

LIFE ORGANISATION

organisms → organ systems → organs → tissues → cells

LIFE MOVEMENT

Living organisms move in relation to their environment, whether rooted down or not

ANIMALS

HINGE
eg. knee

PIVOT
eg. neck

BALL & SOCKET
eg. hip

MICROBES

FLAGELLUM
some bacterium have tail-like structures which help them move through liquid

contracted biceps

relaxed biceps

relaxed biceps

contracted triceps

PLANTS

plants move to follow the light and close their flowers when it rains

PIVOT

LIFE SENSES

Senses are systems used by living organisms to gather data about their environment

TASTE

PROPRIOCEPTION
external body senses
eg. movement

INTEROCEPTION
internal body senses
eg. hunger or need to urinate

CENTRAL NERVOUS SYSTEM
makes decisions based on what the organism has sensed

HEARING

SMELL

TOUCH

SIGHT

BALANCE

LIFE REPRODUCTION

Living organisms create new reproductions by producing seeds or eggs, or splitting in half

POLLINATION

anther produces pollen

ovary produces ovules

seeds

BINARY FISSION

1 2 4 8 16 32

FERTILISATION

sperm

ovum

embryo

foetus

baby

LIFE EXCHANGE

Living organisms extract substances from their environment and expel waste products

DIGESTION

IN

$C_6H_{12}O_6$ ENERGY released

OUT

PHOTOSYNTHESIS

CO_2

H_2O

O_2

$C_6H_{12}O_6$

VENTILATION

chest EXPANDS

IN O_2

chest CONTRACTS

DELATES

CO_2 OUT

LIFE BALANCE

Homeostasis is the steady state of internal conditions maintained by living organisms

TEMPERATURE

blood vessels dilate (get wider) to allow more heat to escape

sweating cools us down by evaporation

shivering causes our body to make heat if we are too cold

hairs stand on end to trap air

blood vessels contract to reduce heat flow away from major organs

WATER

too little water causes cells to shrink and plant to wilt

too much water causes cells to expand and burst

JUST RIGHT

GLUCOSE

INSULIN is produced by the body to maintain healthy blood sugar levels to release energy in respiration

DIABETES is a disease caused by either insufficient insulin production or cells becoming unresponsive to the effects of insulin, leading to health complications or death