

CELLS

Living things...
ARE MADE OF CELLS

ex: Bacteria are single-celled organisms.

Unicellular - one celled organisms
- bacteria, amoeba

Multicellular - made of many cells

Is it alive?



Change over a LONG period of time to better SURVIVE in an environment

ex: Galapagos Finches beaks changed allowing them to eat nuts and seeds.

Living things...
CHANGE OVER TIME

ADAPT OVER TIME

REPRODUCE

Living things...
PRODUCE OFFSPRING

ex: Spiders can lay a 1000 eggs depending on the species!

Asexual 1 parent
- conjugation
- binary fission

Sexual 2 parents

ENERGY

GROW

Living things...
GROW and DEVELOP

ex: Bamboo plants can grow 10 cm a day!

Increase in SIZE, Mature over time, Have a Lifespan (LIVE and DIE)

Growth - increase in size + shape
Development - mature over time (crawl → walk)

INTERNAL BALANCE

Prokaryotic Organisms - "Pro" - first - organisms without an organized nucleus or membrane covered organelles
Eukaryotic Organisms - organisms with an organized nucleus + membrane covered organelles

ORGANIZATION LEVELS IN LIVING ORGANISMS -
CELLS → TISSUES → ORGANS → ORGAN SYSTEMS → ORGANISMS

RESPOND to STIMULI

Characteristics OF LIVING THINGS

Either MAKE their own food, EAT other things OR BREAK down dead material

Autotrophic -
ex: plants produce energy using the process of photosynthesis.

Heterotrophic - cannot make their own food
Decomposers - break down dead material

Energy - ability to do work
Living things...

NEED and USE ENERGY

Homeostasis - when a body remains stable inside regardless of outside conditions.

ex: humans maintain a body temperature near 98.6 degrees F or 37 degrees C.

Living things...
MAINTAIN & SUSTAIN

can react rapidly to changes in the environment

Stimulus - anything that causes a rapid reaction or change in an organism either internally or externally
Ex: pupils contract in bright light
- plants grow towards sunlight
- jump when you hear loud noise

Living things...
REACT and RESPOND