

# GREEK AND LATIN ROOTS

Following is a list of some common prefixes, roots, and suffixes to help understand scientific terminology. Take a look through the list and then complete the exercises which follow.

a-, ab	from, away, down	electro-	referring to electricity
ad-, af-	near, toward	-ernia	blood
alb-	white	endo-	inner
-algia	ache, pain	entero-	gut, intestine
amphi-	both	epi-	upon, outer
angio-, -angium	container, receptacle	erythro-	red
anti-	against	eu-	true
aqua-	water	ex-, exo-	without, outside
arterio-	having to do with arteries	-fer	bearer
arthr-	joint	-fuge	drives away or out
-ase	enzyme	gastr-, gastro	stomach, belly
auto-	self	-gen	producing, causing
bi-	twice, two	-genesis	origin, creation
bio-	life, living	-graph-	write, draw
brachi-	arm	gymno-	naked
calor-	heat (unit of)	heli-	spiral, circular
card-	heart	hemi-	half
car-	flesh	hemo-	blood
caryo, karyo-	nucleus of cell	herb-	non-woody plant
centi-	one-hundredth	hepat-, hepato-	liver
centro-	center	hetero-	other, different
cephal-	head	homo, homeo-	same, like, similar
chloro-	green	hist-	tissues
chondr-	cartilage	hydro-	water
chromo-	colour	hyper-	high, excessive, over
-cide	kill	hypo-	low, beneath, less than
coel-	hollow, cavity	-ia, -iasis	disease
contra-	against	inter-	between, among
cyte-, cyto-	cell	intra-	within, inside of
-cyst	capsule	iso-	equal, same as
decid-	to cut off	-itis	inflammation, pain
dendr-	tree	kilo-	one thousand
dent-, don't-	teeth	lac-	milk
derm-	skin, covering	leuco-, leuko-	white
di-	two	lip-, lipo-	fat or fatlike
dis-, dys-	ill or bad	-logy	study of
ecto-	outside, external	-lysis, -lyso	splitting, breaking open,
ectomy-	removal		dissolving

# GREEK AND LATIN ROOTS

macro-	large, enlarged	plasm-, -plasm	viscous material
mal-	bad, ill	-plast	particle
mega-	very large, female, one million	platy-	flat, broad
meso-	middle	-poda	foot
meta-	beyond or after	poly-	many
micro-	very small, male, one-millionth	post-	after, behind
milli-	one-thousandth	pro-	before
mono-	one, single	proto-	first
morph-, morpho-	form, shape, structure	-pter	wing
myo-	muscle	pseudo-	false
nema-	thread	pulmo-	lung
nephr-, nephro-	kidney	renal	kidney
neuro-	nerve	-rhea, -rrhea	flow or discharge
o-, oo-, ov-, ovi-	egg	rhino	nose
ocular-	relating to eyes, vision	sal-	salt
-ology	study of, science	sarco-	flesh
-oma	tumor or swelling	sclera-, sclero-	hard
omni-	all	soma	body
ophth-	eye	stom-, -stome	mouth
opti-	vision or sight	sym-, syn-	together
orni-	bird	synthesis-	a putting together
ortho-	straight	therm-	heat
-osis	condition or state	trans-	across, beyond
-osteo	bone	trop	turn
oto-	pertaining to ear	-trophic	to feed, feeder
para-	beside	ultra-	beyond, excessive
patho-	disease	vaso-	blood vessel
peri-	surrounding	viv-	living
period	regularly occurring event	-vore	to devour
photo-	light	xero-	dry
-phyll	leaf	zoo-	animal, motile
-phyte, phyto-	plant	zyg-	united
pino	to drink		

## Numerical Prefixes

#	1	2	3	4	5	6	7	8	9	10
prefix	mono	di	tri	tetra	penta	hexa	hepta	octa	nona	deca

# GREEK AND LATIN ROOTS

One of the challenges for science students is that it introduces a large number of new words. These words are used to name or describe living things, their parts, functions, and processes. In trying to determine the meanings for these new terms, it is helpful to examine the individual parts (roots) of the new words. By knowing the meanings of the root words, it will be easier to understand and remember the new biological terminology.

In Biology, many words are produced from Greek and Latin roots, which are combined to form biological terms on an ongoing basis as new scientific discoveries are made. These root words can be added as prefixes at the beginning of a term (ex. bio-) or suffixes at the end of a term (ex. -ology) to form words which scientists can understand (ex. biology)

PART 1: Use your table of root words to determine the meaning of each of the following terms

Polypoda: \_\_\_\_\_

Erythrocyte: \_\_\_\_\_

Herbivore: \_\_\_\_\_

Cytolysis: \_\_\_\_\_

Leukocyte: \_\_\_\_\_

PART 2: Use your table of root words to construct terms for the following meanings

Bellyache : \_\_\_\_\_

Inflammation of the skin: \_\_\_\_\_

Removal of the kidney: \_\_\_\_\_

# GREEK AND LATIN ROOTS

PART 3: Match the mostly make-believe terms on the left with their English meanings on the right.

- |  |                                  |
|--|----------------------------------|
| ___ dicephalosis is superior to monocephalosis | A. redhead                       |
| ___ gymnopodosis                               | B. runny nose                    |
| ___ postautocardosis                           | C. two heads are better than one |
| ___ rhinorrhea                                 | D. after his own heart           |
| ___ erythrocephalis                            | E. barefootedness                |

PART 4: Use your table of root words to construct atleast three terms of your own. Be creative and feel free to create imaginary words or phrases. Be sure to include the term and its definition.

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# KINDS OF SCIENTISTS & DOCTORS

Name \_\_\_\_\_ BI \_\_\_\_\_ Date \_\_\_\_\_ VALUE : 22

SCIENCE is a field of study that has 3 main PURE sciences; biology, chemistry, and physics. Ecology is a 4<sup>th</sup> field that uses the pure sciences to study the interactions between living organisms and their environment. These sciences are broken down into specialty areas that study specific aspects of the field. A person working in any of these areas may be called a “scientist”, but may also be referred to by a more specific title. The title of a scientist usually uses a Greek or Latin prefix that relates to their specialty.

Directions : use your table of Greek/Latin roots, a dictionary, an encyclopedia, or the internet as references to match the scientist with their area of study.

1. \_\_\_\_\_ - deals with disorders of the stomach and intestines.
2. \_\_\_\_\_ - concerned with the function and disorders of the urinary system.
3. \_\_\_\_\_ - the study and treatment of disorders and diseases of the eye.
4. \_\_\_\_\_ - the branch of medicine concerned with the anus and rectum.
5. \_\_\_\_\_ - the branch of biology concerned with the structure and function of plant and animal cells.
6. \_\_\_\_\_ - deals with diseases and abnormalities of the heart.
7. \_\_\_\_\_ - concerned with the diagnosis and treatment of skin disorders.
8. \_\_\_\_\_ - studies the genetic properties or features of an organism.
9. \_\_\_\_\_ - the branch of zoology that deals with fishes.
10. \_\_\_\_\_ - the branch of zoology concerned with reptiles and amphibians.
11. \_\_\_\_\_ - the branch of zoology concerned with the study of insects.
12. \_\_\_\_\_ - predicts and studies the weather.
13. \_\_\_\_\_ - studies human history and prehistory through the excavation of sites and the analysis of artifacts and other physical remains.
14. \_\_\_\_\_ - the branch of science concerned with the nature and properties of matter and energy, including heat, light, radiation, sound, electricity, magnetism, and the structure of atoms.
15. \_\_\_\_\_ - the branch of biology that deals with the relations of organisms to one another and to their physical surroundings.
16. \_\_\_\_\_ - studies the earth's physical structure and substance, its history, and the processes that act on it.
17. \_\_\_\_\_ - studies plants.
18. \_\_\_\_\_ - studies the behavior, physiology, classification, and distribution of animals.
19. \_\_\_\_\_ - the study of bacteria.
20. \_\_\_\_\_ - studies the causes and effects of diseases.
21. \_\_\_\_\_ - the study of humankind, human societies, cultures and their development.
22. \_\_\_\_\_ - uses scientific methods and techniques to investigate crime scenes.

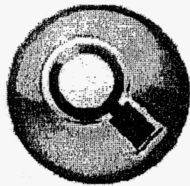
## Scientists and Doctors

Anthropologist  
Archaeologist  
Bacteriologist  
Botanist  
Cardiologist  
Cytologists  
Dermatologist  
Ecologist

Entomologist  
Forensic Scientist  
Gastroenterologist  
Geneticist  
Geologist  
Herpetologist  
Ichthyologist  
Ophthalmologist

Meteorologist  
Pathologist  
Physicist  
Proctologist  
Urologist  
Zoologist

# SCIENTIST BINGO



## Instructions:

- Find a person who can tell you what kind of scientist is being described in the squares below.
- Once you have found them, get their name and write their name and the type of scientist in that square.
- You can only use someone's name **ONCE!**

## FIND A PERSON WHO.....

Studies weather and makes forecasts	Studies plant life	Studies animal life	Studies insects	Studies reptiles and amphibians
Studies plant micro-organisms	Studies man's physical character, distribution, origin and culture	Studies disease, their nature and causes	Studies the history of the earth as recorded in rocks	Studies field crop production and soil management
Studies the relationship between organisms and their environment	Studies fish	Studies birds	Studies Eggs	Studies the interactions of drugs in the human body.