

Abiogenesis or spontaneous generation is the belief that living things can arise from non-living systems. This is no longer an accepted truth

Acelomates are animals that do not have any body cavities

Acquired immunity is achieved from prior exposure to a pathogen, and is a component of the adaptive immune response

Acquired passive immunity is achieved by the reception of antibodies from one person to another

Action Patterns or stereotypes are behaviors that an animal always repeats

Active transport is the movement of a substance from an area where there is more of it to where there is less of it

Adaptation is the ability of organisms to adjust to changes in their environments and is independent of symbiosis

Adaptive evolution describes the process in which the members of population become well-adjusted to their environment

Adaptive immunity or specific immunity is the memory component of the immune system that remembers specific pathogens, and responds to them on an individual basis

Adenosine Triphosphate (ATP) is the energy currency of the cell. It is the end product of cellular respiration.

Adipocytes are fat cells, and they cushion many of the organs in the body

Adrenal gland is found on top of the kidneys

Afferent Division handled the gathering of sensory information from the external world through the senses and specialized receptors of the body

Agonist is the muscle that causes specific movement and produces most of the force during contraction

Aldosterone triggers the absorption of sodium in the kidneys and raises the blood pressure

Allantois is the chamber for gas exchange and the elimination of nitrogenous wastes

Allocation is restriction on a cell's differentiation despite its commitment to form a particular cell type

Alpha cells secrete glucagon, which work against insulin to promote the release of glucose into the bloodstream

Alveoli are tiny sacs in the lungs in which gas exchange take place.

Amnion acts as a watery cushion that saves the embryo from mechanical shock

Amplification is the process by which a gene or DNA sequence is copied many times

Amylase partially digests starches that enter the mouth

Anagenesis is when species evolves gradually into another species over time

Anaphase is when the chromosomes are pulled up to opposite poles of the cell by the spindle apparatus

Antagonist muscle causes movement that opposes the agonist, and prevents excessive movement and injury

Anti-diuretic hormone (ADH) which is also called Vasopressin, causes decreased water excretion by instructing the kidneys to produce concentrated urine, as opposed to dilute urine

Antiperistalsis is the similar movement in peristalsis but in reverse direction. This is found only in the second and third part of the duodenum

Aorta is the largest artery in the body and does not conduct current that is associated with the heartbeat

Aphotiz zone is the zone in the ocean that does not receive sun light

Apoptosis term used when damaged cell in the body undergo a process of programmed cell death

Appositional Growth describes an increase in bone diameter

Aqueous fluid and vitreous fluid are the supportive fluid found in the eyes

Artificial immunity is induced by vaccination

Artificial selection is called selective breeding, and it is the practice of intentionally breeding organisms to have specific traits

Axial Filament is a region of the flagellum that causes rotation

Axons transmits messages in the nervous system

Barr bodies are inactive X chromosomes in female body cells

Benthic zone is known as the ocean bottom

Beta cells secrete insulin

Bifurcation is the splitting of a main body, such as data, into two parts and it does not describe specification

Bile is a yellowish to dark green fluid that is produced by the liver, and store in the gallbladder

Biodiversity studies the variations in the different life-forms that occupy the earth's ecosystems

Biogenesis is the process in which living systems give rise to new living systems

Biological catalysts are macromolecules that can speed up the rates of reactions in living systems

Blastocoel is the fluid-filled cavity of the blastocyst

Blastocyst is the structure that nourishes the developing embryo

Blastulation is where hollow sphere of cells is formed. Blastula is single-layered

Blubber is another term for fat cells or adipocytes

Bowman's capsule is where the filtration of the blood begins. It is the cup-shaped structure at the beginning of the kidney's tubules

Bryophytes were the first plants that did not contain any vascular structures or totipots

Bulk Transport is when large molecules such as amino acids are moved through the plasma membrane in either direction

Bundle of His transmits electrical pulses from the atrioventricular node to the fascicular branches, which passes them to the Purkinje fibers that sends them to the ventricle resulting in ventricular contraction

Calcaneus forms the heel bone

Calvin Cycle is commonly referred to as the dark reaction of photosynthesis, and the cell uses it during carbon fixation. It takes part in the Stroma

Cancer occur when cells in the body obtain mutations that allow them to grow or divide uncontrollably

Capacitation is the process through which sperm undergoes physical changes needed to penetrate and fertilize an egg

Carbon Dioxide is a waste product of cellular respiration and is generated primarily in Krebs Cycle

Carpal bones form the wrist

Catalyst is a molecule that increases the rate of a reaction

Cell Shrinkage is observed when cells are dehydrated but they can recover

Cellular respiration is the process in which cells convert the potential energy in carbon rich molecules such as glucose into chemical energy (ATP) that is usable by the cell

Centrifugation is when the cell contents are separated by spinning the homogenized cell in a centrifuge to allow sedimentation of

the various components at different levels in a tube

Centrioles are internal organelles in cells that are involved in cell division. They exist in pairs and are involved in cell division

Centromere is found at the center of the chromosome where two sister chromatids are connected

Channels or transporters carry molecules through the membrane

Chiasma is the site where the crossover takes place

Chloroplast are found in plant cells where they carry out photosynthesis

Chorion is the outer membrane surrounding and protecting the embryo and transfers nutrients from the mother to the fetus

Chromatid is one of a pair of identical copies of a chromosome. They appear during cell division and the pair is called sister chromatids

Chromosomal deletion occurs when a segment of a chromosome is missing, or the entire chromosome is missing from a genome

Chromosomal Duplication occurs when an entire chromosome exists in multiple copies within a single genome

Chromosomal insertion is where new DNA is added to a region of the chromosomes

Chromosome Loss occurs when the entire chromosome is missing from a genome

Cladogenesis is when species split into two species

Cleavage is the mitotic cell division of a zygote

Cloning is the engineering of genetically identical organisms

Cnidaria consist of a sac containing a gastrovascular cavity which has a single opening that acts as a mouth or an anus

Coelem is an internal body cavity

Coenzyme are organic molecules that enzymes need to function

Co-factor is a non-protein substance that helps an enzyme to carry out its activity. It is produced when a catalytically active enzyme forms a complex substance with a co-factor of holoenzyme

Colon is not a site of digestion; rather it is the site of reabsorption of water and other nutrients

Commensalism is a symbiotic relationship that is harmless and one partner benefits

Commitment is the built-in characteristic of a cell that makes it follow a set development path

Competition exists in all communities, and refers to the process by which the members of the community compete for resources

Conduction is when heat is transferred within and between bodies of matter

Contact Inhibition is the ability of a cell to detect its boundaries for growth. This prevents cells from piling on top of each other, and growing into neighboring tissues to form tumors.

Convection is the heat transfer driven by movement of fluids

Cortisol is a stress hormone that promotes the release of sugar into the blood stream

Cristae are the folds of the inner membrane of mitochondria and help in ATP production

Cuboidal cells are cube like

Cytoskeleton gives the cell its shape and also allows the internal organelles to move around when necessary

Delta cells produces somatostatin, which is a hormone that inhibits both insulin and glucagon

Denaturation involves the disruption of the bonds in DNA or protein molecules due to heating

Dermis is located below the epidermis

Desmosomes are adhesion structures that are found on the sides of the plasma membrane in cells, where they resists shear stress and bind the cells together.

Determination is the cell's irreversible commitment to become a specific cell type

Diatoms are freshwater or marine unicellular golden-brown algae with a cell wall consisting of two silica impregnated valves

Differentiation is the process by which cells are assigned a specific fate during development

Diffusion is a form of passive transport in which particles move down their concentration gradient

Dihybrid cross is when two alleles are observed

Diploidy is when the individual is born with a complete set, or correct number of chromosomes (2N)

Dissipation is the loss of energy from a system, which becomes heat and raises the temperature of the system

Disturbances are events that include natural disasters and human activities that damage and disrupt communities.

DNA Polymerase is the enzyme that adds nucleotides to the growing DNA strand, it is unable to begin working without the primer

Driesch's experiment was one of the first documented experiments in experimental embryology

Echinoderms are marine vertebrates that have radial symmetry

Ecological niche is the set of condition and resources that is readily utilized by the organisms. It is the most favored habitat. It is the ecological position which best suits a particular plant or animal

Ecological succession is when each new set of species modifies the environment to enable the establishment of other species

Ecosystem is the collection of living organisms and nonliving entities in a specific biological environment

Ecotone is a boundary between two plant communities or a major rank, or a transition zone between two adjacent biomes containing some organism from adjacent biomes and some characteristic ones, restricted to the zone itself

Efferent Division handles the responses to glands and the tissues. Motor response is also a part of this division

Elongation is when one strand of the DNA molecule is used as a template for the growing single-stranded RNA molecule

Endochondral Ossification is when cartilage is replaced by bone

Endocytosis is the movement of substances into the plasma membrane

Endoderm is a germ tissue that is present during early embryological development

Entomology is the study of causation

Eosinophils are a type of white blood cells that are increased in number during allergic or parasitic infections

Epiblast is the early embryonic tissue that gives rise to the three early germ layers during gastrulation

Epiglottis covers the entrance of the larynx to prevent food from entering the trachea and going into the lungs

Erythropoiesis is the formation of RBC

Estradiol is the form of estrogen that is present in the body during the reproductive years

Ethnology is the branch of anthropology that investigates the origin and characteristics of the different ethnic groups in human societies

Eutrophication is the rapid increase in algae or plant growth in an aquatic system

Evaporation is when liquid changes into the gaseous phase at its surface

Evolution is the process by which living systems change over time.

Exocytosis is when substances are expelled from the cells in vesicles that fuse with the plasma membrane

Exons are the coding regions in the DNA

Expansion refers to an exponential increase in the number of dividing cells

Exponential growth occurs when the population grows indefinitely without regard to lack of resources

Extracellular matrix is the region outside of the cells that contains the proteins and molecules that allow the cells to interact with and connect to each other

Facilitated diffusion is when molecules move spontaneously through protein channels in the membrane

Fast twitch fibers are non-oxidative muscle fibers that carry less oxygen and appear white. Some fast twitch fibers are anaerobic, and use glycolysis to produce energy

Fertilizin is a gelatinous glycoprotein secreted by the mature egg which plays an important role in agglutination of sperms on the egg surface

Fibrinogen is a soluble plasma glycoprotein synthesized in the liver by hepatocytes and megakaryocytes

Fibula bones serves as a reservoir of extra bone tissue

First Law of Thermodynamics states that energy can neither be created nor destroyed

Flagellum is found at the rear of the spermatozoa and it provides the force necessary for movement

Food web describes the feeding connections between the organisms in an ecosystem

Forward genetics is when mutations are introduced into an organism's genome using a mutagen to identify gene function

Fractionation is the separation of cellular components in the cell

Fracture Repair is a complex process that requires replacement and remodeling of a bone in multiple directions and it is not usually a component of fetal development

Fungi are generally saprotrophs, which are heterotrophs that obtain their food through external digestion

G-actin is the subunit of microfilaments

Gametogenesis is the production of gametes, or egg and sperm cells, in an organism

Gap junctions are channels between two cells that allow them to share their nutrients and molecules

Gastrin is a polypeptide hormone secreted by the stomach which stimulates the secretion of gastric acid and pepsin in the stomach

Gastrulation is the process to form the three-layered gastrula. Gastrula contains the three germ layers: endoderm, mesoderm and ectoderm that will form the tissues of the body

Gel electrophoresis allows cell fractionation based on the size of the cellular components

Gene expression is believed to be regulated by histones, which are proteins that bind tightly to the DNA molecules inside the cell nucleus.

Gene transfer describes the process by which an organism can accept and use DNA from another organism

Genetic linkage is the tendency of two genes that are in close proximity on a chromosome to be inherited together

Genetic Recombination occurs in chromosomes during meiosis to increase the genetic variety and subsequent fitness of the offspring

Genetic Variation describes the presence of different versions of the same gene in a population

Genus Cyanobacteria, historically called the blue-green algae, are photosynthetic bacteria that belong to the kingdom Monera

Gibbs free energy describes the available energy in chemical molecules

Glomerulus filters water and solutes from the blood

Glucose 6-phosphate is an intermediate compound in multiple energy-yielding pathways in the cell

Glycoproteins are proteins in the membrane that are attached to sugar. Glycoproteins in the plasma membrane give each cell type its identity

Golgi Apparatus is the cellular compartment that packages the vesicles for export from the cell and it has a membrane as well. It is located in the cytoplasm where it packages substances for cellular export

Hardy-Weinberg equilibrium or principle describes the distribution of alleles for a specific trait in a population

Helicase unwinds the double stranded DNA molecule at the onset of replication

Hepatic portal system is a system of veins leading from the digestive tract to capillaries in the liver

Herd Immunity is the process by which unvaccinated members of a community develop immunity towards a pathogen by interacting with vaccinated members of the community

Heterotrophs are animals that cannot produce their own food and must feed to survive

Histamine is a chemical produced by the mast cells of the immune system that causes vasodilation

Histones can turn genes on and off by chemically modifying the DNA

Homologous chromosomes are the non-sex chromosomes which are called autosomes

Hyaluronic acid is not a component of urine, rather it is a long un-branched polysaccharide that is found throughout the body in connective, epithelial, and neural tissues

Hypodermis is the innermost layer of the skin

Hypothalamus is located above the brainstem

IgA is found in bodily secretions such as tears, breast milk, and saliva

IgD and **IgM** are found on the surfaces of the B-cells that produce immunoglobulins

IgE is involved in allergic reactions and binds to parasitic worms that enter the body

IgG is the dominant immunoglobulin during the immune response against invading pathogens. IgG also crosses the placenta to provide immunity to the developing fetus

Immunoglobulins are proteins that are produced but the immune system to help prevent and rid the body of infections

Imprinting is when the animal learns its behavior from its parents early in life

Inbreeding lowers genetic variation at the familial level, but not necessarily at the population level

Inducers in genetics are molecules that start or induce gene expression

Induction is the start of an effect during development

Initiation is the beginning of transcription where RNA polymerase binds the promoter region that is upstream of the gene in the DNA sequence

Innate immunity is present at birth, and it responds the same way to all pathogens

Inner Mitochondrial Matrix is involved in energy production via cellular respiration,

however this is independent of photosynthesis

Insulin is produced by the Islets of Langerhans that contain the beta-cells. It promotes the uptake of glucose from the blood

Intramembranous ossification is the process of bone formation in the fetus in which cartilage is absent

Introns are the regions of DNA that contain non-coding regions

Invasion is the process by which new species enter the community, due to disturbances and eventually displace the original species

Inversion occurs when a region of a chromosome is reversed from end to end

Invertebrates are animals that do not have a vertebral column

Janus green is a basic dye used in histology and used to stain mitochondria supravitaly

Juxtamedullary nephrons are present in the inner part at the junction of the medulla. They constitute 15% of the total nephrons. They are larger. They work under conditions of stress and produce concentrated urine

Kinesis is a change in behavior in response to a stimulus

Kinetochore is the location on the chromosome where the spindle apparatus attaches, to pull the sister chromatids apart during cell division

Klinefelter Syndrome is if an individual is born with two X chromosomes and one Y

chromosome (XXY), he is classified as a male

Labeling, is a general biological technique that is used to mark molecules of interest using fluorescent, radioactive, or protein compounds.

Langerhan cells are a type of immune cells that are found in the skin.

Law of Dominance reflects the relationship between different allelic forms, in which the phenotype of a genotypic heterozygous individual is expressed as one form

Law of Independent Assortment describes the relationship of two different genes on separate chromosomes, and their tendency to assort independently into a gamete

Law of Segregation describes the separation of the two alleles for a given gene during meiosis into separate gametes

Lichen represents a symbiotic association between a fungus and alga which is capable of photosynthesis

Ligase seals the newly formed DNA molecules together at the end

Linkage disequilibrium, some genes are not closely linked together or are not on the same chromosome are inherited together

Lipase are enzymes that digest lipids or fats and are also produced by the salivary glands as well as the pancreas, which sends it to the small intestine

Locus is the location of gene on any chromosome

Logistic growth occurs when the population growth is limited to the amount of resources available

Longitudinal growth describes an increasing the length of a bone

Luteal phase occurs after ovulation, and involves the formation of the corpus luteum which grows on top of the ovary and releases progesterone to prepare the body for pregnancy

Lymphocytes are white blood cells that are found throughout the lymphatic systems. It includes B-cells that produce antibodies, and T-cells that regulate the immune systems

Lysosome is produced in the salivary glands, and it destroys the cell walls of bacteria

Macrophage are large white blood cells that digest bacteria and cellular debris through a process called Phagocytosis

Malthusian growth is a form of exponential growth

Masking refers to the ability of dominant alleles to hide or mask the expression of the recessive alleles in the organism

Medulla oblongata is the region of hind brain, which is concerned with the functioning of visceral organs like stomach, heart and lungs. It is the grey matter of medulla oblongata which is the center of controlling respiratory rhythm

Megakaryocytes are a type of bone marrow cell that produces thrombocytes or platelets

Melanin is the primary pigment that colorized the skin. It is produced by melanocytes in the epidermis of the skin.

Meninges is the outer membrane that covers and protects the brain and spinal cord

Mesenchyme is derived from the mesoderm that forms the connective tissues and it is not involved in nervous system development

Mesoderm is a germ tissue that is present during early embryological development

Metacarpals form the middle part of the hand between the phalanges or fingers and the wrist

Metamersim is exhibited by chordates due to repetition of a succession of homologous structures along the anterior-posterior axis

Metamorphosis refers to physical changes in animal's body that take place after birth

Metaphase follows prophase, and during this stage the chromosomes line up across the center of the cell

Metastasis is the ability of cancer cells to migrate to different tissues in the body

Microfilaments are long threads of beadlike protein actin, helps in the movement of cytoplasm

Microglia are white blood cells that live in brain, but they are not the most abundant

Microtubules are the largest of the three types of protein filaments that make up the cytoskeleton of the cell

Microvilli are the structures on the outside of the cells that increase the surface area of the cell. They can be found on the inner linings of the small intestine

Micturition is the process by which urine is intermittently release from the bladder

Missense mutation results in a different amino acid substitution

Mitochondria is the second largest structures in cells after the nucleus. It is the compartment of the cell that produces energy and it also has a membrane

Mitosis is the process of nuclear division that allows cells to form multiple copies of themselves

Monohybrid cross is when one allele is studied

Monosomy is when the individual is missing a chromosome and has only one of a pair ($2N-1$)

Morulation is the formation of the 32-celled morula following symmetrical divisions that begin with the fertilized egg

Mosaic development is when the blastomere has a limited developmental potency and can only from a specific part of the embryo

Mucus is secreted by multiple surfaces of the body, including the lungs to protect the body from infection and wash away contaminants

Multipotent cells give rise to closely related families of cells

Mutants are organisms that have changes in their DNA sequences or genes

Mutualism is a symbiotic relationship where both members benefit from the union

Myelin is the fatty substance that is wrapped around the axons of the neurons

Myosin is a protein found in most of the eukaryotic cells and is involved in cell locomotion and muscle contraction

Natural killer cells are a type of white blood cell that kill infected and tumor forming cells in the body

Natural selection is the process in which traits that are favorable for the survival of members of a species are selected during the mating process

Neuritic zone is the zone over the continental shelf

Neural Crest gives rise to the peripheral nervous system

Neural groove is a channel that forms between the folds of the embryo before the neural tube is completely developed

Neural tube is derived from the ectoderm, and it gives rise to the central nervous system

Neurogenesis is the formation of nerve cells or neurons from stem cells

Neurulation is the process in development that forms the central nervous system

Niche is a species' specific role in the ecosystem

Nondisjunction is the mechanism by which chromosomes do not separate correctly during cell division

Nonsense mutation results in a stop codon so that incomplete proteins are produced

Nucleolus is a non-membranous structure found inside the nucleus

Nucleotides are monomers that make up nucleic acids such as DNA and RNA

Nucleus stores DNA and controls the cell's activities

Oligodendrocytes are glial cells that secrete myelin

Oocytogenesis is the development of immature oocytes or egg, in the female prior to or shortly after birth

Ootidogenesis is when the oocyte becomes an ootid, an egg that is arrested at prophase 1

Operons are regulatory units or a set of genes that work under the same promoter

Organogenesis is the development of organs later during development

Origin is the attachment of the bone to the stationary end of the muscle

Ornithine cycle or urea cycle is the cycle of biochemical reactions occurred in the liver and produces urea from ammonia

Outgrouping is the assignment of organisms to a reference group for determining evolutionary relationships among species

Ovulation is the maturation and release of eggs in the female reproductive system

Oxidative phosphorylation is an ATP generating process which occurs in mitochondria

Oxytocin is released by the pituitary gland, and it causes uterine contractions during childbirth

Parasitism is a symbiotic relationship between two organisms in which one partner benefits, while the other is harmed

Parasympathetic Branch of the nervous system contains both afferent and efferent components that it uses to calm and relax the body when necessary

Parthenogenesis or virgin birth is the process by which female eggs auto-fertilize without sperm and form new offspring

Passive immunity is developed by the reception of antibodies from one person to another

Passive transport is when a substance moves freely from an area where there is more of it to where there is less of it.

Pedigree charts use circles and squares to represent individuals in a population

Pelagic zone is known as the open ocean

Pendular movement is a passive motility found in the loops of small intestine

Peristalsis is the rhythmic contraction of smooth muscles that helps in downward movement of the (food) content

Peritoneal fluid is found in the abdomen, where it covers most of the vital organs in the abdomen

Peroxisomes neutralize oxygen ions, detoxify drugs and also break down fatty acids

Peroxisomes are specially equipped to destroy free radicals and toxic chemicals such as hydrogen peroxide

Peyer's patches are secondary lymphoid tissue found in the lowest portion of the small intestine, the ileum

Phagocytosis is the process by which white blood cells engulf bacteria or cellular debris.

Phalanges form the toes

Photic zone is the zone in the ocean that receives sun light

Photoautotrophs are organisms that use the energy in sunlight to produce food, or more specifically molecules with a great degree of potential energy such as glucose

Photosynthesis is the process by which sunlight is converted into a usable form of energy by a cell.

Pinocytosis is the movement of fluids into the cell

Pituitary gland is considered the master gland of the endocrine system, and it is heavily regulated by the hypothalamus that is located nearby

Placentation means formation or arrangement of placenta

Plasma membrane functions as a protective barrier for the cell

Plasmodesmata are channels that connect individual plant cells allowing them to share their cytoplasm

Pleural cavity is the space between the pleura

Pleural fluid is the fluid between the pleural cavities. It allows the pleura to slide against each other during ventilation

Pluripotent cell give rise to the three germ layers during embryonic development

Point mutation is when a change occurs in a single nucleotide in the DNA sequence

Polygenic Inheritance is when multiple genes control a single trait

Polymerase Chain Reaction (PCR) is a technique used to amplify small amounts of DNA into larger amounts for applications such as DNA profiling and gene expression studies

Polyploidy is when the individual is born with more than two complete sets of chromosomes

Population is a collection of members of species that live in the same ecosystem

Predation involves harm of one member of the predator-prey relationship. It is not an example of symbiosis

Primary succession meant the development of communities only on a newly exposed habitat with no record or earlier vegetation

Proaccelerin or Factor V is a protein circulation in plasma which is required in the conversion of prothrombin to thrombin

Producers make their own food usually through photosynthesis

Profiling is the use of DNA technology to identify an individual based on the uniqueness of each individual's genome.

Progenitor cells are stem cells that give rise to single type cell

Prostate gland produces slippery fluid that combines with the sperm to form semen

Protein Synthesis is the responsibility of the ribosomes inside the cell

Prothrombin is a plasma protein produced in the liver in the presence of Vitamin K

Protists are generally single-celled organisms that can resemble plants or animals.

Pseudopodia or false feet are cytoplasmic extensions that the amoeba uses to gather food.

Pyramid of biomass is the dry weight of tissues at different trophic levels

Pyruvate is the end product of glycolysis, which takes place prior to cellular respiration in animal cells

Radiation is when heat is transferred from electromagnetic waves

Radiocarbon dating, also called radiometric dating is a process used to date rocks by analyzing the decay rates of radioactive isotopes

Radius is located on the side of the thumb

Radula is a flexible tongue-like strip of tissue covered with tough abrasive teeth that point backward. Apple snails use it to scrape up plants

Receptors recognize molecules called ligands that approach the plasma membrane

Recessive diseases are present when the individual receives two copies of the allele that causes the disease from his or her parents

Recombinants are cells that have different combinations of genes from their parents.

Regulative development is when each blastomere has the potential to form a complete embryo

Regulon is a group of genes or operons that are controlled by the same regulatory protein

Renal Absorption is when the kidneys return solutes and water to the blood

Renal capsule is the region of the kidney that is composed of fatty, fibrous layers of tissue. It surrounds the kidney and protects it from trauma and physical damage

Renal cortex is the outer layer of the kidney which is where ultrafiltration of the blood occurs

Renal Excretion is when the kidneys remove excess solutes and pharmacological drugs

Renal medulla is the innermost part of the kidney, and it splits into sections called renal pyramids

Replacement cloning involves the use of clones to replace cells in a population

Restriction is not a term specific to cell biology and can describe multiple biological or cellular processes

Reverse genetics is when “knockout” organisms are created in which genes have been deleted from their genomes

Reverse transcription is the process of making a double stranded DNA molecule from a single stranded RNA template

Ribonucleases are enzymes that degrade the RNA molecules into smaller components, and they are not involved in DNA replication

Ribosomes are responsible for protein synthesis.

RNA Polymerase is involved with RNA synthesis during the process of transcription

RNA silencing is a technique in which the expression of genes in a cell is inhibited by inserting foreign RNA into the cells

SA node sets off cardiac impulses, causing both auricles to contract simultaneously

Saprotroph is an organism that uses enzymes to break down dead and decaying matter extracellularly and uses it as a food source.

Sarcomer is a contractile element in a striated muscle fibril

Schizocoely occurs when a body cavity is split into two, and it is absent in deuterostomes such as humans

Schizogamy is not an actual biological term, but the roots of the term suggest that it would mean the splitting of gametes into two

Sebum is an oily substance secreted by glands in the skin

Second Law of Thermodynamics is called the LAW OF ENTROPY, and states that all

systems have a tendency to move towards disorder

Segmentation is the rhythmic contraction and relaxation of the small intestine

Selection is a term in evolution, which describes the favoritism shown towards individuals in the population who have desirable traits

Senescence refers to a cell's ability to divide after it has reached the maximum number of divisions for its life span

Sequencing is the elucidation of the DNA sequence of a gene, chromosome, or organism by using sequencing technologies.

Serous Fluid fills the cavities in the body

Sex chromosomes are the X and Y chromosomes

Silent mutation produces code for the same or a different amino acid but without any functional change in the protein

Simple columnar cells are taller and also are single layered. They are found in the stomach, large and small intestine, gall bladder etc.

Simple cuboidal epitheliums are found in the smallest duct glands and many kidney tubules

Simple squamous epitheliums are single layered and are found in the blood and lymph vessels, major body cavities and are associated with diffusion of water, electrolytes etc.

Single Nuclear Polymorphism (SNP) is a variation in a single base pair of DNA in member of a species

Slow twitch or Oxidative Fiber are oxygen rich muscle fibers that are well suited for intense aerobic activity. The vascular supply to these muscles is very dense, and this gives the muscle its red color

Smooth Endoplasmic Reticulum is the site of lipid production

Sodium Potassium Pump is an active transport protein in the cells. Its function is to pump potassium molecules into the cell and pump sodium molecules out.

Somatic Branch of the nervous system deals exclusively with the regions of the body that are under voluntary or at-will control

Somatic means body

Spatial structure describes the way in which species in a community are distributed relative to each other

Speciation is the process by which new species form through evolution

Species diversity is the number of different types of species in the community

Species richness is the number of species in the community

Spherosome is a small spherical organelle which is covered by a single membrane. It synthesizes and stores fat

Splicing is the removal of some exons or coding regions in an mRNA transcript, to create alternate versions of the gene

Squamous cells are flat cells

Stereoscope can produce three dimensional images of an object by the combined action of two eyes

Stimulus is a measurable or detectable change in an animal's environment

Stomata are the opening in the plant's leaves that allow gas exchange

Stratified cuboidal epitheliums are found in the ducts of the sweat glands

Stratified squamous epitheliums are multi-layered and are found in epidermis of the skin, anus and vagina etc.

Stratum corneum is a layer of dead cells on the surface of the skin

Stratum lucidum is a layer of dead cells on the surface of the epidermis

Superficial nephrons are present in the outer part of the cortex. They constitute 85% of the total nephrons. They are smaller and act in normal conditions and produce less concentrated urine

Surfactant are slippery fluids made up of proteins and lipids that reduce the surface tension of the alveoli

Surfactants are slippery fluids made up of proteins and lipids that reduce the surface tension of the alveoli, to facilitate gas exchange in the lungs

Survivorship Curves describe the average life span of organisms in a community

Symbiosis is the process by which two organisms live together

Synergist aids the agonist and modifies the direction of movement

Taxis is a movement of the animal towards or away from a stimulus

Telophase is when the nuclear envelope is rebuilt around the two sets of chromosomes, and the invagination of the plasma membrane begins

Tendon is a modified white collagenous fibrous tissue in which fibers occur in thick parallel bundles

Termination is when RNA polymerase releases the new RNA transcript

Test cross is when the unknown genotype of an individual is crossed with a known genotype

Thallophyta are plant-like but not true plants. Their body is not differentiated into roots, stems and leaves but is composed of mass of cells called thallus

Thermodynamic system is a physical system, to which the laws of thermodynamics are applied.

Third Law of Thermodynamics asserts that no system can reach an absolute zero temperature

Thromboplastin is a protein in subendothelial tissue, platelets and leukocytes

Thylakoid membrane is the site of the light-dependent reactions in which sunlight is used to make high-energy molecules such as ATP

Thymus sits in front of the heart behind the breastbone

Thyroid gland is found in the neck

Tibia bone is the weight bearing bone of the body

Tight junctions are formed when the membrane of two cells join together to form a barrier that fluids cannot pass through

Tonoplast is the membranous covering found in mature plant cells, around the large central vacuole

Totipotent cells give rise to all cell types including embryonic cells

Transcription is the conversion of the message store in a DNA sequence into a messenger RNA (mRNA) sequence

Transfection is the introduction of a new gene into a cell

Transgenic is when a new gene is incorporated into an organism's genome

Translocation is the rearrangement of regions of non-homologous chromosomes

Trisomy is when the individual is born with three copies of a single chromosome ($2N+1$)

Trophic cascade occurs when species at one trophic/feeding level influence species at other levels. This leads to the addition or subtraction of species from the community

Trophic levels are the positions occupied in a food chain by the members of the ecosystem

Trophic structure describes the feeding hierarchy of the community

Trypsinogen is the precursor form of the pancreatic enzyme trypsin. It secretes the

pancreatic acini, a small berrylike clusters of dark staining cells

Turgor pressure is the force exerted on the cell wall of a plant cell by the water contained in the vacuole

Ulna is the bones that is located on the same as the little finger

Vacuoles are the compartments of cell that store water molecules.

Validation is a general term for ensuring the integrity of scientific data

Vas deferens are the ducts that transport the sperm from the epididymis to the ejaculatory duct

Yolk sac is the first gestational sac observed during human pregnancy and it gives rise to the digestive tube. It also helps in the formation of red blood cells

Zero Law of Thermodynamics is the law of equilibrium between systems

Zygote is a fertilized egg