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## Root Words

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### Introduction

Biological terminology can be as overwhelming to learn as a foreign language. Having a Root Word List can help in decoding the biological foreign language.

### Concepts

- Word derivation

### Materials

Greek and Latin Root Word List

### Procedure

Copy the list found on the reverse side of this BioFax and distribute for classroom use.

### Tips

- Create a list of words and have students derive a “literal-root” definition of the word.

Example:            Microcephalic (small head)  
                          micro—     small  
                          cephalo—   head

- Create a list of definitions and have students derive a word.

Example:            Red blood cell (erythrocyte)  
                          erythros—   red  
                          cyte—        cell

### Reference

Kessler, J. W. “An Alternative Approach to Teaching Biological Terminology”; *The American Biology Teacher*, **1999**, 61, 9.

# Greek and Latin Root Words

Root (Source)	Meaning	Example
a, an (G)	without, not	abiotic, anaerobic, asymmetry, atrophy
ambi (L)	on both sides	ambidextrous, ambivalent
amphi (G)	both, doubly	amphibian, amphiblastula
andro (G)	male, masculine	androgen, android, Andros
ante (L)	before, in front of	antedate, anteflexion, anterior
anti (G)	against	antibody, antigen
aqua (L)	water	aqueous, aquifer
archeo (G)	original, ancient	<i>Archaeopteryx</i> , archeogonium, archeology
arthro (G)	joint	arthritis, arthrology, arthropod
auto (G)	self	autogenous, automatic, autonomic
bi (L)	two, twice, double	bilateral, bipedal, bipinnate, bivalve
bio (G)	life, living	biogenesis, biogeography, biology
cephal, cephalo (L)	head	cephalic, cephalothorax
chromo (G)	color	chromatin, chromosome
cide (L)	killer, killing	hericide, insecticide, pesticide
circum, circa (L)	around, about	circadian, circumference
corpus (L)	body	corpus luteum, corpuscles
crypto (G)	hidden	cryptic, cryptogram, cryptorchidism
cyte, cyto (G)	cell, hollow	cytoplasm, leukocyte
derm, dermis (G)	skin	dermal, Echinodermata, ectoderm
di (G)	two, double	diatom, dihybrid, disaccharide
dys (G)	bad	dysentery, dysfunction, dystrophy
e, ec, ef, ex (L)	out of, from	eccentric, emit, excretion, exit, extinction
ecto (G)	outside of, external	ectocarpus, ectoparasite, ectoplasm
endon, endo (G)	in, internal	endoderm, endopodite, endosperm
epi (G)	upon, above	epidermis, epigenesis, epiphyte
erythros (G)	red	erythrocyte, phycoerythrin
exo (G)	outer, external	exoskeleton, exothermic
gam, gamo (G)	marriage, sexual	gamete, gametophyte, gamogenesis
genesis, genic (L)	origin, birth, producing	carcinogenic, cytogenic, mutagenic
genos, gen, geny (G)	race, kind	genealogy, genetics, genotype
herba (L)	grass, plants	herbaceous, herbal, herbivore
heteros (G)	different, other	heterotrophic, heterosexual, heterozygous
homo (L)	man	hominid, <i>Homo sapiens</i>
homos, homeos (G)	alike, same	homogeneous, homologous, homozygous
hydro, hudor (G)	water	hydrology
hyper (G)	above, beyond	hyperactive, hyperglycemia, hypertonic
hypo (G)	below, under	hypodermic, hypoglycemia, hypotonic
intra (L)	within, inside	intracellular
intro (L)	into, within	introversion
itis (G)	disease, inflammation	appendicitis, arthritis, hepatitis
logos, logy (G)	the study of	biology, zoology
lys, lysis (L)	dissolution, destruction	hemolysis, hydrolysis, lysosome
mikros, micro (G)	small	microbe, microscope, microspore
monos (G)	one, single	monocular, monocotyledon, monoecious
morphe (G)	form, shape	ectomorph, lagomorph, morphology
neuro (G)	nerve	neurology, neuromuscular, neuron
oo (G)	beginning, egg	oocyte, oogenesis
ovum, ovi (L)	egg	ovary, oviduct, ovipositor, ovule
para (G)	beside, near	paramedic, paranoid, parasite
pedi (G)	beginning, child	pediatrician, pediatrics, pedigree
pes, pedis, pod (L)	foot	bipedal, pedal
photo, phos, phot (G)	light	photosynthesis
post (L)	after, behind	posterior, postnatal, postpartum
semi (L)	half	semicircle, semilunar
skleros (G)	hard	sclera, <i>Scleria</i> , sclerenchyma, sclerotic
soma (G)	body	centrosome, lysosome, somatic, somite
sub, sup (L)	below, under, smaller than	subspecies, supination
super (L)	above, upper	supercerebral, superior
supra (L)	above, upon	supraorbital, suprarenal
tetra (L)	four	tetrapod, tetraspore
tox, toxikon (G)	poison	antitoxin, toxic, toxin
tri (L)	three	triploid, tripod
trophe (G)	to feed or eat	autotroph, dystrophy, heterotroph
uni, unis (L)	one	unicellular, uniform, united
zo, zoon (G)	animal	holozoic, protozoa, zoology, zoospore