

Topics	Notes, Diagrams, and Drawings
How are organism's organized?	<ul style="list-style-type: none"> • Molecules make up cells. • All living things are made up of cells. • Unicellular organisms are made of a single cell that completes all of its functions needed for survival. • Multicellular organisms can be made up of more than a trillion cells.
What are unicellular organisms?	<ul style="list-style-type: none"> • Unicellular organisms can be either prokaryotic or eukaryotic.
What are prokaryotic organisms?	<ul style="list-style-type: none"> • Prokaryotic organisms lack a nucleus • Smaller than eukaryotic organisms • Have fewer cell structures • Bacteria and Archaea
What are eukaryotic organisms?	<ul style="list-style-type: none"> • Eukaryotic organisms have a nucleus • Have multiple specialized organelles • Animals, Fungi, Plants, Protist
What are multicellular organisms?	<ul style="list-style-type: none"> • Any organism that is made up of multiple eukaryotic cells. • Made up of multiple specialized cells, specific to jobs needed for survival.
What is cell differentiation?	<ul style="list-style-type: none"> • All multicellular organisms come from one cell- a fertilized egg. • Cell division starts quickly after fertilization. • The first cells can become any type of specialized cell, i.e. muscle cells, nerve cells, or blood cells. • Definition: the process by which cells become different types of cells. • Most of an organism's cells have the same number of chromosomes. • Different cells use different parts of the chromosome for instructions.

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What are animal stem cells?	<ul style="list-style-type: none">• Definition: unspecialized cells that are able to develop into many different cell types.• Embryos have many stem cells, adults have fewer.• Adult stem cells are important for repair and replacement of old and damaged cells.• Stem cells in bone marrow can produce over a dozen different types of blood cells.• Found also in skeletal muscles.
What are plant stem cells?	<ul style="list-style-type: none">• Meristems: areas of the plant that contains unspecialized cells.• Found in the tip of roots and stems.• Becomes parts of stems, leaves, flowers, or roots.
What are tissues?	<ul style="list-style-type: none">• Tissues are groups of cells that work together to carry out specific tasks,• Many animals have four main types of tissue; muscle, connective, nervous, epithelial.• Plants have three main types of tissue; dermal, vascular, and ground.
What are organs?	<ul style="list-style-type: none">• Organs are groups of tissue that work together to carry out particular tasks,• Example in Animals: stomach, specialized for breaking down food.• Example in Plants: Leaves, specialized for photosynthesis.
What are organ systems?	<ul style="list-style-type: none">• Organ systems are groups of organs that work together to carry out a series of tasks,• Example in Animals; digestive system• Example in Plants: two main organ systems; shoot and root systems.
What is an organism?	<ul style="list-style-type: none">• Anything that can live on its own, may be unicellular or multicellular.