

1. <b>phloem</b>	part of the vascular bundle in plants, responsible for the transport of sugars	15. <b>ruminant</b>	a herbivore with a specialised digestive system, including several chambers to the stomach to promote the fermentation and digestion of plant material
2. <b>phospholipid</b>	a biochemical consisting of a phosphate group attached to a lipid; major component of the cell or plasma membrane	16. <b>specialise</b>	to develop characteristics for special purposes
3. <b>photosynthesis</b>	the process by which plants make their own food using carbon dioxide, water and sunlight, in the presence of chlorophyll	17. <b>spiracles</b>	opening to the exoskeleton of the breathing tubes in insects
4. <b>procaryotic cells</b>	cells without a nucleus, organelles or internal membranes e.g. bacteria	18. <b>spontaneous generation</b>	the theory that living cells could arise from non-living matter; now discredited
5. <b>protein</b>	an organic compound made up of amino acid units and is essential for growth, repair and life processes	19. <b>starch</b>	a white, insoluble form of carbohydrate that occurs in plant parts such as seeds, grains and tubers
6. <b>radioisotope</b>	a form of an element in which the atoms are unstable and emit radiation in the form of alpha and/or beta particles and/or gamma rays	20. <b>stomata</b>	the pores in plant leaves with guard cells, responsible for the exchange of gases and the loss of water through transpiration
7. <b>radiopharmaceutical</b>	a combination of a radioisotope and a pharmaceutical that ensures the substance moves to the appropriate organ so that medical diagnosis can occur or movement of substances be traced	21. <b>surface area/volume ratio</b>	the surface area divided by the volume; relates to the efficiency of the exchange of materials or heat
8. <b>resolution</b>	the ability of a device such as a microscope to produce a clear image	22. <b>technology</b>	applied science
9. <b>respiration</b>	the process by which living organisms obtain energy by using glucose and oxygen and producing carbon dioxide, water and energy	23. <b>terrestrial</b>	living or growing on land
10. <b>respiratory system</b>	the set of organs, including lungs or gills, responsible for the exchange of gases in vertebrates	24. <b>tissue</b>	a group of cells or cell products that form a definite structural material in a plant or animal
11. <b>reticulum</b>	the second chamber of the ruminant stomach where food is processed into cud, which is eventually regurgitated and rechewed	25. <b>tracheae</b>	the tubes that assist gaseous exchange in insects and other arthropods
12. <b>ribosome</b>	an organelle responsible for the manufacture of proteins	26. <b>tracheoles</b>	the fine endings of the tracheae in insects and arthropods that come into contact with their internal cells and allow exchange of gases
13. <b>root hair cells</b>	specialised epidermal cells located behind the root tip	27. <b>translocation</b>	the process by which sugars and other organic molecules are transported within the phloem of plants
14. <b>rumen</b>	the large chamber in the stomach of ruminants into which food is initially swallowed and where fermentation occurs	28. <b>transpiration</b>	the evaporation of water through the pores of a plant
		29. <b>vacuoles</b>	relatively large organelles that can expand enormously to hold watery liquid or secretions
		30. <b>xylem</b>	part of the vascular bundle, made up of tracheids; responsible for the transport of water and mineral salts