**Biology Vocabulary Flash Cards 2016**

|  |  |  |
| --- | --- | --- |
| **Term**  **Independent Variable** | **Definition**   |  | | --- | | **The one variable an experimenter changes; it is graphed on the x axis** | |
| **Term**   |  | | --- | | **Dependent Variable** | | **Definition**   |  | | --- | | **The variable that is measured for a result; it is graphed on the y axis** | |
| **Term**   |  | | --- | | **Control Group** | | **Definition**   |  | | --- | | **Subjects in the experiment that do not receive the experimental treatment; needed for comparison** | |
| **Term**   |  | | --- | | **Placebo** | | **Definition**   |  | | --- | | **An inert or inactive substance** | |
| **Term**   |  | | --- | | **Bias** | | **Definition**   |  | | --- | | **a preconceived idea of how an experiment will turn out- good scientists avoid this** | |
| **Term**   |  | | --- | | **Good experiments include:** | | **Definition**   |  | | --- | | **question, testable hypothesis, control group, experimental group, one independent variable, multiple trials** | |
| **Term**   |  | | --- | | **carbohydrate** | | **Definition**   |  | | --- | | **primary source of energy for living things, made of C,H,O found in fruits, vegetables, and grains** | |
| **Term**   |  | | --- | | **monosaccharide** | | **Definition**   |  | | --- | | **single sugars such as glucose and fructose** | |
| **Term**   |  | | --- | | **disaccharide** | | **Definition**   |  | | --- | | **two sugar monomers such as sucrose or lactose** | |
| **Term**   |  | | --- | | **polysaccharide** | | **Definition**   |  | | --- | | **chain of sugars such as cellulose, glycogen, and starch used for energy storage or structure** | |
| **Term**   |  | | --- | | **cellulose** | | **Definition**   |  | | --- | | **structural polysaccharide of plant cell walls- humans can't digest it (fiber)** | |
| **Term**   |  | | --- | | **starch** | | **Definition**   |  | | --- | | **energy storing polysaccharide of plants** | |
| **Term**   |  | | --- | | **glycogen** | | **Definition**   |  | | --- | | **energy storing polysaccharide of animals** | |
| **Term**   |  | | --- | | **glucose** | | **Definition**   |  | | --- | | **building block of carbohydrates; molecule that begins cellular respiration** | |
| **Term**   |  | | --- | | **protein** | | **Definition**   |  | | --- | | **diverse molecules used for structure, transport, as enzymes, muscle, and antibodies** | |
| **Term**   |  | | --- | | **antibody** | | **Definition**   |  | | --- | | **protein molecule used by immune system to fight infection** | |
| **Term**   |  | | --- | | **amino acid** | | **Definition**   |  | | --- | | **building block of proteins** | |
| **Term**   |  | | --- | | **lipid** | | **Definition**   |  | | --- | | **molecule that contains twice the energy of carbs; used for energy, insulation, and cell membranes** | |
| **Term**   |  | | --- | | **enzyme** | | **Definition**   |  | | --- | | **protein catalysts that speed chemical reactions to maintain homeostasis** | |
| **Term**   |  | | --- | | **factors affecting enzyme activity** | | **Definition**   |  | | --- | | **pH and temperature; there is an optimal level for each** | |
| **Term**   |  | | --- | | **pH scale** | | **Definition**   |  | | --- | | **0-14, 7 is neutral, 0-6 acidic, 8-14 basic, 6-8 is zone of life (stomach is very acidic)** | |
| **Term**   |  | | --- | | **ribosome** | | **Definition**   |  | | --- | | **manufactures proteins for cell by assembling chains of amino acids** | |
| **Term**   |  | | --- | | **nucleus** | | **Definition**   |  | | --- | | **houses the eukaryotic cell's DNA and directs cell activities** | |
| **Term**   |  | | --- | | **vacuole** | | **Definition**   |  | | --- | | **stores water and waste in eukaryotic cells; larger in plants** | |
| **Term**   |  | | --- | | **mitochondria** | | **Definition**   |  | | --- | | **performs cellular respiration to make ATP for eukaryotic cells** | |
| **Term**   |  | | --- | | **chloroplast** | | **Definition**   |  | | --- | | **uses the sun, water, and carbon dioxide to perform photosynthesis; makes organic compounds** | |
| **Term**   |  | | --- | | **cell wall** | | **Definition**   |  | | --- | | **outer boundary of plants, fungi, and bacteria plant contains cellulose** | |
| **Term**   |  | | --- | | **cell membrane** | | **Definition**   |  | | --- | | **selectively permeable bilayer; outer boundary of animal cells; made of lipids** | |
| **Term**   |  | | --- | | **plant vs animal cell** | | **Definition**   |  | | --- | | **plants have cell wall, chloroplast, and larger vacuole than animal cells** | |
| **Term**   |  | | --- | | **prokaryotic** | | **Definition**   |  | | --- | | **cells lacking a nucleus; today's bacteria are this type** | |
| **Term**   |  | | --- | | **eukaryotic** | | **Definition**   |  | | --- | | **cells with a nucleus and other membrane bound organelles** | |
| **Term**   |  | | --- | | **All cells have...** | | **Definition**   |  | | --- | | **a cell membrane, ribosomes, DNA, cytoplasm** | |
| **Term**   |  | | --- | | **osmosis** | | **Definition**   |  | | --- | | **movement of water across a membrane from an area of high concentration to low concentration** | |
| **Term**   |  | | --- | | **flagella** | | **Definition**   |  | | --- | | **whip-like structure used for movement by some cells** | |
| **Term**   |  | | --- | | **cilia** | | **Definition**   |  | | --- | | **short hair-like structures used for movement** | |
| **Term**   |  | | --- | | **pseudopodia** | | **Definition**   |  | | --- | | **false foot used for movement** | |
| **Term**   |  | | --- | | **contractile vacuole** | | **Definition**   |  | | --- | | **special organelle in some organisms to prevent bursting from too much water moving in** | |
| **Term**   |  | | --- | | **density of ice** | | **Definition**   |  | | --- | | **less than fresh water so it floats; < 1.0g/mL because of hydrogen bonding due to polarity of water** | |
| **Term**   |  | | --- | | **mitosis** | | **Definition**   |  | | --- | | **creation of identical daughter cells for growth and repair; 2n to 2n** | |
| **Term**   |  | | --- | | **meiosis** | | **Definition**   |  | | --- | | **process that makes haploid gametes (2n to n) leads to genetic variation through crossing over** | |
| **Term**   |  | | --- | | **gamete** | | **Definition**   |  | | --- | | **haploid sex cells such as egg or sperm; produced by meiosis** | |
| **Term**   |  | | --- | | **chromosome** | | **Definition**   |  | | --- | | **structure made of DNA; carries an organism's traits, found in nucleus of eukaryotes** | |
| **Term**   |  | | --- | | **allele** | | **Definition**   |  | | --- | | **an alternative version of a gene** | |
| **Term**   |  | | --- | | **homozygous** | | **Definition**   |  | | --- | | **both alleles of a gene are the same i.e. HH or hh** | |
| **Term**   |  | | --- | | **heterozygous** | | **Definition**   |  | | --- | | **both alleles for a gene are different; i.e. Hh or Tt** | |
| **Term**   |  | | --- | | **dominant** | | **Definition**   |  | | --- | | **a trait that will appear if just one copy is present in the organism** | |
| **Term**   |  | | --- | | **recessive** | | **Definition**   |  | | --- | | **a trait that will only appear if there is no dominant allele i.e tt or hh** | |
| **Term**   |  | | --- | | **sex linked trait** | | **Definition**   |  | | --- | | **a trait usually passed from female to male offspring; carried on X chromosome (ex colorblindness)** | |
| **Term**   |  | | --- | | **variation** | | **Definition**   |  | | --- | | **slight differences between members of the same species** | |
| **Term**   |  | | --- | | **adaptation** | | **Definition**   |  | | --- | | **a trait that increases the chances of survival for an organism in its environment** | |
| **Term**   |  | | --- | | **natural selection** | | **Definition**   |  | | --- | | **process in which those organisms best suited to the environment reproduce and pass on their traits** | |
| **Term**   |  | | --- | | **phenotype** | | **Definition**   |  | | --- | | **the physical appearance or traits an organism has** | |
| **Term**   |  | | --- | | **genotype** | | **Definition**   |  | | --- | | **an organism's allele pairs such as HH or Tt** | |
| **Term**   |  | | --- | | **transcription** | | **Definition**   |  | | --- | | **process of copying the information in DNA to mRNA** | |
| **Term**   |  | | --- | | **RNA** | | **Definition**   |  | | --- | | **single stranded molecule with nucleotides A,U,G, and C** | |
| **Term**   |  | | --- | | **mRNA** | | **Definition**   |  | | --- | | **carries information of DNA to the ribosome for protein synthesis** | |
| **Term**   |  | | --- | | **translation** | | **Definition**   |  | | --- | | **"reading" mRNA by tRNA to assemble a chain of amino acids at the ribosome** | |
| **Term**   |  | | --- | | **gene** | | **Definition**   |  | | --- | | **a segment of DNA that codes for a protein** | |
| **Term**   |  | | --- | | **mutation** | | **Definition**   |  | | --- | | **a change in a DNA sequence; usually but not always harmful** | |
| **Term**   |  | | --- | | **causes of mutation** | | **Definition**   |  | | --- | | **radiation, uv light, chemical mutagens** | |
| **Term**   |  | | --- | | **mutualism** | | **Definition**   |  | | --- | | **symbiotic relationship in which both organisms benefit (ex bees and flowers)** | |
| **Term**   |  | | --- | | **commensalism** | | **Definition**   |  | | --- | | **symbiotic relationship in which one organism benefits and the other is unaffected** | |
| **Term**   |  | | --- | | **parasitism** | | **Definition**   |  | | --- | | **one organism benefits while the other is harmed** | |
| **Term**   |  | | --- | | **autotroph** | | **Definition**   |  | | --- | | **organisms such as plants and some bacteria that can make their own food** | |
| **Term**   |  | | --- | | **heterotrophs** | | **Definition**   |  | | --- | | **organisms that cannot manufacture food (animals and fungi)** | |
| **Term**   |  | | --- | | **chemotrophs** | | **Definition**   |  | | --- | | **organisms found near hot vents on ocean floor that make their own food with inorganic molecules and no light** | |
| **Term**   |  | | --- | | **cellular respiration** | | **Definition**   |  | | --- | | **process performed by mitochondria to make ATP using glucose and oxygen and releasing carbon dioxide and water** | |
| **Term**   |  | | --- | | **aerobic respiration** | | **Definition**   |  | | --- | | **breakdown of carbohydrates for energy in the presence of oxygen; makes lots of ATP** | |
| **Term**   |  | | --- | | **anaerobic respiration** | | **Definition**   |  | | --- | | **breakdown of carbohydrates without using oxygen; used by bacteria, yeast, and very hard working muscle** | |
| **Term**   |  | | --- | | **producers** | | **Definition**   |  | | --- | | **first step in food chain; plants, contain large amounts of energy** | |
| **Term**   |  | | --- | | **consumers** | | **Definition**   |  | | --- | | **heterotrophs that feed on producers or other heterotrophs** | |
| **Term**   |  | | --- | | **decomposers** | | **Definition**   |  | | --- | | **bacteria and fungi that break down dead organisms and return the molecules to the environment** | |
| **Term**   |  | | --- | | **length** | | **Definition**   |  | | --- | | **measured in meters; micrometers, millimeters, centimeters, meters, kilometers** | |
| **Term**   |  | | --- | | **mass** | | **Definition**   |  | | --- | | **micrograms, milligrams, grams, kilograms** | |
| **Term**   |  | | --- | | **niche** | | **Definition**   |  | | --- | | **the role an organism plays in its habitat- where it lives, what it eats, what eats it, etc** | |
| **Term**   |  | | --- | | **succession** | | **Definition**   |  | | --- | | **change in an ecosystem as one community replaces another** | |
| **Term**   |  | | --- | | **primary succession** | | **Definition**   |  | | --- | | **occurs where no ecosystem has existed before such as a volcanic island; pioneer species move in and make soil** | |
| **Term**   |  | | --- | | **secondary succession** | | **Definition**   |  | | --- | | **takes place where an ecosystem already was such as after a forest fire** | |
| **Term**   |  | | --- | | **nervous system** | | **Definition**   |  | | --- | | **brain, spinal cord, and nerves; respond to stimuli and send messages throughout body** | |
| **Term**   |  | | --- | | **digestive system** | | **Definition**   |  | | --- | | **breaks down food to monomers for absorption to meet energy needs (mouth, stomach, intestines)** | |
| **Term**   |  | | --- | | **endocrine system** | | **Definition**   |  | | --- | | **sends chemical messages called hormones through bloodstream** | |
| **Term**   |  | | --- | | **respiratory system** | | **Definition**   |  | | --- | | **moves oxygen and carbon dioxide; involves lungs or gills** | |
| **Term**   |  | | --- | | **excretory system** | | **Definition**   |  | | --- | | **filters waste products from blood; kidneys are primary organ** | |
| **Term**   |  | | --- | | **circulatory system** | | **Definition**   |  | | --- | | **moves needed molecules throughout body; heart and blood vessels in animals, xylem in plants** | |
| **Term**   |  | | --- | | **biological magnification** | | **Definition**   |  | | --- | | **type of pollution when a toxin builds up in concentration as it moves through a food chain (DDT)** | |
| **Term**   |  | | --- | | **Acid precipitation** | | **Definition**   |  | | --- | | **rain or snow with a low pH caused by burning fossil fuels; especially harmful to aquatic organisms** | |
| **Term**   |  | | --- | | **Introduced species** | | **Definition**   |  | | --- | | **non-native species brought to live or accidentally released in new place; often outcompete native species** | |