

Unit 10: Final Vocab List

scientific method – a series of steps that scientists use to answer questions and solve problems

hypothesis – a possible explanation or answer to a question (educated guess)

observation – to study closely by using the 5 senses (sight, hearing, smell, taste and touch)

analyze – to look at carefully to determine why something happened

conclusion – a decision or opinion reached by reasoning

procedure - a series of steps that a scientist's follows to perform an experiment

variable – the one factor (thing) that changes in an experiment

theory – an explanation that is based on observations and testing to explain a large number of facts

metric system – a measurement system that uses meters to measure length, grams to measure mass, and liters to measure volume

cell- a structure that has all the parts necessary for life

stimulus - a change in an organism's surroundings that changes what the organism does

DNA- the part of a cell that has directions to make proteins

liters- the unit used to measure volume in the metric system

grams- the unit used to measure mass in the metric system

Cell Membrane: Covers the cell, keeps insides in and chooses what to let in from the outside; protects the cell

Cell Wall: Provides strength and support for the cell membrane. Only found in plant cells.

Nucleus: The control center of the cell. Stores most of the DNA.

Endoplasmic Reticulum (ER): Delivers things around the cell.

Ribosomes: Make protein. They are the dots generally on the ER.

Mitochondrion (Mitochondria): The powerhouse of the cell. It breaks down sugar to make energy the cell can use (ATP).

Chloroplasts: Uses sunlight to make sugar (photosynthesis). Only found in plant cells.

Golgi Complex (Golgi Bodies): Package things and deliver them out of the cell

Vacuoles: Stores food, water and waste.

Lysosomes: Digests things.

Cytoplasm: The jelly like fluid that is inside the cell. Surrounds the organelles.

Chromosomes: Sections of DNA in nucleus. Has all the information for making the cell and doing all the things to keep it alive.

mitochondria- an organelle that breaks down food (sugar)

chloroplasts- an organelle that makes sugar in plants

nucleus- the control center; stores DNA

photosynthesis- when a plant uses the sun's energy to make sugar

respiration- when a cell breaks down sugar into cell energy (ATP)

cell division- when a cell divides into more than one cell

mitosis- when a cell copies its parts and divides into two cells

meiosis- when a cell divides to make a sex cell with half the DNA

chromosome- the part of the nucleus that holds genetic information

sexual- when 2 cells join together to form a new organism

asexual- when 1 cell copies itself to make another identical cell
cell cycle-the life cycle of a cell
Trait- a characteristic
Gene-a set of instructions for a trait
Alleles-different forms of a trait
Dominant- a trait that will always show itself
Recessive- a trait that stays hidden unless both genes are recessive
Genotype- the genes present for a trait
Phenotype- the trait that shows up for the genes
Purebred- an organism that has the same alleles for a gene
Hybrid- an organism that has different alleles for a gene
DNA- the information inside the nucleus that has genes on it
Double-helix – the shape of DNA
Base – the codes in DNA that give all of the information for living things
Punnett Square – a tool used to find the possible combinations of alleles from a set of parents
Mutations – a mistake in the copying of DNA that changes the order of the bases
Mutagen – something that causes a mutation
Rocks – a hard substance made from one or more minerals
Sediment – pieces of broken down rock
Sedimentary rock – rock made from sediment
Igneous rock – rock made from magma or lava
Metamorphic rock – rock made from other rock
Lithosphere – solid outermost part of the earth (a.k.a crust)
Pangea – one land mass from about 200 million years ago
Convection current – movement of material due to temperature difference
Mantle – the thick liquid that make up most of the inside of the earth
Core – the solid inner most part of the earth
Fossil—traces or imprints of living things preserved in rock
Imprint—a mark made by pressure from an object
Trace—evidence left by something that was there (like a footprint)
Decompose—to break down into simple parts (to rot or decay)
Paleontologist—someone who studies what happened in the past using fossils
Half-life—the time it takes for half of something radioactive to change into another form
Radioactive—an atom that gives off smaller parts
Radioactive dating—using how much an object has of something radioactive compared to what it breaks down to
Absolute dating—using radioactive dating to find when an object came from
Relative dating—using layers of rock to estimate when an organism lived compared to other organisms
Biodiversity—the many different kinds of living things alive today
Evolution—change over time
Adaptation—a trait that helps an organism survive in its environment
Species—a group of organisms that can mate and have offspring, which can have offspring
Common Ancestor—a relative shared by 2 or more organisms

Vestigial structure—a body part that may have been useful at one point, but now is not because of evolution

Embryo—a developing living thing before it is born

Selective breeding—when humans choose traits in organisms and breed them to get that trait

Natural selection—Darwin's idea that nature selects traits that make an organism better adapted to its environment

Variation—the idea that a species has a lot of variety in traits (color, size, etc.)

Resources – all the things an organism needs to stay alive (food, water, space)

Overproduction – having so many offspring that not all can survive

Peppered moth – one famous example of how natural selection works

Resistant – to act against; an organism that is not affected by a chemical

Anatomy – the structure or body of a living thing

mass extinction – when a large number of species become extinct at the same time

Eon – the largest time break down (there have been 4)

Era – the middle time break down (there have been 3 in the last eon)

Period – the smallest time break down (there have been more than 10 in the last eon)

Precambrian – when the earliest life shows up in the fossil records

Classification – putting things into groups based on how they are similar

Kingdom – the largest group of living things

Species – a group of organisms that can mate and have offspring, which can have offspring

Archaea – the newest kingdom of living things

Fungi – the group of living things that is multicellular and gets their food by absorbing decaying things

Plantae – the group of living things that is multicellular and gets their food by making it

Animalia – the group of living things that is multicellular and gets their food by eating it

Microbe – a living thing that can only be seen with a microscope

Virus – something that causes diseases, but is probably not living

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Virus – something that causes diseases, but is probably not living

Archaea – a kingdom with living things that have one cell and no nucleus which live in extreme environments

Eubacteria – that live everywhere

Protist – organisms with one cell that has a nucleus

Eubacteria – an organism with one cell and no nucleus kingdom includes bacteria

Parasite – an organism that lives off another living thing and harms it

Flower the plant part most plants make to reproduce

Pollination when the pollen of one flower reaches the stigma of another flower

Stamen the male part of the flower, which makes pollen

Pistil the female part of the flower, which makes the eggs

Anther the part that creates the pollen (part of the stamen)

Filament the part that holds up the anther (part of the stamen)

Stigma the sticky part where the pollen lands (part of the pistil)

Style holds up the stigma and the sperm travels through here (part of the pistil)

Ovary where the egg is fertilized and develops into a seed (part of the pistil)

Wavelength – the distance between one point on a wave and the corresponding point on the next wave

Frequency- the number of waves produced in a give amount of time

Reflection – occurs when light or any other wave bounces off an object

Absorption – the transfer of energy carried by light waves to particles in matter

Refraction – the bending of a wave as it passes at an angle from one medium to another

Lens – focuses light on the retina; changes focus from near and far objects

Cornea – outer part of the eye that protects and is responsible for focusing

Retina – where the image is projected, made of rods (dim light) and cones (color)

Optic Nerve – the nerves that carry messages from the eye to the brain

Pupil – opening in the eye that lets light in