# AP Biology Vocabulary List

This is a list of terms that you should be able to define/describe. A good rule of thumb to keep in mind when determining if you can define/describe these terms is whether or not you can explain them to a (reasonably) intelligent 12-year-old.

##

## Scientific Process:

|  |  |  |
| --- | --- | --- |
| accuracyChi-squarecontrolconstantdeductive reasoningdependent variablegraph | hypothesisindependent variableinductive reasoningmeanmedianmodelobservation | precisionpredictionratescientific methodtabletrendvariable |

##

## Biochemistry:

|  |  |  |
| --- | --- | --- |
| amino acidamphipathiccarbohydratecarbondenaturationdisaccharideester bondfibrous proteinglobular proteinglycosydic bond | hydrogen bondionlipidmacromoleculemonomermonosaccharidenitrogennon-polar moleculenucleic acidnucleotide | organic moleculepeptide bondphospholipidpolar moleculepolymerproteinwater |

##

## Evolution:

|  |  |  |
| --- | --- | --- |
| adaptationadaptive radiationalleleallopatricanalogous structureartificial selectionbackground extinction ratebiogeographybiological speciescoevolutioncommon ancestorcomparative anatomyconvergent evolutionDarwindifferential survivaldirectional selectiondisruptive selectiondivergent evolution (aka cladogenesisendosymbiosisepochevo-devoevolutionevolutionary fitnessextinctionfixation (of alleles) | fossilfossil recordfounder effectgeologic time scalegeologygene flowgene poolgenetic bottleneckgenetic driftgenetic equilibriumgenetic variationgenotypegradualism (aka anagenesis)Hardy-Weinberg equationhomologous structureshomologyhybridLast Universal Common Ancestormass extinctionmigrationMiller-Urey experimentsmodern synthesismolecular clockmutation | natural selectionpaleontologypanspermiaparallel evolutionphenotypephylogenypolymorphismpolyploidypopulationpostzygotic isolating mechanismprezygotic isolating mechanismprimordial environmentradiometric datingrandom matingrelative datingreproductive isolationRNA worldrock strataspeciationspeciesstromatolitesympatrictransitional fossilvestigial organ |

##

## Classification & Biological Diversity:

|  |  |  |
| --- | --- | --- |
| ArchaeaBacteriabinomial nomenclaturecladisticscladogramclassdistinguishing featureEukarya | familygenuskingdommonophyleticorderparaphyleticphylogenetic treephylogeny | phylumpolyphyleticshared derived characteristicshared ancestral characteristicspeciestaxon |

##

## Cells:

|  |  |  |
| --- | --- | --- |
| active transportamphipathicapoptosisaquaporincarrier proteincell wallcentrioleschannel proteinchloroplastcommunicationcyclic AMP (cAMP)concentration gradientcytoplasmcytoskeletondiffusionelectron microscopeendocytosisendoplasmic reticulumexocytosiseukaryotic cellfacilitated diffusionflagellafluid mosaic model | glycolipidglycoproteinGolgi apparatusG-protein linked receptorhormonehypertonichypotonicion pumpisotonicligandlight microscopelysosomemagnificationmembranemitochondrionnecrosisnuclear envelopenuclear porenucleusorganellesosmosispassive transportphagocytosis | phospholipidphosphorylation cascadepinocytosisplasma membraneplasmolysisprokaryotic cellprotein kinasequorum sensingreceptorresolutionribosomerough ERsecond messengerselectively permeablesignal cascadesignal transductionsignal transduction pathwaysmooth ERsurface area:volume ratiotransmembrane proteinturgorvacuole |

##

## Cell Division:

|  |  |  |
| --- | --- | --- |
| anaphasecancercell cyclecellular differentiationcell divisioncentrioleschromosomecrossing overcrossover frequencycyclin-dependent kinasecytokinesisdifferentiation | diploid (2N)DNA replicationfertilizationgametehaploid (1N)homologous chromosomesindependent assortmentinterphasematernal chromosomemeiosismetaphasemitosis | nuclear divisionp53paternal chromosomepotencyprophaserecombinationsex chromosomesomatic cellspecialized cellsynapsistelophase |

##

## Molecular Genetics:

|  |  |  |
| --- | --- | --- |
| activatoramino acidsanticodonbase-pairing rulescell differentiationconstituitive genecoding strandcodonDNADNA ligaseDNA polymeraseDNA replicationembryonic inductionexonsgel electrophoresisgene expressiongene inductiongene repression | genetic codegenetic engineeringgenetic transplantationhelicasehomeotic genes*HOX* geneshydrogen bondinginducible genesintronslac operonlagging strandleading strandmicro RNA (miRNA)morphogenesismorphogensmutationnucleic acidsnucleotides | Okazaki fragmentspolymerase chain reactionproteinregulatory sequencereplication forkrepressorrestriction enzymereverse transcriptaseRNA (mRNA, rRNA, tRNARNAismall interfering RNA (siRNA)small regulatory RNAstart codon/stop codontemplate strandtranscriptiontranscription factorstransgenic organismtranslation |

##

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## Mendelian Genetics:

|  |  |  |
| --- | --- | --- |
| alleleautosomeback crossclinecodominancecontinuous variationcrossdihybrid crossdiscontinuous variationdominantF1/F2 Generationgenetic counselinggenomic imprinting | genotypeheterozygoushomozygousincomplete dominanceindependent assortmentlethal allelelinkagemonohybrid crossmultiple allelesnon-disjunctionnon-nuclear inheritancepedigree analyisisphenotype | phenotypic plasticitypolygenetic inheritancePunnett squarepure-breeding (aka true-breeding)recessivesegregationselfingsex chromosomesex-limited traitssex linked genetest crosstrait |

##

## Metabolism

|  |  |  |
| --- | --- | --- |
| absorption spectrumaccessory pigmentacetyl coAaction spectrumactivation energyactive siteanabolismanaerobic metabolismallosteric regulationATPautotrophCalvin cyclecatabolismcatalystcellular respirationchemiosmosischemoautotroph | chlorophyllchloroplastcitric acid cyclecoenzymecofactorcompartmentalizationconsumercyclic electron flowdenaturationelectron transport chainentropyendergonic reactionenzymeexergonic reactionfeedback inhibitionfermentationglycolysis | heterotrophinduced fit modellight dependent reactionslight independent reactionsmetabolic pathwaymitochondrionNADNADPnegative feedbacknon-cyclic electron flowoxidative phosphorylationphotolysisphotosynthesispositive feedbackribulose bisphosphatesubstrate-level phosphorylationthylakoid membrane |

##

## Physiology

|  |  |  |
| --- | --- | --- |
| cell-mediated immunitycircadian rhythmclosed circulatory systemclonal selectioncompanion cellcortexcountercurrent exchangecourtshipdentitiondiabetesdiastoledigestive enzymesdigestive tractdiseasedopaminedouble circulatory systemectothermicelectrochemical gradientendocrine signalingendodermisendothermicestivationexcretionextracellular digestionfibringas exchangegastrovascular cavitygillsglucagonguard cellsheartheart valveshibernationHIVhomeostasishormone | humoral immunityhypothalamusinflammationinhibitioninsulinintegrationintracellular digestionimmune responsekidneyleafleukocyteloop of henlelungslymphocytememory cellsmesophyllmetabolismmigrationmotor neuronmyelinmyosinneuromuscular junctionneuronneurotransmitternitrogenous wastenodes of Ranviernon-specific defenseopen circulatory systemosmoregulationpassive immunitypathogenphagocytephagocytosisphloemphotoperiodismphytochrome | postsynapticpresynapticprimary immune responsepressure-flow hypothesispulmonary circulationreflexrefractory periodreproductive strategyrespiratory surfaceresting potentialrootroot hairroot pressuresaltatory conductionSchwann cellssecondary immune responsesensory neuronsensory receptorserotoninsinoatrial nodeskeletal musclespecific defensestemstimulusstomatasymplastsynapseT-celltranspirationtranspirational pullvaccinationveinventriclevillixerophytexylem |

##

## Ecology

|  |  |  |
| --- | --- | --- |
| abiotic factorabundanceadaptationage structurebiodiversitybiomebiotic factorcarbon cyclecarrying capacityclimate change communityconservationdecomposerdemographydensity dependent factordetritovoredistributionecologial nicheecological pyramidecological successionecosystemecosystem stabilityendangered speciesexponential growth | food chainfood webglobal warminggreenhouse effectgreenhouse gasgross primary productivityhabitathydrologic cycleimprintinginterspecific competitionintraspecific competitionintroduced speciesK-selectionkeystone specieslearninglife historylife tableslimiting factorlogistic growthmark and recapturemigrationmortalitymutualismnet primary productivity | nitrogen cyclenutrient cycleparasitephotoautotrophpopulationpopulation growthpopulation sizepollutionpredatorprimary consumerquadratrate of increase resilliencer selectionsaprophytesecondary consumerspecies diversitysurvivorship curvesymbiosisten percent rulethreatened speciestrophic efficiencytrophic levelurbanization |