8. Transport in plants

Starter Quiz · 课前小测

IGCSE Biology Name: _____ Score: _____

1. Xylem transports:
   - ☐ water and minerals up the plant
   - ☐ sugars down the plant
   - ☐ oxygen to the roots
   - ☐ sugars to the leaves
2. Water enters a root hair cell by:
   - ☐ osmosis
   - ☐ active transport
   - ☐ respiration
   - ☐ photosynthesis
3. Transpiration is the loss of:
   - ☐ water vapour from the leaves
   - ☐ sugars from the roots
   - ☐ oxygen from the stomata
   - ☐ minerals from the soil
4. Translocation is the transport of:
   - ☐ sugars in the phloem
   - ☐ water in the xylem
   - ☐ oxygen in the blood
   - ☐ minerals in the roots
5. Phloem transports:
   - ☐ sugars made in the leaves
   - ☐ only water
   - ☐ only minerals
   - ☐ oxygen
6. Which increase the rate of transpiration? (Select all that apply.)
   - ☐ more wind
   - ☐ higher temperature

☐ more light

☐ higher humidity

Tick every correct option.

7. Phloem can transport substances both up and down the plant.

   ☐ True ☐ False

8. Evaporation of water from the leaves helps pull water up the plant.

   ☐ True ☐ False

9. A plant wilts if it loses water faster than it can take it up.

   ☐ True ☐ False

10. Phloem can carry sugar both up and down the plant, depending on need.

    ☐ True ☐ False

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Answers · 答案

IGCSE Biology

1. **water and minerals up the plant**

   Xylem carries water and minerals upward.

2. **osmosis**

   Water moves in by osmosis down the water gradient.

3. **water vapour from the leaves**

   Transpiration is water vapour loss, mainly through stomata.

4. **sugars in the phloem**

   Translocation moves sugars in the phloem.

5. **sugars made in the leaves**

   Phloem carries sugars (translocation).

6. **more wind; higher temperature; more light**

   Higher humidity slows transpiration; the others speed it up.

7. **True**

   Translocation moves sugars to wherever they are needed.

8. **True**

   This creates the transpiration stream.

9. **True**

   Flaccid cells can no longer support the plant.

10. **True**

    Direction depends on where the sources and sinks are.