KEY TERMS FOR LAB EXERCISE 1:

**Cell wall:** A protective layer external to the plasma membrane in plant cells, bacteria, fungi, and some protists. In plant cells, the wall is formed of cellulose fibers embedded in a polysaccharide-protein matrix. The primary cell wall is thin and flexible, whereas the secondary cell wall is stronger and more rigid and is the primary constituent of wood.

**Central vacuole:** A membranous sac in a mature plant cell with diverse roles in reproduction, growth, and development.

**Chloroplasts:** An organelle found only in plants and photosynthetic protists that absorbs sunlight and uses it to drive the synthesis of organic compounds from carbon dioxide and water.

**Cilium:** A short cellular appendage specialized for locomotion, formed from a core of nine outer doublet microtubules and two inner single microtubules ensheathed in an extension of plasma membrane.

**Cytoplasm:** The entire contents of the cell, exclusive of the nucleus, and bounded by the plasma membrane.

**Eukariotic cell:** A type of cell with a membrane-enclosed nucleus and membrane-enclosed organelles, present in protists, plants, fungi, and animals; also called eukaryote.

**Flagellum:** A long cellular appendage specialized for locomotion, formed from a core of nine outer doublet microtubules and two inner single microtubules, ensheathed in an extension of plasma membrane.

**Mitochondrion:** An organelle in eukaryotic cells that serves as the site of cellular respiration.

**Nucleus:** The chromosome-containing organelle of a eukaryotic cell.

**Organelle:** One of several formed bodies with specialized functions, suspended in the cytoplasm of eukaryotic cells.

**Prokaryotic cell:** A type of cell lacking a membrane-enclosed nucleus and membrane-enclosed organelles; found only in the domains Bacteria and Archaea.

**Pseudopodium:** A cellular extension of amoeboid cells used in moving and feeding.