

Stem cell

An undifferentiated cell that can divide over and over to make many cells of different types

Metabolism

The sum of all reactions that occur in an organism

Anabolism

The synthesis of complex molecules from simpler molecules

Catabolism

The breakdown of complex molecules into simpler molecules

Homeostasis

Keeping conditions inside a cell within tolerable limits

Nutrition

Obtaining food, to provide energy and materials for growth

Growth

An irreversible increase in size

Response

The ability to react to changes in the environment

Excretion

Getting rid of the waste products of metabolism

Reproduction

Producing offspring either sexually or asexually

Cholesterol

A component of animal cell membranes reducing membrane fluidity and permeability to some solutes

Facilitated Diffusion

The movement of ions/particles across a cell membrane down the concentration gradient with the aid of an integral protein

Active Transport

The movement of ions/particles across a cell membrane up the concentration gradient with the aid of an integral protein and ATP

Endocytosis

The process of bringing material into a cell by pinching off a small piece of plasma membrane forming a vesicle

Exocytosis

The process of releasing a material outside a cell by fusing a vesicle with the plasma membrane

Semi-conservative

The property of DNA after replication in which one of the strands is an original and the other a newly synthesized strand

Gene

A heritable factor that consists of a length of DNA and influences a specific characteristic

Allele

A specific form of a gene that differs from other alleles of that gene by only one or a few bases

Genome

The whole of the genetic information of an organism

Mutation

A change in the base sequence of a gene

Plasmid

Small, circular pieces of extra DNA found in prokaryotes

Diploid

A nucleus having two chromosome of each type as in gametes

Haploid

A nucleus having one chromosome of each type as in somatic (body) cells

Karyogram

A micrograph showing the chromosomes of an organism in homologous pairs of decreasing length

Crossing over

The random exchange of parts of the chromatids of homologous chromosomes during Prophase I of meiosis

Gametes (haploid sex cells)

Haploid sex cells (sperm and egg) produced by meiosis

Malnutrition

An outcome of the diet that can be caused by deficiency, imbalance or excess of nutrients

Ecology

The study of relationships between living organisms and between organisms and their environment

Population

A group of organisms of the same species who live in the same area at the same time

Ecosystem

A community and its abiotic environment

Cytoplasm

Interior of a prokaryotic cell, also the region between the nucleus and plasma membrane of eukaryotic cells

Rough Endoplasmic reticulum

Lysosome

Digestive organelle where macromolecules are hydrolyzed

Carrier

An individual that has a recessive allele of a gene that does not have an effect on the phenotype

Sex Linked

Allele carried on the X chromosome

Test Cross

Testing a suspected heterozygote by crossing it with a known homozygous recessive

Phenotype

Outward expression of characteristic in organism

Genotype

Alleles possessed by an organism

Organic Compound

Compounds containing carbon that are found in living organisms (except hydrogencarbonates, carbonates, and oxides of carbon)





Trophic level

A position in a food chain (ex. primary consumer)

Consumer

An organism that ingests other organic matter that is living or recently killed

Heart Rate

Number of contractions of the heart per minute

Ventilation Rate

Number of inhalations or exhalations per minute

Osmosis

The passive movement of water molecules, across a partially permeable membrane, from a region of lower solute concentration to a region of higher solute concentration

Pathogen

An organism or virus that causes a disease

Saprotrophs

An organism that lives on or in dead organic matter, secreting digestive enzymes into it and absorbing the products of digestion

Detritivores

An organism that ingests dead organic matter

Nucleus

Cell Respiration

The controlled release of energy from organic compounds in cells to form ATP

Active Site

Specific portion of an enzyme that binds the substrate

Homologous Chromosomes

A pair of chromosomes of the same length, centromere position, and staining pattern that possess genes for the same characters at corresponding loci. One is inherited from the organism's father, the other from the mother

Clone

A group of organisms of identical genotype OR a group of cells descended from a single parent cell

Species

Group of organisms that can interbreed and produce fertile offspring

Nucleoid

Where DNA is concentrated

Golgi Apparatus

Packages and modifies molecules, especially for secretion or storage

Mitochondrion

Where cellular respiration occurs and most ATP is generated

Plasma Membrane

Encloses cytoplasm. Selective barrier that allows passage of oxygen, nutrients, and wastes

Cell Wall

Maintains cell shape, protects cell from mechanical damage and excessive water uptake

Ribosomes

Completes protein synthesis

Flagella

Locomotion organelles of some bacteria

Pili

Attachment structure on the surface of some prokaryotes

Community

A group of populations living and interacting with each other in an area

Heterotroph

An organism that obtains organic molecules from other organisms

Autotroph

An organism that synthesizes its organic molecules from simple inorganic substances

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