LC Agricultural Science – Key Definitions

Eukaryotic cell	A cell containing a membrane-bound nucleus and membrane-bound organelles (mitochondria and chloroplast).
Diffusion	The movement of a substance from an area of high concentration to an area of low concentration along a concentration gradient.
Osmosis	The movement of water across a semipermeable membrane from an area of high water concentration to an area of low water concentration. It is a passive process and does not require energy.

Cut dotted horizontal lines. Fold vertical lines.

LC Agricultural Science – Key Definitions

Aerobic respiration	Involves the release of energy from glucose in the presence of oxygen. Aerobic respiration occurs in two stages (glycolysis and the Krebs cycle). Glycolysis occurs in the cytosol and the Krebs cycle occurs in the mitochondria.
Active transport	The movement of a substance from an area of low concentration to an area of high concentration gradient. Active transport requires energy.
Lignins	Complex organic compounds found in the cell walls of plants. They provide strength and support to the cell walls.

Cut dotted horizontal lines. Fold vertical lines.

LC Agricultural Science – Key Definitions

Cotyledons	Provide energy for the germinating seeds until the true leaves have formed and can photosynthesise. In some cases the cotyledons may become the first leaves of the germinated seedling; hence, the cotyledons are often referred to as seed leaves.
Plant tissue: dermal tissue	Outer layer of tissue on a plant. Its function is protection.
Plant tissue: ground tissue	Functions include photosynthesis, storage of food and support.

Cut dotted horizontal lines. Fold vertical lines.

LC Agricultural Science – Key Definitions

Plant tissue: vascular tissue	Transport tissue. It is composed of phloem and xylem. Phloem transports sugar and xylem transports water and minerals. Xylem and phloem tissue are found together in vascular bundles in the leaves and stems of plants.
Xylem	Composed of xylem vessels and tracheids. Xylem tissue is dead tissue. The cell walls of xylem tissue are reinforced with lignin.
Phloem tissue	Composed of sieve tubes and companion cells. Phloem tissue is living tissue. Companion cells control and maintain sieve tubes.

Cut dotted horizontal lines. Fold vertical lines.

LC Agricultural Science – Key Definitions

Monocotyledons (monocots)	Monocotyledons have one cotyledon in the seed or one seed leaf. Examples of monocots include grasses and cereals.
Dicotyledons (dicots)	Dicotyledons have two cotyledons in the seed or two seed leaves. Examples include daisies, dandelions and most other flowering plants.
The longitudinal section of a root	Composed of the following sections: root cap (protection), zone of cell division (meristematic tissue), zone of elongation (cells increase in size) and zone of differentiation (cells become specialised).

Cut dotted horizontal lines. Fold vertical lines.