AP Biology Vocabulary Study Sheet

1.	active site	The part of an enzyme where the substrate will bind.
2.	active transport	The movement of molecules across the cell membrane with the use of ATP.
3.	amino acids	The 20 molecules that are held together by peptide bonds to make up proteins.
4.	antibodies	Proteins made by the B cells that immobilize antigens.
5.	anticodon	The three nucleotide combination on the transfer RNA that matches up with the three letter on the messenger RNA.
6.	antigen	The foreign particles or substances that trigger an immune response.
7.	ATP	A high energy molecule that can be split apart to release energy for many different processes in living things.
8.	autotroph	An organism that makes its own food.
9.	autosomal chromosomes	Any chromosome not considered as a sex chromosome, or is not involved in sex determination.
10.	auxins	Plant hormones that lead to phototropism by elongating the dark side of the plant.
11.	binary fission	The asexual reproduction in bacteria.
12.	buffer	A chemical that can release or absorb hydrogen ions depending on the conditions and therefore can maintain the pH of a solution at a constant level.
13.	capillaries	The smallest of blood vessels that serve to distribute oxygenated blood from arteries to tissues of body and to feed deoxygenated blood from tissues back into veins.
14.	carrying capacity	The maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water, and other necessities available in the environment.
15.	catalyst	A molecule that speeds up a chemical reaction by lowering the activation energy.
16.	cell cycle	The continuous series of events that all somatic cells go through that includes interphase, mitosis, and cytokinesis.

17.	cell wall	Structural part of some cells that can be made of cellulose, peptidoglycan, or chitin depending on what kingdom the organism belongs to.
18.	cellular respiration	The process of breaking down glucose to make ATP.
19.	centromere	The region of a chromosome to which the microtubules of the spindle attach, via the kinetochore, during cell division.
20.	centrosome	An organelle near the nucleus of a cell that contains the centrioles (in animal cells) and from which the spindle fibers develop in cell division.
21.	cholesterol	The steroid embedded in the cell membrane that keeps the membrane fluid and strong.
22.	chlorophyll	The green pigment molecule found in the chloroplasts of higher plants and in cells of photosynthetic microorganisms which is primarily involved in absorbing light energy for photosynthesis.
23.	chloroplast	The cell part responsible for photosynthesis in eukaryotic cells.
24.	chromatin	The unwound form of DNA that is accessible for making RNA.
25.	chromosomes	The DNA when it is wrapped up tightly around proteins during metaphase.
26.	codominance	Form of dominance in which the alleles of a gene pair in a heterozygote are fully expressed thereby resulting in offspring with a phenotype that is neither dominant or recessive.
27.	codon	The three nucleotide combination on the messenger RNA that matches up with the three letter combination on the transfer RNA and has the information to code for one amino acid.
28.	cohesion	The attractive force between polar molecules of the same substance.
29.	controlled variables	The many characteristics of the experimental group and control group which are held constant.
30.	covalent bond	An intramolecular bond where atoms are sharing electrons equally.
31.	cuticle	The waxy protective layer on plants that prevents desiccation.

32.	cytokinesis	After mitosis or meiosis it is the "splitting" of the cytoplasm to form two or four new cells each with its own nucleus.
33.	dehydration synthesis	The type of reaction that links together monomers to make polymers and release water in the process.
34.	diffusion	Net passive movement of particles from a region of higher concentration to region of lower concentration until the concentration of substances is uniform throughout.
35.	diploid	Cells that have two copies of each kind of chromosome.
36.	DNA ligase	The enzyme that splices DNA together in genetic engineering and the Okazaki fragments of replication.
37.	endoplasmic reticulum	The series of membranes inside the cell that allow for passage of materials through the cytoplasm and the synthesis of lipids.
38.	endosymbiosis	The theory that eukaryotic cells arose from prokaryotic cells that lived closely together to the point that we now call these former cells "mitochondria" and "chloroplasts."
39.	enzyme	An organic catalyst that lowers the activation energy of chemical reactions in organisms thus increasing the rate of reaction.
40.	eukaryotic cell	A cell with a nucleus and membrane bound organelles.
41.	facilitated diffusion	The movement of molecules across the cell membrane without the use of ATP, but with the help of a protein.
42.	gametes	The haploid cells produce by meiosis.
43.	gene	The section of DNA that is responsible for the production of one new polypeptide.
44.	genetic engineering	The process of combining the DNA of two different organisms.
45.	genome	The entire complement of chromosomes in an individual.
46.	genotype	A set of alleles that determines the expression of a particular trait.
47.	global warming	The increase in carbon dioxide and other gases causing heat to be trapped raising the temperature of the earth.
48.	glycerol	The three carbon backbone molecule of the triglycerides.
49.	glycogen	The polysaccharide that is how animals store glucose in their liver.

50. gonads	The site of meiosis in humans that includes the ovaries and testes.
51. haploids	Cells that have one copy of each kind of chromosome.
52. heterotroph	An organism that cannot manufacture its own food and instead obtains its food and energy by taking in organic substances.
53. heterozygous	Pair of genes where one is dominant and one is recessive.
54. homeostasis	The condition in animals where they keep their internal environment constant for a specific characteristic often as a result of negative feedback.
55. homozygous	The description of an individual who has the same allele for a trait on both homologous chromosomes.
56. hydrogen bond	The weak intermolecular bond that forms between water molecules that causes them to "stick" to each other.
57. hypothesis	A testable explanation for a question.
58. incomplete dominance	The type of inheritance where the heterozygous individual has a blend of the dominant and recessive trait.
59. independent variable	The one difference between the experimental group and the control group.
60. innate	Behavior of an organism that is not learned and is genetically determined.
61. insulin	The hormone that lowers blood sugar by having it stored as glycogen in the liver and increasing cellular uptake.
62. logistic growth	The type of population growth where the population has reached the carrying capacity and stays at a relatively constant level as indicated by a J curve.
63. marker proteins	Proteins embedded in the cell membrane which allow organisms to differentiate between self and non-self cells.
64. meiosis	The type of nuclear division that leads to four nuclei with a haploid complement of chromosomes produced from one diploid nucleus.
65. messenger RNA	RNA made from DNA that carries the nucleotide template to the ribosome for protein synthesis.
66. mitochondria	In eukaryotic cells it is the site of the Krebs cycle and electron transport chain of aerobic cellular respiration.

67.	mitosis	The type of nuclear division that leads to two nuclei with the entire diploid complement of chromosomes.
68.	mutation	A change in the DNA either by changing a chromosome's structure or the order of nucleotides.
69.	natural selection	The theory that explains how a population changes over time to reflect the individuals who are most successful.
70.	nucleotides	The monomer subunit that links together along the sugar phosphate backbone to form nucleic acids.
71.	nucleus	Membrane bound cell organelle that contains genetic material.
72.	pancreas	The gland that releases glucagon and insulin to help control blood sugar.
73.	passive transport	The transport of molecules across the cell membrane without the use of energy.
74.	peptide bond	Bond formed between adjacent amino acids; between carboxyl group of one amino acid and amine group of other amino acid.
75.	phenotype	The physical appearance of an organism as a result of the interaction of its genotype and environment.
76.	phloem	The vascular tissue in plants that transports food from leaves to the rest of the plant.
77.	phospholipid bilayer	The two layers of phospholipids arranged in such a way that their hydrophobic tails are projecting inwards while their polar head groups are projecting on the outside surfaces.
78.	photosynthesis	The chemical reaction that makes glucose and oxygen from water and carbon in the presence of sunlight.
79.	pituitary gland	The gland that controls the release of hormones from many other glands.
80.	plasma	The liquid noncellular component of blood.
81.	plasma membrane	The outer selectively permeable membrane bilayer of all cells.
82.	polar bond	A bond where the atoms are sharing electrons unequally creating small negative and positive charges on the atoms.

83.	population	The members of a species within a specific area that has gene flow between its members.
84.	primary productivity	The amount of photosynthesis in an ecosystem.
85.	prokaryotic	Cells that have no nucleus or membrane bound organelles.
86.	protista	The kingdom that has predominantly unicellular eukaryotic organisms including algae, protozoans, and slime molds.
87.	replication	The duplication of the DNA during the middle "s phase" of interphase during the cell cycle.
88.	restriction enzymes	Enzymes that are used to "cut" DNA into pieces that often have "sticky" ends.
89.	ribosome	The part of the cell responsible for dehydration synthesis of proteins using the mRNA template.
90.	ribosomal RNA	A molecular component of a ribosome, the cell's essential protein factory.
91.	root	The structure responsible for water absorption in plants.
92.	RNA	The single stranded nucleic acid with uracil instead of the thymine found in DNA.
93.	RNA polymerase	The enzyme that makes RNA from DNA.
94.	sex chromosomes	The 23rd pair of chromosomes in humans that determine whether the offspring is male or female.
95.	species	A group of similar looking organisms that can reproduce to make fertile offspring.
96.	somatic cell	Any cell of an organism that is not a sex cell (not egg or sperm).
97.	spindle fibers	The microtubules that are used to separate the chromosomes and drag them to separate sides during nuclear division.
98.	stomata	The small openings on the underside of leaves that allow for carbon dioxide to come in and oxygen to escape.
99.	symbiosis	A long term relationship between organisms of two different species where at least one of the organisms benefits.
100.	transcription	The making of RNA from DNA.

101. transfer RNA	RNA made from DNA that attaches to amino acids and delivers them to the mRNA in the ribosome.
102. translation	The process of making proteins from the mRNA template.
103. transpiration	The evaporation of water from the stomata of a leaf that allows water to be pulled up a stem.
104. virus	A non-cellular infectious agent that is unable to grow or reproduce outside a host cell. contains either RNA or DNA.
105. xylem	The vascular tissue in a plant that carries water up from the roots to the rest of the plant.
106. zygote	A fertilized egg