

Unit #2 Cells

Life Processes

Organism: A living thing composed of cell(s) that carries out metabolic activities (life processes).

Multicellular Organisms: More than one cell, e.g., plants, animals

Unicellular Organisms: One cell, e.g., bacteria, paramecium

Homeostasis: is the ability to maintain a relatively stable internal state that persists despite changes in the world outside.

Metabolism: the chemical processes that occur within a living organism in order to maintain life.

8 Metabolic activities/Life processes

1. **Respiration:** Releases ENERGY from nutrients and converts into usable form, ATP. (think currency converter!)
2. **Regulation:** Coordination & control of life activities to maintain homeostasis.
3. **Reproduction:** Creates a new organism or cell. Important for a species, not the individual!!
4. **Growth:** To increase in size or number of cells.
5. **Synthesis:** Combine **SIMPLE** substances to MAKE something **COMPLEX**, e.g., hormones, proteins
6. **Transport:** Distributes substances around the organism where they are needed. Also happens inside, into and out of a cell.
7. **Excretion:** Removal of metabolic wastes.

Metabolic wastes are produced by the body's cells, e.g., CO₂, H₂O, urea

8. **Nutrition:** providing or obtaining nutrients to be used as fuel for growth & repair of cell structures.