

Worksheet 5: Match terms and definitions

Match the terms in Column A to the correct definition in Column B.

Column A	Column B
1. Wilting	A. Vascular tissue that carries water and minerals in a plant
2. Guttation	B. Process that requires energy to proceed in a plant
3. Phloem	C. Process of moving nutrients from manufacture sites to storage sites in a plant
4. Xylem	D. Pathway water takes when moving into the root via cell walls until reaching the xylem vessels
5. Active transport	E. The main storage site for manufactured nutrients in a plant
6. Sucrose	F. The main site for the manufacture of nutrients in a plant
7. Source	G. The main type of manufactured carbohydrate in a plant
8. Sink	H. Vascular tissue that carries nutrients in a plant
9. Translocation	I. Process in which the turgor pressure in a plant is so low that the stem and leaves appear soft and withered
10. Apoplast	J. Process in which plants excrete excess water on the leaf margins, via hydathodes

Total: 10 marks

Worksheet 6: Complete the sentences

Use the words in the list below to complete the following sentences.

area; increase; against; surface; walls; osmosis; apoplast; diffusion; symplast pathway; xylem; into; vacuole; cytoplasm; swells; two; cell; more; higher; membrane

- Root hair cells increase the _____ to _____ the rate of water absorption. (3)
- Water in the soil has a _____ water potential than the water in the cell sap. (1)
- Water moves by _____ down the water potential gradient, _____ the cell. (2)
- Because there are _____ minerals in the plant than in the soil, absorption of nutrients into the root is _____ the gradient and so requires a large amount of energy. (2)
- As water is absorbed into the root, it moves into the _____, which _____, increasing turgor pressure. (2)
- Water can move along _____ pathways from the soil into the _____ in the central part of the root. (2)
- One route water can take is to move through the _____ and intercellular air spaces. This happens by _____. (2)
- This route is called the _____ pathway. (1)
- Another route water can take is to move through the _____ from the cell to cell, through the cell _____. This happens by _____. (3)
- This route is called the _____. (2)

Total: 20 marks