

What makes something Alive?

For something to be “alive” or known as a living thing, it must pass a sort of “test” created by biologists, or scientists who study living things. Anything that can pass this test is considered to be alive.

A living thing must have all seven characteristics, or attributes, in order to be considered “alive” Read on to find out what the seven attributes of living things are.

Living things are *made of cells*. Cells are the smallest structural unit of an organism. Anything that is alive is made up of cells.

Living things also *have cellular organization*. This means that the cells that make up the living thing are organized by the kind of cell or the job of the cell. In human beings there are skin cells, muscle cells, brain cells, blood cells...many different kinds of cells. The more complicated the living thing, the more different kinds of cells it is likely to have.

Living organisms also *use energy*. Plants use the sun's energy to make their own food. Animals eat plants or other animals. When eating, animals use energy to digest food. Generally, the larger and more complicated an organism is, the more energy it uses to stay alive.

Living organisms *respond to their environment*. Plants grow to reach the sun, creating more leaves to collect the sun's energy. They may lose leaves when the seasons change. Animals adapt to different weather and climate conditions in order to obtain food, to survive, and to hide from predators.

Living things *grow*. Growth is a natural part of the life of the organism. If the organism is damaged, it may grow new cells to repair the injury. When an organism can no longer grow, it dies.

Living organisms must *have the ability to reproduce*. Organisms must be able to make copies of themselves, or the organism would become extinct. Some organisms reproduce sexually, and have male and/or female reproductive parts. Others reproduce asexually, meaning they can make copies of themselves without sex occurring.

Living organisms must *adapt*. If the environment changes, a living thing must possess the ability to adapt to these changes. Some animals hibernate when the seasons change. Some animals migrate when their food supply is in short supply. Many plants have reproductive cycles that follow the seasonal changes in temperature and rainfall.