

phloem

part of the vascular bundle in plants, responsible for the transport of sugars

phospholipid

a biochemical consisting of a phosphate group attached to a lipid; major component of the cell or plasma membrane

photosynthesis

the process by which plants make their own food using carbon dioxide, water and sunlight, in the presence of chlorophyll

procaryotic cells

cells without a nucleus, organelles or internal membranes e.g. bacteria

protein

an organic compound made up of amino acid units and is essential for growth, repair and life processes

radioisotope

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

radiopharmaceutical

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

resolution

the ability of a device such as a microscope to produce a clear image

respiration

the process by which living organisms obtain energy by using glucose and oxygen and producing carbon dioxide, water and energy

respiratory system

the set of organs, including lungs or gills, responsible for the exchange of gases in vertebrates

reticulum

the second chamber of the ruminant stomach where food is processed into cud, which is eventually regurgitated and rechewed

ribosome

an organelle responsible for the manufacture of proteins

root hair cells

specialised epidermal cells located behind the root tip

rumen

the large chamber in the stomach of ruminants into which food is initially swallowed and where fermentation occurs

ruminant

a herbivore with a specialised digestive system, including several chambers to the stomach to promote the fermentation and digestion of plant material

specialise

to develop characteristics for special purposes

spiracles

opening to the exoskeleton of the breathing tubes in insects

spontaneous generation

the theory that living cells could arise from non-living matter; now discredited

starch

a white, insoluble form of carbohydrate that occurs in plant parts such as seeds, grains and tubers

stomata

the pores in plant leaves with guard cells, responsible for the exchange of gases and the loss of water through transpiration

surface area/volume
ratio

the surface area divided by
the volume; relates to the
efficiency of the exchange of
materials or heat

technology

applied science

terrestrial

living or growing on
land

tissue

a group of cells or cell
products that form a
definite structural material
in a plant or animal

tracheae

the tubes that assist
gaseous exchange in
insects and other
arthropods

tracheoles

the fine endings of the tracheae in insects and arthropods that come into contact with their internal cells and allow exchange of gases

translocation

the process by which sugars and other organic molecules are transported within the phloem of plants

transpiration

the evaporation of water through the pores of a plant

vacuoles

relatively large organelles that can expand enormously to hold watery liquid or secretions

xylem

part of the vascular bundle, made up of tracheids; responsible for the transport of water and mineral salts