

Levels of Organization

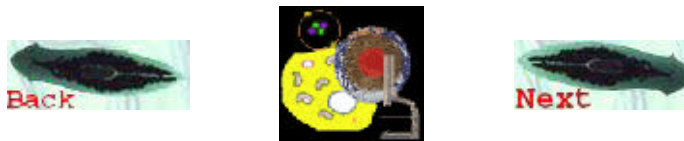


In unicellular (single-celled) organisms, the single cell performs all life functions. It functions independently. However, multicellular (many celled) organisms have various levels of organization within them. Individual cells may perform specific functions and also work together for the good of the entire organism. The cells become dependent on one another.

Multicellular organisms have the following 5 levels of organization ranging from simplest to most complex:

<p>LEVEL 1 - Cells</p> <ul style="list-style-type: none"> ● Are the basic unit of structure and function in living things. ● May serve a specific function within the organism ● Examples- blood cells, nerve cells, bone cells, etc. 	
<p>LEVEL 2 - Tissues</p> <ul style="list-style-type: none"> ● Made up of cells that are similar in structure and function and which work together to perform a specific activity ● Examples - blood, nervous, bone, etc. Humans have 4 basic tissues: connective, epithelial, muscle, and nerve. 	
<p>LEVEL 3 - Organs</p> <ul style="list-style-type: none"> ● Made up of tissues that work together to perform a specific activity ● Examples - heart, brain, skin, etc. 	
<p>LEVEL 4 - Organ Systems</p> <ul style="list-style-type: none"> ● Groups of two or more tissues that work together to perform a specific function for the organism. ● Examples - circulatory system, nervous system, skeletal system, etc. ● The Human body has 11 organ systems - circulatory, digestive, endocrine, excretory (urinary), immune(lymphatic), integumentary, muscular, nervous, reproductive, respiratory, and skeletal. 	
<p>LEVEL 5 - Organisms</p> <ul style="list-style-type: none"> ● Entire living things that can carry out all basic life processes. Meaning they can take in materials, release energy from food, release wastes, grow, respond to the environment, and reproduce. ● Usually made up of organ systems, but an organism may be made up of only one cell such as bacteria or protist. ● Examples - bacteria, amoeba, mushroom, sunflower, human 	

The levels of organization in the correct order then are:
 cells --> tissues --> organs --> organ systems --> organisms



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