

Living Systems and Environment

cell-the basic unit of life///all living things are composed of cells **muscle cell**

tissue-cells “combine” together to form a function **muscle**

organ- tissues combine to form an organ **heart**

organism- a unicellular or multicellular living thing that is composed of
at least one cell

population-many similar organisms together in one area

community-many populations of various species in one area

ecosystem- biotic (living) plus abiotic (nonliving) in an area

nucleus-part of the cell that contains DNA

DNA- the genetic “blueprint” of the cell (organism)

mitochondria-the cell organelle that carries the cellular **respiration** reaction

chloroplast- the cell organelle that carries the cellular **photosynthesis** reaction

vacuole-the cell organelle that stores food (starch)

cell wall-the plant cell structure that provides support of the plant

cell membrane-the flexible support around the cell (double layer)

animal cell-contain cell membrane and organelles except the plant organelles

plant cell-contain animal cell components plus cell wall and plant cell
organelles

cellular respiration- reaction to provide energy for the cell



photosynthesis- reaction to produce energy for plant cells



nitrogen cycle-the use of N_2 in the atmosphere for protein production

unicellular-a living thing composed of one cell (bacteria)

multicellular-living things composed of many cells (specialized)

niche- the role (job) of an organism in its environment

carbon cycle- the cycle of CO_2 in the atmosphere and living things

food web- many food chains put together

food chain- one linear process from producer→consumers→decomposer

producer- makes glucose (plants)

primary consumer- consumes (eats) plants

secondary consumer- consumer that eats primary consumers

consumer- an organism that obtains energy from other living things

decomposer-an organism that obtains its nutrition from dead materials

10% rule- 100%>10%>1%>0.1%>0.01%

homeostasis- internal “balance” of the systems in the body
regulation- the processes that work to maintain homeostasis
feedback mechanism- the process that forces regulation and homeostasis
water cycle- the flow of water between the atmosphere and surface/ground
water and organisms

endangered- a living thing that has very limited numbers left
extinct- a living thing that no longer exists on Earth
predator- a living thing that hunts, kills, and eats other organisms
prey- the organism that gets hunted, killed, and eaten by the predator
carnivore-organism that eats other consumers
herbivore- consumer that eats producers
omnivore- organism that eats producers and consumers and decomposers
heterotroph- organism that does NOT run photosynthesis (animals)
autotroph- organism that *runs* photosynthesis (producer)
parasitism- relationship with win-lose (tick and dog)
mutualism-relationship with win-win (orange tree and bees)
chromosomes- the DNA strands in the cell
inherited trait- get it from parents
learned trait-get it from environment
dominant trait-“strong” trait (brown eyes vs. blue eyes)
recessive trait- “weak” trait
adaptation- DNA changes over time to favor a trait over another
(thick fur in winter)
mutation- a change in DNA in a very short period of time (+ or -)
primary succession- bare rock > lichens and mosses> grass>shrub>trees
secondary succession- existing ecosystem gets destroyed and stuff grows back
(forest fire or flood)
lichens- organisms that grow on bare rock

human body systems

nervous system
muscular system
skeletal system
circulatory/cardiovascular system
respiratory system

digestive system

endocrine system

integumentary system

excretory system