

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:

| | | |
|---------------------|----------------------|-------------------|
| accuracy | hypothesis | precision |
| Chi-square | independent variable | prediction |
| control | inductive reasoning | rate |
| constant | mean | scientific method |
| deductive reasoning | median | table |
| dependent variable | model | trend |
| graph | observation | variable |

Biochemistry:

| | | |
|------------------|--------------------|------------------|
| amino acid | hydrogen bond | organic molecule |
| amphipathic | ion | peptide bond |
| carbohydrate | lipid | phospholipid |
| carbon | macromolecule | polar molecule |
| denaturation | monomer | polymer |
| disaccharide | monosaccharide | protein |
| ester bond | nitrogen | water |
| fibrous protein | non-polar molecule | |
| globular protein | nucleic acid | |
| glycosidic bond | nucleotide | |

Evolution:

| | | |
|----------------------------|-----------------------------|---------------------------------|
| adaptation | fossil | natural selection |
| adaptive radiation | fossil record | paleontology |
| allele | founder effect | panspermia |
| allopatric | geologic time scale | parallel evolution |
| analogous structure | geology | phenotype |
| artificial selection | gene flow | phylogeny |
| background extinction rate | gene pool | polymorphism |
| biogeography | genetic bottleneck | polyploidy |
| biological species | genetic drift | population |
| coevolution | genetic equilibrium | postzygotic isolating mechanism |
| common ancestor | genetic variation | prezygotic isolating mechanism |
| comparative anatomy | genotype | primordial environment |
| convergent evolution | gradualism (aka anagenesis) | radiometric dating |
| Darwin | Hardy-Weinberg equation | random mating |

differential survival
directional selection
disruptive selection
divergent evolution (aka
cladogenesis
endosymbiosis
epoch
evo-devo
evolution
evolutionary fitness
extinction
fixation (of alleles)

homologous structures
homology
hybrid
Last Universal Common
Ancestor
mass extinction
migration
Miller-Urey experiments
modern synthesis
molecular clock
mutation

relative dating
reproductive isolation
RNA world
rock strata
speciation
species
stromatolite
sympatric
transitional fossil
vestigial organ

Classification & Biological Diversity:

Archaea
Bacteria
binomial nomenclature
cladistics
cladogram
class
distinguishing feature
Eukarya

family
genus
kingdom
monophyletic
order
paraphyletic
phylogenetic tree
phylogeny

phylum
polyphyletic
shared derived characteristic
shared ancestral characteristic
species
taxon

Cells:

active transport
amphipathic
apoptosis
aquaporin
carrier protein
cell wall
centrioles
channel protein
chloroplast
communication
cyclic AMP (cAMP)
concentration gradient
cytoplasm
cytoskeleton
diffusion
electron microscope
endocytosis
endoplasmic reticulum

glycolipid
glycoprotein
Golgi apparatus
G-protein linked receptor
hormone
hypertonic
hypotonic
ion pump
isotonic
ligand
light microscope
lysosome
magnification
membrane
mitochondrion
necrosis
nuclear envelope
nuclear pore

phospholipid
phosphorylation cascade
pinocytosis
plasma membrane
plasmolysis
prokaryotic cell
protein kinase
quorum sensing
receptor
resolution
ribosome
rough ER
second messenger
selectively permeable
signal cascade
signal transduction
signal transduction pathway
smooth ER

exocytosis
eukaryotic cell
facilitated diffusion
flagella
fluid mosaic model

nucleus
organelles
osmosis
passive transport
phagocytosis

surface area:volume ratio
transmembrane protein
turgor
vacuole

Cell Division:

anaphase
cancer
cell cycle
cellular differentiation
cell division
centrioles
chromosome
crossing over
crossover frequency
cyclin-dependent kinase
cytokinesis
differentiation

diploid (2N)
DNA replication
fertilization
gamete
haploid (1N)
homologous chromosomes
independent assortment
interphase
maternal chromosome
meiosis
metaphase
mitosis

nuclear division
p53
paternal chromosome
potency
prophase
recombination
sex chromosome
somatic cell
specialized cell
synapsis
telophase

Molecular Genetics:

activator
amino acids
anticodon
base-pairing rules
cell differentiation
constitutive gene
coding strand
codon
DNA
DNA ligase
DNA polymerase
DNA replication
embryonic induction
exons
gel electrophoresis
gene expression
gene induction
gene repression

genetic code
genetic engineering
genetic transplantation
helicase
homeotic genes
HOX genes
hydrogen bonding
inducible genes
introns
lac operon
lagging strand
leading strand
micro RNA (miRNA)
morphogenesis
morphogens
mutation
nucleic acids
nucleotides

Okazaki fragments
polymerase chain reaction
protein
regulatory sequence
replication fork
repressor
restriction enzyme
reverse transcriptase
RNA (mRNA, rRNA, tRNA)
RNAi
small interfering RNA (siRNA)
small regulatory RNA
start codon/stop codon
template strand
transcription
transcription factors
transgenic organism
translation

Mendelian Genetics:

allele
autosome
back cross
cline
codominance
continuous variation
cross
dihybrid cross
discontinuous variation
dominant
F1/F2 Generation
genetic counseling
genomic imprinting

genotype
heterozygous
homozygous
incomplete dominance
independent assortment
lethal allele
linkage
monohybrid cross
multiple alleles
non-disjunction
non-nuclear inheritance
pedigree analysis
phenotype

phenotypic plasticity
polygenetic inheritance
Punnett square
pure-breeding (aka true-breeding)
recessive
segregation
selfing
sex chromosome
sex-limited traits
sex linked gene
test cross
trait

Metabolism

absorption spectrum
accessory pigment
acetyl coA
action spectrum
activation energy
active site
anabolism
anaerobic metabolism
allosteric regulation
ATP
autotroph
Calvin cycle
catabolism
catalyst
cellular respiration
chemiosmosis
chemoautotroph

chlorophyll
chloroplast
citric acid cycle
coenzyme
cofactor
compartmentalization
consumer
cyclic electron flow
denaturation
electron transport chain
entropy
endergonic reaction
enzyme
exergonic reaction
feedback inhibition
fermentation
glycolysis

heterotroph
induced fit model
light dependent reactions
light independent reactions
metabolic pathway
mitochondrion
NAD
NADP
negative feedback
non-cyclic electron flow
oxidative phosphorylation
photolysis
photosynthesis
positive feedback
ribulose biphosphate
substrate-level phosphorylation
thylakoid membrane

Physiology

cell-mediated immunity
circadian rhythm
closed circulatory system
clonal selection
companion cell
cortex
countercurrent exchange
courtship

humoral immunity
hypothalamus
inflammation
inhibition
insulin
integration
intracellular digestion
immune response

postsynaptic
presynaptic
primary immune response
pressure-flow hypothesis
pulmonary circulation
reflex
refractory period
reproductive strategy

dentition
diabetes
diastole
digestive enzymes
digestive tract
disease
dopamine
double circulatory system
ectothermic
electrochemical gradient
endocrine signaling
endodermis
endothermic
estivation
excretion
extracellular digestion
fibrin
gas exchange
gastrovascular cavity
gills
glucagon
guard cells
heart
heart valves
hibernation
HIV
homeostasis
hormone

kidney
leaf
leukocyte
loop of henle
lungs
lymphocyte
memory cells
mesophyll
metabolism
migration
motor neuron
myelin
myosin
neuromuscular junction
neuron
neurotransmitter
nitrogenous waste
nodes of Ranvier
non-specific defense
open circulatory system
osmoregulation
passive immunity
pathogen
phagocyte
phagocytosis
phloem
photoperiodism
phytochrome

respiratory surface
resting potential
root
root hair
root pressure
saltatory conduction
Schwann cells
secondary immune response
sensory neuron
sensory receptor
serotonin
sinoatrial node
skeletal muscle
specific defense
stem
stimulus
stomata
symplast
synapse
T-cell
transpiration
transpirational pull
vaccination
vein
ventricle
villi
xerophyte
xylem

Ecology

abiotic factor
abundance
adaptation
age structure
biodiversity
biome
biotic factor
carbon cycle
carrying capacity
climate change
community
conservation
decomposer
demography
density dependent factor

food chain
food web
global warming
greenhouse effect
greenhouse gas
gross primary productivity
habitat
hydrologic cycle
imprinting
interspecific competition
intraspecific competition
introduced species
K-selection
keystone species
learning

nitrogen cycle
nutrient cycle
parasite
photoautotroph
population
population growth
population size
pollution
predator
primary consumer
quadrat
rate of increase
resilience
r selection
saprophyte

detritovore
distribution
ecological niche
ecological pyramid
ecological succession
ecosystem
ecosystem stability
endangered species
exponential growth

life history
life tables
limiting factor
logistic growth
mark and recapture
migration
mortality
mutualism
net primary productivity

secondary consumer
species diversity
survivorship curve
symbiosis
ten percent rule
threatened species
trophic efficiency
trophic level
urbanization