Year Long Biology Vocabulary

1. Biology - The science of life or living matter in all its forms and phenomena
2. Scientific method - The process scientists use to answer questions.
3. Qualitative data - Information collected in the form of descriptions.
4. Quantitative data - Information collected in the form of numbers.
5. Hypothesis - a statement that is going to be tested.
6. Controlled experiment - a test of a hypothesis under carefully managed conditions.
7. Control - the group in an experiment used as a standard of comparison.
8. Independent variable - The factor that is changed in an experiment.
9. Dependent variable - the factor that is measured in an experiment.
10. Scientific model - a conceptual representation whose purpose is to explain and predict observed phenomena
11. Homeostasis - The steady-state physiological condition of the body.
12. Metric system - a decimal system of weights and measures used in science.
13. Theory - An explanation that is broad in scope, generates new hypotheses, and is supported by a large body of evidence.
14. Law - A statement based on repeated experimental observations that describes some aspect of the universe.
15. Matter - something that has mass and takes up space.
16. Element - something that cannot be broken down into simpler substances.
17. Compound - two or more elements combined
18. Trace elements - any substance that is required in minute quantities for physiological functioning.
19. Atom - The smallest unit of matter that retains the properties of an element
20. Neutron - An electrically neutral particle found in the nucleus of an atom with a mass of 1 Atomic Mass Unit (AMU).

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21. Proton - a particle found in the nucleus of an atom that has a positive charge with a mass of 1 AMU.
22. Electron - a particle found in a cloud around the nucleus that has negative charge with no significant mass.
23. Atomic nucleus - An atom's central core, containing protons and neutrons.
24. Atomic number - the number found in the periodic table for an element. Equals the number of protons for that element.
25. Atomic mass - The average mass of all the isotopes of an element.
26. Mass number - the sum of protons and neutrons in each atom of an element.
27. Isotopes - atoms of elements with several different mass numbers.
28. Radioisotope - a version of an element that has an unstable nucleus so it will decay over time.
29. Energy - the ability to do work
30. Electron shells - An energy level represented as the distance of an electron from the nucleus of an atom
31. Valence electron - An electron found in the outermost shell of an atom.
32. Valence shell - the outermost shell of an atom.
33. Chemical bond - a mutual attraction between two atoms resulting from a redistribution of their outer electrons.
34. Covalent bond - A chemical attraction in which atoms share electrons.
35. Molecule - A chemical compound composed of covalent bonds between atoms.
36. Non-polar covalent - A molecule in which electrons are evenly distributed.
37. Polar covalent - A molecule with a slight positive charge on one side and a slight negative charge on the other.
38. Ion - A charged atom
39. Cation - A positively charged atom
40. Anion - A negatively charged atom

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41. Ionic bond - An attraction formed when electrons are transferred between atoms.
42. Hydrogen bond - Weak attraction between a hydrogen atom and another atom
43. Van der Waals forces - Slight attraction that develops between oppositely charged regions of nearby molecules
44. Chemical reaction - The process that changes, or transforms, one set of chemicals into another set of chemicals
45. Reactant - Elements or compounds that enter into a chemical reaction
46. Product - Elements or compounds synthesized by a chemical reaction
47. Equilibrium - A state in which a process and its reverse are occurring at the same rate.
48. Cohesion - The binding together of like molecules, often by hydrogen bonds.
49. Adhesion - The force of attraction between different kinds of molecules.
50. Solvent - The dissolving substance in a solution, usually a liquid
51. Solute - The substance that is dissolved in a solution
52. Solution - A liquid that is a homogeneous mixture of two or more substances.
53. Hydrophilic - A substance that is soluble in water; having an affinity for water
54. Hydrophobic - A substance that is not soluble in water; having an aversion to water
55. Acid - A compound that forms hydrogen ions (H+) in solution; a solution with a pH of less than 7.
56. Base - A compound that produces hydroxide ions (OH-) in solution; a solution with a pH of more than 7.
57. Protein - An organic compound that contains carbon, hydrogen, oxygen, nitrogen, and sulfur; needed by the body for growth and repair.
58. Carbohydrate - an organic compound made up of carbon, hydrogen, and oxygen atoms in a 1:2:1 ratio that is the major source of energy for the body
59. Lipid - an organic compound made mostly from carbon and hydrogen atoms, which includes fats, oils and waxes.
60. Nucleic acid - an organic compound that contains hydrogen, carbon, oxygen, nitrogen, and Phosphorus that is the source of hereditary information for the organism.

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61. Adenosine Triphosphate - a nucleic acid that living things use to store and release energy.
62. Macromolecule - A covalently bonded compound containing a very large number of atoms, such as protein, nucleic acid, or synthetic polymer.
63. Polymer - A large molecule consisting of many similar or identical monomers linked together.
64. Monomer - A subunit that serves as a building block of a polymer.
65. Metabolism - The totality of an organism's chemical reactions, consisting of catabolic (breaking down) and anabolic (building up) pathways.
66. Condensation reaction - a chemical reaction in which water is released and a macromolecule is built.
67. Hydrolysis - A chemical reaction in which water is added and macromolecules are broken down.
68. Monosaccharide - any of the class of sugars that cannot be hydrolyzed to give a simpler sugar.
69. Disaccharide - any of a class of sugars whose molecules contain two simple sugars.
70. Glycosidic bond - A covalent bond formed between two monosaccharides by a condensation reaction.
71. Polysaccharide - A polymer of up to over a thousand monosaccharides, formed by condensation reactions.
72. Phospholipid - A molecule that is a constituent of the inner bilayer of biological membranes, having a polar, hydrophilic head and a nonpolar, hydrophobic tail.
73. Enzyme - A protein serving as a biological catalyst, a chemical agent that speeds up the rate of a reaction without being consumed by the reaction.
74. Catalyst - A chemical agent that changes the rate of a reaction without being consumed by the reaction.
75. Peptide bond - covalent bond between two amino acid units, formed by a condensation reaction.
76. Nucleotide - A building block of a nucleic acid, consisting of a five-carbon sugar covalently bonded to a nitrogenous base and a phosphate group.

77. Cell Theory - A set of statements in biology that states that all organisms are composed of cells, cells come from cells, and cells are the basic unit of living things.
78. Light microscope - An optical instrument with lenses that refract (bend) visible light to magnify images of specimens.
79. Organelle - One of several formed bodies with specialized functions, suspended in the cytoplasm of eukaryotic cells.
80. Electron microscope - An instrument that focuses an electron beam through a specimen, resulting in resolving power a thousand fold greater than that of a light microscope.

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81. Prokaryotic cell - A type of cell lacking a membrane-enclosed nucleus and membrane-enclosed organelles; found only in the domains Bacteria and Archaea.
82. Eukaryotic cell - A type of cell with a membrane-enclosed nucleus and membrane-enclosed organelles, present in protists, plants, fungi, and animals.
83. Cytoplasm - jelly-like portion of the cell, exclusive of the nucleus, and bounded by the plasma membrane.
84. Plasma membrane - The fluid boundary of every cell that acts as a selective barrier, thereby regulating the cells chemical composition.
85. Cell nucleus - The chromosome-containing organelle of a eukaryotic cell.
86. Nucleolus - A specialized structure in the nucleus, formed from various chromosomes and active in the synthesis of ribosomes.
87. Ribosome - site of protein synthesis in all types of cells.
88. Rough Endoplasmic Reticulum - internal membrane system found in eukaryotic cells covered with ribosomes; place where proteins bound for membranes are assembled.
89. Smooth Endoplasmic Reticulum - internal membrane system found in eukaryotic cells where lipid synthesis and detoxification occurs.
90. Golgi apparatus - An organelle in eukaryotic cells consisting of stacks of flat membranous sacs that modify, store, and route products of the endoplasmic reticulum.
91. Lysosome - A membrane-enclosed sac of digestive enzymes found in the cytoplasm of eukaryotic cells
92. Phagocytosis - A type of endocytosis involving large, particulate substances, accomplished mainly by macrophages, neutrophils, and dendritic cells.
93. Pinocytosis - A type of endocytosis in which the cell ingests extracellular fluid and its dissolved solutes.
94. Vacuole - cell organelle that stores materials such as water, salts, proteins, and carbohydrates.
95. Mitochondria - cell organelle that converts the chemical energy stored in food into compounds that are more convenient for the cell to use in the process of aerobic respiration.
96. Chloroplast - organelle found in cells of plants and some other organisms that captures the energy from sunlight and converts it into chemical energy in the process of photosynthesis.
97. Cytoskeleton - network of protein filaments in a eukaryotic cell that gives the cell its shape and internal organization and is involved in movement.
98. Centrioles - structure in an animal cell that helps to organize cell division.
99. Flagella - structure used by protists for movement; produces movement in a whip-like motion.
100. Cilia - many short hair-like projections that produce movement in a wavelike motion.

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101. Cell wall - strong, supporting layer around the cell membrane in some cells.
102. Selective permeability - A property of biological membranes that allows some substances to cross more easily than others.
103. Integral protein - a transmembrane protein with hydrophobic regions that completely spans the hydrophobic interior of the membrane.

104. Peripheral protein - A protein appendage loosely bound to the surface of a membrane and not embedded in the lipid bilayer.
105. Transport protein - A transmembrane protein that helps a certain substance or class of closely related substances to cross the membrane.
106. Diffusion - The spontaneous tendency of a substance to move down its concentration gradient from a high concentration to a low concentration.
107. Passive transport - The diffusion of a substance across a biological membrane.
108. Osmosis - The diffusion of water across a selectively permeable membrane.
109. Hypertonic solution - the solution with a greater solute concentration and lower water concentration.
110. Hypotonic solution - the solution with a lower solute concentration and greater water concentration.
111. Isotonic solution - the same solute and water concentration as another solution.
112. Active transport - The movement of a substance across a biological membrane against its concentration gradient with the help of energy and specific transport proteins.
113. Facilitated diffusion - passive transport that allows substances through a selectively permeable membrane with the help of transport proteins.
114. Exocytosis - The cellular secretion of macromolecules by the fusion of vesicles with the plasma membrane.
115. Endocytosis - The cellular uptake of macromolecules and particulate substances by localized regions of the plasma membrane that surround the substance and pinch off to form an intracellular vesicle.
116. Exergonic reaction - A spontaneous chemical reaction, in which there is a net release of free energy.
117. Endergonic reaction - A non-spontaneous chemical reaction, in which free energy is absorbed from the surroundings.
118. Phosphorylation - the addition of a phosphate group to a molecule.
119. Activation energy - The amount of energy that reactants must absorb before a chemical reaction will begin.
120. Substrate - The reactant on which an enzyme works.

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121. Active site - The specific portion of an enzyme that attaches to the substrate by means of weak chemical bonds.
122. Fermentation - A catabolic process that makes a limited amount of ATP from glucose without an electron transport chain and that produces a characteristic end product, such as ethyl alcohol or lactic acid.
123. Aerobic respiration - The most prevalent and efficient catabolic pathway for the production of ATP, in which oxygen is consumed as a reactant along with the organic fuel.
124. Cristae - An infolding of the inner membrane of a mitochondrion that houses the electron transport chain and the enzyme catalyzing the synthesis of ATP.
125. Mitochondrial matrix - The compartment of the mitochondria enclosed by the inner membrane and containing enzymes and substrates for the Krebs cycle.
126. Electron transport chain - A sequence of electron carrier molecules (membrane proteins) that shuttle electrons during the redox reactions that release energy used to make ATP.
127. Glycolysis - The splitting of glucose into pyruvate. The one metabolic pathway that occurs in all living cells, serving as the starting point for fermentation or aerobic respiration.
128. Citric acid cycle - A chemical cycle involving eight steps that completes the metabolic breakdown of glucose molecules to carbon dioxide; occurs within the mitochondrion; the second major stage in cellular respiration.
129. Aerobic - Referring to an organism, environment, or cellular process that requires oxygen.
130. Anaerobic - Referring to an organism, environment, or cellular process that lacks oxygen and may be poisoned by it.
131. Alcohol fermentation - The conversion of pyruvate to carbon dioxide and ethyl alcohol.
132. Lactic acid fermentation - The conversion of pyruvate to lactate with no release of carbon dioxide.
133. Pyruvate - the end product of glycolysis and may be metabolized to lactate or to acetyl CoA.

134. Photosynthesis - The conversion of light energy to chemical energy that is stored in glucose or other organic compounds; occurs in plants, algae, and certain prokaryotes.
135. Chlorophyll - A green pigment located within the chloroplasts of plants. Chlorophyll a can participate directly in the light reactions, which convert solar energy to chemical energy.
136. Stomata - small openings in the epidermis of a plant that allows carbon dioxide, water, and oxygen to diffuse into and out of the leaf.
137. Stroma - The fluid of the chloroplast surrounding the thylakoid membrane; involved in the synthesis of organic molecules from carbon dioxide and water.
138. Thylakoids - The flattened membrane sacs inside the chloroplast, used to convert light energy to chemical energy.
139. Calvin cycle - The second of two major stages in photosynthesis (following the light dependent reactions), involving atmospheric CO2 fixation and reduction of the fixed carbon into carbohydrate.
140. Mitosis - A process of nuclear division in eukaryotic cells.
141. Cell cycle - An ordered sequence of events in the life of a eukaryotic cell, from its origin in the division of a parent cell until its own division into two; composed of the G1, S, G2 and M phases.

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142. Genome - The complete complement of an organism's genes; an organism's genetic material.
143. Chromosomes - Threadlike, gene-carrying structures found in the nucleus. Each one consists of one very long DNA molecule and associated proteins..
144. Somatic cells - All cells in a multicellular organism except a sperm or egg cell.
145. Gamete - Haploid cell, such as an egg or sperm. They unite during sexual reproduction to produce a diploid zygote.
146. Chromatin - The complex of DNA and proteins that makes up a eukaryotic chromosome.
147. Sister chromatid - Replicated form of a chromosome joined together by the centromere and eventually separated during mitosis or meiosis II.
148. Centromere - The centralized region joining two sister chromatids.
149. Cytokinesis - The division of the cytoplasm to form two separate daughter cells immediately after mitosis.
150. G1 phase - The first growth phase of the cell cycle, consisting of the portion of interphase before DNA synthesis begins.
151. S-Phase - The synthesis phase of the cell cycle; the portion of interphase during which DNA is replicated.
152. G2 phase - The phase of the cell cycle consisting of the portion of interphase after DNA synthesis occurs.
153. Prophase - The stage of mitosis in which the chromatin is condensing and the mitotic spindle begins to form, but the nucleolus and nucleus are still intact.
154. Metaphase - The stage of mitosis in which the spindle is complete and the chromosomes, attached to microtubules at their kinetochores, are all aligned at the center of the cell.
155. Anaphase - The stage of mitosis in which the chromatids of each chromosome have separated and the daughter chromosomes are moving to the poles of the cell.
156. Telophase - The stage of mitosis in which daughter nuclei are forming and cytokinesis has typically begun.
157. Metaphase plate - An imaginary plane during mitosis in which the centromeres of all the duplicated chromosomes are located midway between the two poles.
158. Cleavage furrow - A shallow groove in the cell surface near the old metaphase plate.
159. Cell plate - A double membrane across the midline of a dividing plant cell, between which the new cell wall forms during cytokinesis.
160. Binary Fission - The separation of a parent into two or more individuals of approximately equal size.

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161. Origin of replication - the site where the synthesis of a DNA molecule begins.

162. Cancer - a large group of different diseases, all involving unregulated cell division and growth of a tumor.
163. Metastasis - The spread of cancer cells to locations distant from their original site.
164. Meiosis - A two-stage type of cell division in sexually reproducing organisms that results in cells with half the chromosome number of the original cell.
165. Diploid - A cell containing two sets of chromosomes (2n), one set inherited from each parent.
166. Haploid - A cell containing only one set of chromosomes (n).
167. Zygote - The diploid product of the union of haploid gametes in conception; a fertilized egg.
168. Fertilization - The union of haploid gametes to produce a diploid zygote.
169. Tetrad - A paired set of homologous chromosomes, each composed of two sister chromatids.
170. Chiasma - The X-shaped, microscopically visible region representing homologous chromatids that have exchanged genetic material through crossing over during meiosis.
171. Homologous chromosomes - Chromosome pairs of the same length, centromere position, and staining pattern that possess genes for the same characters at corresponding loci.
172. Karyotype - A display of the chromosome pairs of a cell arranged by size and shape.
173. Variation - Differences between members of the same species.
174. Genetics - The scientific study of heredity and hereditary variation.
175. Gene - A discrete unit of hereditary information consisting of a specific nucleotide sequence in DNA
176. Locus - A specific place along the length of a chromosome where a given gene is found.
177. Asexual reproduction - A type of reproduction involving only one parent that produces genetically identical offspring by budding or by the division of a single cell or the entire organism into two or more parts.
178. Trait - Any detectable variation in a genetic character.
179. Homozygous - Having two identical alleles for a given gene.
180. Heterozygous - Having two different alleles for a given gene.

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181. Allele - Alternate versions of a gene that produce distinguishable phenotypic effects
182. Dominant - An allele that is fully expressed in the phenotype of a heterozygote.
183. Recessive - An allele whose phenotypic effect is not expressed in a heterozygote.
184. Punnett square - A diagram used in the study of inheritance to show the results of random fertilization in genetic crosses.
185. Genotype - The complete set of alleles of an organism.
186. Phenotype - The physical and physiological traits of an organism that are determined by its genetic makeup.
187. Monohybrid - An organism that is heterozygous with respect to a single gene of interest.
188. Dihybrid - An organism that is heterozygous with respect to two genes of interest.
189. Codominance - The situation in which the phenotypes of both alleles are exhibited in the heterozygote.
190. Incomplete dominance - The situation in which the phenotype of heterozygotes is intermediate between the phenotypes of individuals homozygous for either allele.
191. Epistasis - A type of gene interaction in which one gene alters the phenotypic effects of another gene that is independently inherited.
192. Polygenic - An additive effect of two or more gene loci on a single phenotypic character.
193. Carrier - An individual who is heterozygous at a given genetic locus, with one normal allele and one potentially harmful recessive allele.
194. Deletion - 1) A deficiency in a chromosome resulting from the loss of a fragment through breakage. (2) A mutational loss of one or more nucleotide pairs from a gene.
195. Duplication - An aberration in chromosome structure due to fusion with a fragment from a homologous chromosome, such that a portion of a chromosome is duplicated.

196. Inversion - An aberration in chromosome structure resulting from reattachment in a reverse orientation of a chromosomal fragment to the chromosome from which the fragment originated.
197. Translocation - An aberration in chromosome structure resulting from attachment of a chromosomal fragment to a nonhomologous chromosome.
198. Bacteriophage - A virus that infects bacteria.
199. Semiconservative replication - Type of DNA synthesis in which the reproduced double helix consists of one old strand, derived from the old molecule, and one newly made strand.
200. Lagging strand - A discontinuously synthesized DNA molecule that elongates in a direction away from the replication fork.

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201. Okazaki fragment - A short segment of DNA synthesized on a template strand during DNA replication
202. DNA ligase - A linking enzyme essential for DNA replication; catalyzes the covalent bonding of the 3' end of a new DNA fragment to the 5' end of a growing chain.
203. Primer - A polynucleotide with a free 3´ end, bound by complementary base pairing to the template strand that is elongated during DNA replication.
204. Primase - An enzyme that joins RNA nucleotides to make the primer.
205. Helicase - An enzyme that untwists the double helix of DNA at the replication forks.
206. Transcription - The synthesis of RNA on a DNA template.
207. Translation - The synthesis of a polypeptide (protein) using the genetic information encoded in an mRNA molecule.
208. Codon - A three-nucleotide sequence of DNA or mRNA that specifies a particular amino acid or termination signal
209. Anticodon - A specialized base triplet at one end of a tRNA molecule that recognizes a particular complementary codon on an mRNA molecule.
210. Mutation - A rare change in the DNA of a gene, ultimately creating genetic diversity.
211. Point mutation - A change in a gene at a single nucleotide pair.
212. Frameshift mutation - A mutation occurring when the number of nucleotides inserted or deleted is not a multiple of three, resulting in the improper grouping of the following nucleotides into codons.
213. Insertion - A mutation involving the addition of one or more nucleotide pairs to a gene.
214. Substitution - A mutation involving the replacement of one or more nucleotides with an equal amount.
215. Endangered species - A species that is in jeopardy of extinction throughout all or a significant portion of its range.
216. Natural selection - Differential success in the reproduction of different phenotypes resulting from the interaction of organisms with their environment.
217. Evolution - All the changes that have transformed life on Earth from its earliest beginnings to the diversity that characterizes it today.
218. Adaptation - heritable characteristic that increases an organism's ability to survive and reproduce in an environment
219. Fossil - A preserved remnant or impression of an organism that lived in the past.
220. Taxonomy - the branch of biology concerned with naming and classifying the diverse forms of life.

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221. Gradualism - A thought that attributes profound change to the cumulative product of slow but continuous processes.
222. Catastrophism - The thought that each boundary between strata corresponded in time to a natural disaster, such as a flood or drought that had destroyed many of the species living there at that time.
223. Uniformitarianism - The thought that geologic processes have not changed throughout Earth's history.

224. Vestigial organ - A structure of marginal, if any, importance to an organism.
225. Biogeography - The study of the past and present distribution of species.
226. Gene pool - The total aggregate of genes in a population at any one time.
227. Hardy-Weinberg equilibrium - The principle that the frequency of alleles and genotypes in a population remain constant from generation to generation, provided that only Mendelian segregation and recombination of alleles are at work
228. Genetic drift - Unpredictable fluctuations in allele frequencies from one generation to the next because of a population's finite size.
229. Bottleneck effect - Genetic drift resulting from the reduction of a population, typically by a natural disaster, such that the surviving population is no longer genetically representative of the original population.
230. Founder effect - Genetic drift that occurs when a few individuals become isolated from a larger population, with the result that the new population's gene pool is not reflective of the original population.
231. Gene flow - Genetic additions to or subtractions from a population resulting from the movement of fertile individuals or gametes.
232. Fitness - The contribution an individual makes to the gene pool of the next generation, relative to the contributions of other individuals.
233. Directional selection - Natural selection that favors individuals at one end of the phenotypic range.
234. Disruptive selection - Natural selection that favors individuals on both extremes of a phenotypic range over intermediate phenotypes.
235. Stabilizing selection - Natural selection that favors intermediate variants by acting against extreme phenotypes.
236. Speciation - The origin of new species in evolution.
237. Species - A group whose members possess similar anatomical characteristics and have the ability to interbreed.
238. Binomial nomenclature - classification system in which each species is assigned a two-part scientific name
239. Phylogeny - The evolutionary history of a species or group of related species.
240. Cladogram - A diagram depicting patterns of shared characteristics among taxa.

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241. Derived character - a trait that appears in recent parts of a lineage, but not in its older members.
242. Clade - A group of organisms, such as a species, whose members share homologous features derived from a common ancestor.
243. Ecology - The study of how organisms interact with their environment.
244. Abiotic factors - Nonliving things that are part of an environment.
245. Biotic factors - Referring to all living things that are part of the environment and their interactions with each other.
246. Population - A localized group of individuals that belong to the same biological species.
247. Community - an assemblage of populations of different species living close enough together for potential interaction.
248. Ecosystem - a community and its physical environment.
249. Biosphere - The entire portion of Earth inhabited by life
250. Climate - The prevailing weather conditions at a locality.
251. Biome - Any of the world's major ecosystems, classified according to the predominant vegetation and characterized by adaptations of organisms to that particular environment.
252. Photic zone - The narrow top slice of the ocean, where light permeates sufficiently for photosynthesis to occur.
253. Canopy - The uppermost layer of vegetation in a terrestrial biome.
254. Understory - layer in a rainforest found beneath the canopy formed by shorter vines and trees.
255. Permafrost - a thick subsurface layer of soil that remains frozen throughout the year, occurring mostly in tundra biomes.

256. Arid - barren or unproductive because of a lack of moisture.
257. Immigration - The influx of new individuals from other areas.
258. Emigration - The movement of individuals out of a population.
259. Logistic growth - A model describing population growth that levels off as population size approaches carrying capacity.
260. Exponential growth - The geometric increase of a population as it grows in an ideal, unlimited environment with no limiting factors.

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261. Carrying capacity - The maximum population size that can be supported by the available resources
262. Predation - An interaction between species in which one species hunts and eats the other.
263. Niche - The sum total of a species' use of the biotic and abiotic resources in its environment.
264. Habitat - area where an organism lives including the biotic and abiotic factors that affect it
265. Mimicry - the similarity of one species to another which protects one or both
266. Symbiosis - An ecological relationship between organisms of two different species that live together in direct contact.
267. Parasitism - A symbiotic relationship in which the symbiont benefits at the expense of the host by living either within the host or outside the host.
268. Mutualism - A symbiotic relationship in which both participants benefit.
269. Commensalism - A symbiotic relationship in which the symbiont benefits but the host is neither helped nor harmed.
270. Pathogen - A disease-causing agent.
271. Keystone species - organisms that are not necessarily abundant in a community yet exert strong control on community structure by the nature of their ecological role or niche.
272. Exotic species - An organism that is introduced to an environment in which it has no natural predators.
273. Trophic level - each step in a food chain or food web
274. Food chain - The pathway along which food is transferred from trophic level to trophic level, beginning with producers.
275. Food web - The elaborate, interconnected feeding relationships in an ecosystem.
276. Autotroph - An organism that obtains organic food molecules without eating other organisms or substances derived from other organisms.
277. Producer - An organism that has the ability to create its own energy.
278. Heterotroph - An organism that obtains organic food molecules by eating other organisms or their by-products.
279. Consumer - an organism that relies on other organisms for its energy.
280. Detritivore - An organism that uses organic waste as a food source, such as certain insects.

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281. Decomposer - An organism, usually a bacterium or fungus, that breaks down the cells of dead plants and animals into simpler substances.
282. Scavenger - an animal that consumes the carcasses of other animals
283. Biomass - The dry weight of organic matter comprising a group of organisms in a particular habitat.
284. Succession - Transition in the species composition of a biological community, often following ecological disturbance of the community
285. Primary succession - A type of ecological succession that occurs in a virtually lifeless area, where there were originally no organisms and where soil has not yet formed.
286. Secondary succession - A type of succession that occurs where an existing community has been cleared by some disturbance that leaves the soil intact.
287. Pioneer species - the first organisms to populate an area during succession

288. Limiting factor - a factor that causes population growth to decrease
289. Eutrophication - A process by which nutrients, particularly phosphorus and nitrogen, become highly concentrated in a body of water, leading to increased growth of organisms such as algae.
290. Biogeochemical cycle - Any of the various nutrient circuits, which involve both biotic and abiotic components of ecosystems.
291. Nitrogen fixation - The assimilation of atmospheric nitrogen by certain prokaryotes into nitrogenous compounds that can be directly used by plants.
292. Biological magnification - A trophic process in which retained substances become more concentrated with each link in the food chain.
293. Greenhouse effect - The warming of planet Earth due to the atmospheric accumulation of carbon dioxide, which absorbs infrared radiation and slows its escape from the irradiated Earth.
294. Climate change - a change in global or regional climate patterns, attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.
295. Cerebrum - The dorsal portion of the vertebrate forebrain, composed of the frontal, parietal, occipital, and temporal lobes.
296. Cerebellum - Part of the vertebrate hindbrain located dorsally; functions in unconscious coordination of movement and balance.
297. Brainstem - Collection of structures in the adult brain, including the midbrain, the pons, and the medulla oblongata; functions in homeostasis, coordination of movement, and conduction of information to higher brain centers.
298. Pons - Portion of the brain that participates in certain automatic, homeostatic functions, such as regulating the breathing centers in the medulla.
299. Medulla - a swelling of the hindbrain dorsal to the anterior spinal cord that controls autonomic, homeostatic functions, including breathing, heart and blood vessel activity, swallowing, digestion, and vomiting.
300. Xylem - Vascular plant tissue consisting mainly of tubular dead cells that conduct most of the water and minerals upward from roots to the rest of the plant.
301. Phloem - Vascular plant tissue consisting of living cells arranged into elongated tubes that transport sugar and other organic nutrients throughout the plant.