing pollen

**Question 4**

Why is iodine used after removing chlorophyll from a leaf during the starch test?

- ☐ **A)** To remove water
- ☐ **B)** To colour chlorophyll
- ☐ **C)** To detect stored starch
- ☐ **D)** To increase photosynthesis

**Question 5**

A cactus has very small leaves modified into spines. How does it continue to prepare food?

- ☐ **A)** Roots perform photosynthesis
- ☐ **B)** Flowers perform photosynthesis
- ☐ **C)** Green stem performs photosynthesis
- ☐ **D)** Fruits prepare food

**Question 6**

Which statement correctly explains why guard cells are important?

- ☐ **A)** They absorb minerals
- ☐ **B)** They manufacture starch
- ☐ **C)** They regulate the opening and closing of stomata
- ☐ **D)** They transport food

**Question 7**

A potted plant is placed in complete darkness for one week but watered regularly. Which statement is correct?

- ☐ **A)** Photosynthesis continues normally
- ☐ **B)** Respiration stops
- ☐ **C)** Photosynthesis stops, but respiration continues
- ☐ **D)** Both photosynthesis and respiration stop

**Question 8**

Which pair of processes mainly depends on stomata?

- ☐ **A)** Germination and pollination
- ☐ **B)** Photosynthesis and transpiration
- ☐ **C)** Fertilisation and seed dispersal
- ☐ **D)** Growth and flowering

**Question 9**

Food moves in both upward and downward directions inside plants because

- ☐ **A)** Xylem carries food
- ☐ **B)** Phloem transports food in both directions
- ☐ **C)** Guard cells push food
- ☐ **D)** Chlorophyll stores food

**Question 10**

A student says, 'Photosynthesis cannot occur without oxygen.' Which response is correct?

- ☐ **A)** The statement is correct
- ☐ **B)** Oxygen is required before photosynthesis begins
- ☐ **C)** Oxygen is actually produced during photosynthesis
- ☐ **D)** Oxygen is stored inside chlorophyll

**Question 11**

Which condition would reduce transpiration the most?

- ☐ **A)** Wide open stomata
- ☐ **B)** Bright sunlight
- ☐ **C)** Closed stomata
- ☐ **D)** High temperature

**Question 12**

Why is chlorophyll called an essential pigment?

- ☐ **A)** It absorbs minerals
- ☐ **B)** It absorbs sunlight needed for photosynthesis
- ☐ **C)** It transports water
- ☐ **D)** It stores oxygen

**Question 13**

Which process mainly helps pull water from roots to leaves?

- ☐ **A)** Pollination
- ☐ **B)** Transpiration
- ☐ **C)** Fertilisation
- ☐ **D)** Diffusion

**Question 14**

If phloem is damaged while xylem remains healthy, the plant will still

- ☐ **A)** Transport food normally
- ☐ **B)** Absorb water from the soil
- ☐ **C)** Distribute glucose to all parts
- ☐ **D)** Stop photosynthesis immediately

**Question 15**

Which observation proves that osmosis has taken place in the potato experiment?

- ☐ **A)** Potato changes colour
- ☐ **B)** Sugar solution level rises
- ☐ **C)** Water turns blue
- ☐ **D)** Potato becomes heavier due to minerals

**Question 16**

Which gas enters a leaf during photosynthesis but leaves the leaf during respiration?

- ☐ **A)** Carbon dioxide
- ☐ **B)** Oxygen
- ☐ **C)** Nitrogen
- ☐ **D)** Both A and B, depending on the process

**Question 17**

Why are root hairs numerous and very thin?

- ☐ **A)** To store starch
- ☐ **B)** To increase the surface area for water absorption
- ☐ **C)** To perform respiration
- ☐ **D)** To make chlorophyll

**Question 18**

Which statement about xylem is FALSE?

- ☐ **A)** It transports water
- ☐ **B)** It transports minerals
- ☐ **C)** Its movement is bidirectional
- ☐ **D)** It forms part of the vascular system

**Question 19**

A student removes all leaves from a plant. Which function is most immediately affected?

- ☐ **A)** Seed formation
- ☐ **B)** Food preparation
- ☐ **C)** Root growth
- ☐ **D)** Mineral absorption

**Question 20**

Which process releases energy stored in glucose?

- ☐ **A)** Photosynthesis
- ☐ **B)** Respiration
- ☐ **C)** Transpiration
- ☐ **D)** Osmosis

## Question 21

Which statement best explains why plants need both xylem and phloem?

- ☐ **A)** Both transport only water
- ☐ **B)** Xylem transports food while phloem transports water
- ☐ **C)** Xylem transports water and minerals, while phloem distributes food throughout the plant
- ☐ **D)** Both perform photosynthesis

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