

Cells and Systems

Central concept: **Living Systems**

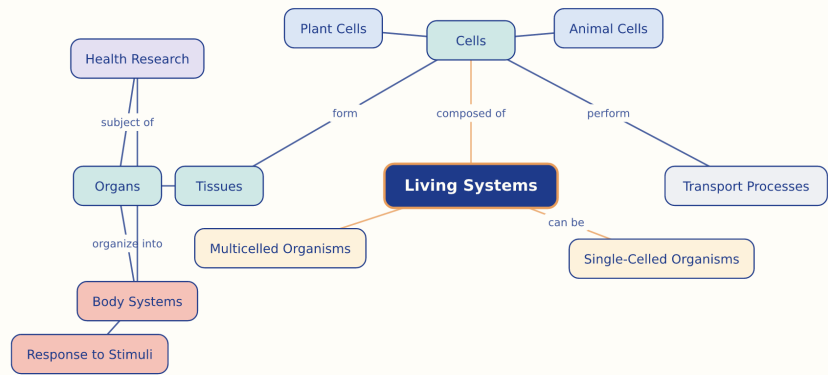
Connections

- Living Systems (composed of) -> Cells
- Cells (form) -> Tissues
- Tissues (form) -> Organs
- Organs (organize into) -> Body Systems
- Cells (includes) -> Plant Cells
- Cells (includes) -> Animal Cells
- Living Systems (can be) -> Single-Celled Organisms
- Living Systems (can be) -> Multicelled Organisms
- Cells (perform) -> Transport Processes
- Body Systems (enable) -> Response to Stimuli
- Body Systems (studied by) -> Science
- Organs (subject of) -> Science

Notes

- **Living Systems:** Organisms organized at multiple levels from cells to complex structures [Topic](#)
- **Cells:** Basic unit of life; all living things composed of cells [Outcome](#), [Outcome](#)
- **Tissues:** Groups of similar cells that work together [Outcome](#), [Outcome](#)
- **Organs:** Structures made of tissues that perform specific functions [Outcome](#), [Outcome](#)
- **Plant Cells:** Have cell walls and other structures distinct from animal cells [Outcome](#), [Outcome](#)
- **Animal Cells:** Have cell membranes; lack cell walls [Outcome](#), [Outcome](#)
- **Single-Celled Organisms:** One cell performs all life functions; example amoeba [Outcome](#), [Outcome](#)
- **Multicelled Organisms:** Many cells work together; cells specialize in different functions [Outcome](#), [Outcome](#)
- **Body Systems:** Respiration, circulation, digestion, excretion, sensory awareness [Outcome](#)
- **Transport Processes:** Diffusion and osmosis move gases and liquids based on concentration [Outcome](#), [Outcome](#)
- **Response to Stimuli:** Body changes in response to internal and external conditions [Outcome](#)
- **Health Research:** Studies improve understanding of cells, organs and systems [Outcome](#)

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Central concept Structure Cell Types Organism Types Human Function Cell Function Applications

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