* All organisms are composed of cells-the fundamental unit of life. Most organisms are single cells with bacteria serving as the majority. Although some of these organisms live in colonies, they are still unicellular. These organisms live together, and each cell in the colony is the same. **However, each cell must carry out all life processes in order for that cell to survive.** Most unicellular organisms are of [microscopic](http://en.wikipedia.org/wiki/Microscopic) size and are thus classified as [microorganisms](http://en.wikipedia.org/wiki/Microorganism). ( amoebas, paramecium, bacteria)
* Other organisms, including humans,are multicellular.
* Cells carry on the many functions needed to sustain life. They grow and divide; thereby producing more cells. This requires that they take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or an organism needs.
* Specialized cells perform specialized functions in multicellular organisms. Groups of specialized cells cooperate to form a tissue, such as a muscle. Different tissues are in turn grouped together to form larger functional units, called organs. Each type of cell, tissue, and organ has a distinct structure and set of functions that serve the organism as a whole. In complex multicelluar organisms, only the surface cells are in contact with the external environment and are able to exchange substances with it. **Cell within multicelluar organisms are too far away from the environment for direct exchange of substances, This is the reason multicelluar organisms have developed transport systems.**

| **Definition** |
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| Vocabulary | |  |  | | --- | --- | | **CELLS** | | | cell | the basic unit of life | | multicellular | composed of several of many cells | | unicellular (single cell) | composed of one cell | | permeable | able to pass through | | **TISSUES** | | | tissue | similar cells with a specific function | |

Cells have a nucleus and a cell membrane.