1 The photograph shows a plant.

State the name of the type of tissue that transports water in a plant.

..... [1]

[Total: 1]

2 Xylem is a specialised plant tissue.

State **two** functions of xylem tissue.

1 .....

2 ..... [2]

[Total: 2]

3 State **two** substances that are transported only in the phloem.

..... [1]

[Total: 1]

4 State **one** role of xylem vessels **other than** transport.

..... [1]

[Total: 1]

5 Complete the definition of the term transpiration.

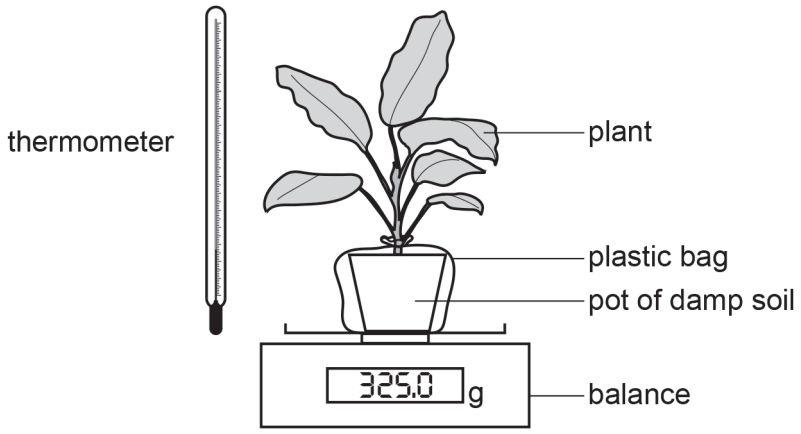
Transpiration is the loss of water vapour from plant leaves by

..... of water at the surfaces of .....

cells, followed by diffusion of water vapour through the ..... . [3]

[Total: 3]

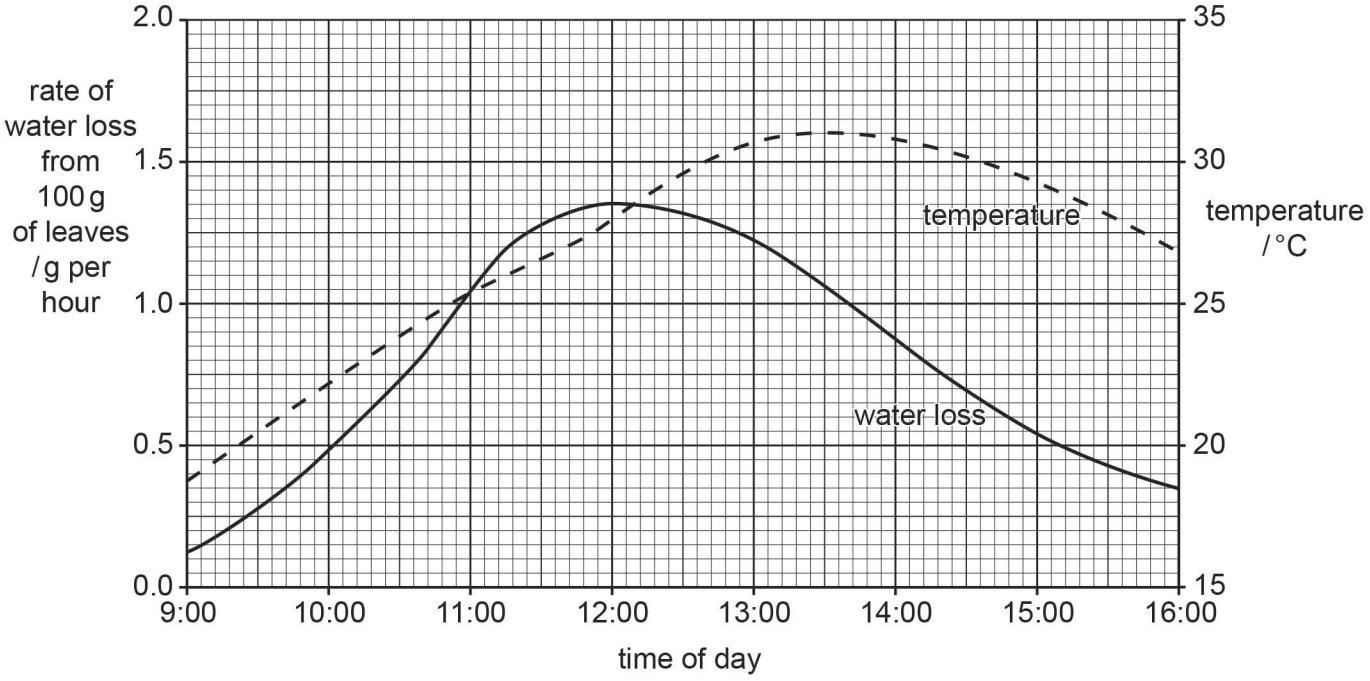
6 The diagram shows apparatus that can be used to measure water loss in a plant.



The apparatus shown in the diagram was used in an investigation.

The results of this investigation are shown in the graph.

Readings were taken at hourly intervals during the day between 9:00 and 16:00.



Use the information in the graph to state:

the maximum rate of water loss from 100 g of leaves ..... g per hour

the time at which the temperature was highest .....

the maximum temperature reached during the investigation ..... °C [3]

[Total: 3]

7 Explain why some parts of a plant can act as both a source and a sink.

.....

.....

.....

.....

..... [2]

[Total: 2]

8 The movement of sucrose in plants can be modelled using laboratory apparatus.

Diagram A shows the apparatus used to model the movement of sucrose in a plant:

- Partially permeable bags were attached tightly to the ends of tube **Q**.
- The bag representing a **source** was filled with a coloured sucrose solution.
- The bag representing a **sink** was filled with water.
- The containers and tube **Q** and tube **S** were filled with water.

diagram A

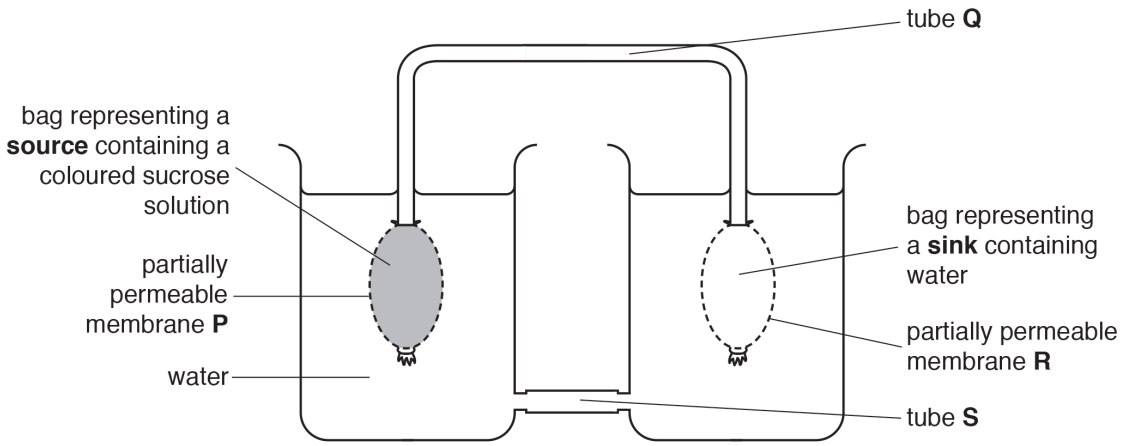
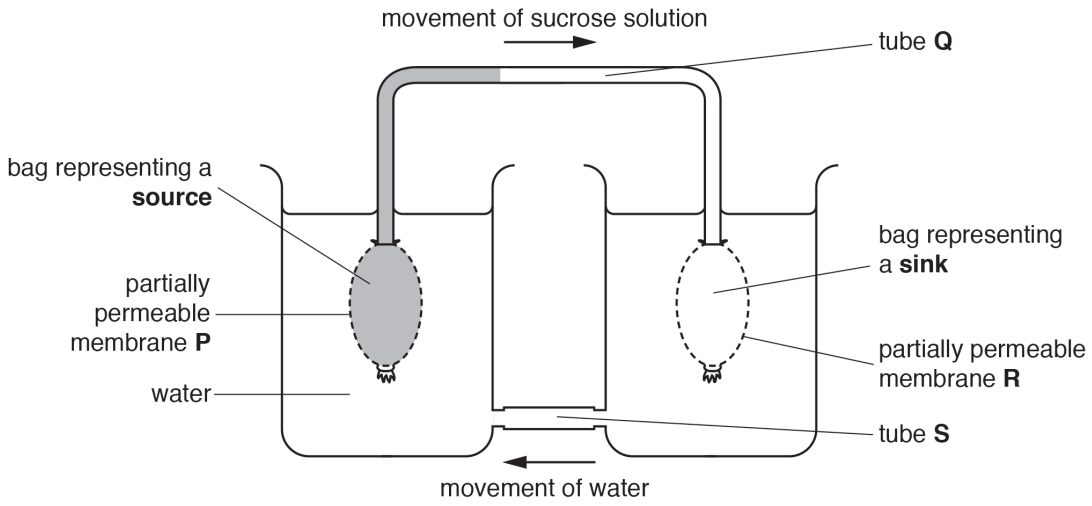


Diagram B shows the position of the coloured sucrose solution 30 minutes after the apparatus was set up.

The arrows show the direction of the movement of the liquids.

diagram B



State the name of the tissue represented by tube **Q** and the name of the tissue represented by tube **S** in **diagram B**.

Q .....

S ..... [2]

[Total: 2]