**BIOLOGY**

***SCIENTIFIC ROOT WORDS, PREFIXES, AND SUFFIXES***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| a-; an- | not;without;lacking;deficient | centi- | hundredth | -escent | becoming |
| ab- | away from; out from | centr- | center | eso- | inward; within; inner |
| -able | capable of | cephal- | head | eu- | well; good; true; normal |
| ac- | to; toward | cerat- | horn | eury- | widen |
| -aceous | of or pertaining to | cerebr- | brain | ex- | out of; away from |
| acou-;acous- | hear | cervic- | neck | extra- | beyond; outside |
| ad- | to; toward | chel- | claw | -fer- | bear; carry; produce |
| aden- | gland | chem- | dealing with chemicals | ferro- | iron |
| adip | fat | chir- | hand | fibr- | fiber; thread |
| aero- | air | chlor- | green | -fid; fiss- | split; divided into |
| agri- | field; soil | chondr- | cartilage | -flect; -flex | bend |
| -al | having the character of | chrom-;-chrome | color | flor- | flower |
| alb- | white | chron- | time | flu-;fluct;flux | flow |
| alg-;algia | pain | -chym- | juice | foli- | leaf |
| alto- | high | -cid-;-cis- | cut; kill; fall | fract- | break |
| ambi- | both | circa-;circum- | around; about | -gam- | marriage |
| ameb- | change; alternation | cirru- | hairlike curls | gastr- | stomach |
| amni- | fetal membrane | co- | with; together | geo- | land; earth |
| amphi-;ampho- | both | cocc- | seed; berry | -gen;-gine | producer; former |
| amyl- | starch | coel- | hollow | -gene- | origin; birth |
| ana- | up; back; again | coll- | glue | -gest- | carry; produce; bear |
| andro- | man; masculine | coni- | cone | -glen- | eyeball |
| anemo- | wind | contra- | against | -glob- | ball; round |
| ang- | choke; feel pain | corp- | body | gloss- | tongue |
| angi- | blood vessel; duct | cort-;cortic- | outer layer | gluc-;glyc- | sweet; sugar |
| ante- | before; ahead of time | cosmo- | world; order; form | glut- | buttock |
| anter- | front | cotyl- | cup | gnath- | jaw |
| antho- | flower | counter- | against | -gon | angle; corner |
| anti- | against; opposite | crani- | skull | -grad- | step |
| anthropo- | man; human | cresc-;cret- | begin to grow | -gram;graph | record; writing |
| -ap-;-aph- | touch | crypt- | hidden; covered | grav- | heavy |
| apo-;ap- | away from | -cul-;-cule | small; diminutive | -gross- | thick |
| aqu- | water | cumul- | heaped | gymno- | naked; bare |
| archaeo- | primitive; ancient | cuti- | skin | gyn- | female |
| -ary; -arium | denotes a place for something | cyan- | blue | gyr- | ring; circle; spiral |
| arteri- | artery | cycle-;cycl- | ring; cycle | -hal-;hale | breathe; breath |
| arthr- | joint; articulation | cyst- | sac; pouch; bladder | halo | salt |
| -ase | forms names of enzymes | cyt-;-cyte | cell; hollow container | hapl- | simple |
| aster-;astr- | star | dactyl- | finger | hecto- | hundred |
| -ate | verb form –the act of… | de- | away from; down | -helminth | worm |
| ather- | fatty deposit | deca- | ten | hem- | blood |
| -ation | noun form – the act of… | deci- | tenth | hemi- | half |
| atmo- | vapor | deliquesce- | become fluid | hepar-;hepat- | liver |
| audi- | hear | demi- | half | herb- | grass; plants |
| aur- | ear | dendr- | tree | hetero- | different; other |
| auto- | self | dent- | tooth | hex- | six |
| bacter;bactr- | bacterium; stick; club | derm- | skin | hibern- | winter |
| barb- | beard | di-;dipl- (Latin) | two; double | hidr- | sweat |
| baro- | weight | di-; dia- (Greek) | through; across; apart | hipp- | horse |
| bath- | depth; height | dia- (Latin) | day | hist- | tissue |
| bene- | well; good | digit- | finger; toe | holo- | entire; whole |
| bi- (Latin) | two; twice | din- | terrible | homo-(Latin) | man; human |
| bi-; bio- (Greek) | life; living | dis- | apart; out | homo-(Greek) | same; alike |
| -blast- | sprout; germ; bud | dorm- | sleep | hort- | garden |
| brachi- | arm | dors- | back | hydr- | water |
| brachy- | short | du-;duo- | two | hygr- | moist; wet |
| brady- | slow | -duct | lead | hyper- | above; beyond; over |
| branchi- | fin | dynam- | power | hyph- | weaving; web |
| brev- | short | dys- | bad; abnormal; difficult | hypno- | sleep |
| bronch- | windpipe | ec- | out of; away from | hypo- | below; under; less |
| cac- | bad | echin- | spiny; prickly | hyster- | womb; uterus |
| calor- | heat | eco- | house | -iac | person afflicted with disease |
| capill- | hair | ecto- | outside of | -iasis | disease; abnormal condition |
| capit- | head | -elle | small | -ic | (adjective former) |
| carcin- | cancer | -emia | blood | ichthy- | fish |
| cardi- | heart | en-; endo-;ent- | in; into; within | ign- | fire |
| carn- | meat; flesh | -en | made of | in-;il-;im-;ir- | not |
| carp- | fruit | encephal- | brain | in-;il-;im-;ir- | to; toward; into |
| carpal- | wrist | enter- | intestine; gut | in- | very; thoroughly |
| cata- | breakdown; downward | entom- | insects | -ine | of or pertaining to |
| caud- | tail | -eous | nature of; like | infra- | below; beneath |
| -cell- | chamber; small room | epi- | upon; above; over | inter- | between |
| cen-;cene | now; recent | -err- | wander; go astray | intra- | within; inside |
| cente- | pierce | erythro- | red | -ism | a state or condition |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  | satur- | full |
| iso- | equal; same | oo- | egg | saur- | lizard |
| -ist | person who deals with… | opthalm- | eye | schis-; schiz- | split; divide |
| -it is | inflammation; disease | opt- | eye | sci- | know |
| -ium | refers to a part of the body | orb- | circle; round; ring | scler- | hard |
| -kary- | cell nucleus | -orium; -ory | place for something | -scop- | look; device for seeing |
| kel- | tumor; swelling | ornith- | bird | -scribe; -script | write |
| kerat- | horn | orth- | straight; correct; right | semi- | half; partly |
| kilo- | thousand | oscu- | mouth | sept- | partition; seven |
| kine- | move | -osis | abnormal condition | -septic | infection; putrefaction |
| lachry- | tear | oste- | bone | sess- | sit |
| lact- | milk | oto- | ear | sex- | six |
| lat- | side | -ous | full of | -sis | condition; state |
| leio- | smooth | ov- | egg | sol- | sun |
| -less | without | oxy- | sharp; acid; oxygen | solv- | loosen; free |
| leuc-; leuk | white; bright; light | pachy- | thick | som-; somat-;-some | body |
| lign- | wood | paleo- | old; ancient | somn- | sleep |
| lin- | line | palm- | broad; flat | son- | sound |
| lingu- | tongue | pan- | all | spec-; spic- | look at |
| lip- | fat | par-; para- | beside; near; equal | -sperm- | seed |
| lith-;-lite | stone; petrifying | path-; -pathy | disease; suffering | -spher- | ball; round |
| loc- | place | -ped- | foot | spir-; spire | breathe |
| -log- | word; speech | -ped- | child | -spor- | seed |
| -logist | one who studies… | -pent- | five | stat-; -stasis | standing; placed; staying |
| -logy | study of… | per- | through | stell- | stars |
| lumin- | light | peri- | around | sten- | narrow |
| -lys-;-lyt-;-lyst | decompose; split; dissolve | permea- | pass; go | stern- | chest; breast |
| macr | large | phag- | eat | stom-; -stome | mouth |
| malac- | soft | pheno- | show | strat- | layer |
| malle- | hammer | -phil- | loving; fond of | stereo- | solid; 3-dimensional |
| mamm- | breast | phon-; -phone | sound | strict- | drawn; tight |
| marg- | border; edge | -phore; pher- | bear; carry | styl- | pillar |
| mast- | breast | photo- | light | sub- | under; below |
| med- | middle | phren- | mind; diagram | super-; sur- | over; above; on top |
| meg- | million; great | phyc- | seaweed; algae | sym-; syn- | together |
| mela-;melan- | black; dark | phyl- | related group | tachy- | quick; swift |
| -mer | part | -phyll | leaf | tarso- | ankle |
| mes- | middle; half; intermediate | physi- | nature; natural qualities | tax- | arrange; put in order |
| met-;meta- | between; along; after | phyt-; phyte | plant | tele- | far off; distant |
| -meter;-metry | measurement | pino- | drink | telo- | end |
| micro- | small; millionth | pinni- | feather | terr- | earth; land |
| milli- | thousandth | plan- | roaming; wandering | tetr- | four |
| mis- | wrong; incorrect | plasm-; -plast- | form; formed into | thall- | young shoot |
| mito- | thread | platy- | flat | -the-; -thes- | put |
| mole- | mass | pleur- | lung; rib; side | -thel- | cover a surface |
| mono- | one; single | pneumo- | lungs; air | -therm- | heat |
| mort- | death | -pod | foot | -tom- | cut; slice |
| -mot- | move | poly- | many; several | toxico- | poison |
| morph- | shape; form | por- | opening | top- | place |
| multi- | many | port- | carry | trache- | windpipe |
| mut- | change | post- | after; behind | trans- | across |
| my- | muscle | pom- | fruit | tri- | three |
| myc- | fungus | pre- | before; ahead of time | trich- | hair |
| mycel- | threadlike | prim- | first | -trop- | turn; change |
| myria- | many | pro- | forward; favoring; before | -troph- | nourishment; one who feeds |
| moll- | soft | proto- | first; primary | turb- | whirl |
| nas- | nose | pseudo- | false; deceptive | -ul-;-ule | diminutive; small |
| necr- | corpse; dead | psych- | mind | ultra- | beyond |
| nemat- | thread | pter- | having wings or fins | uni- | one |
| neo- | new; recent | pulmo- | lung | ur- | urine |
| nephro- | kidney | puls- | drive; push | -ura | tail |
| -ner- | moist; liquid | pyr- | heat; fire | vas- | vessel |
| neur- | nerve | quadr- | four | vect- | carry |
| noct-;nox- | night | quin- | five | ven-; vent- | come |
| -node | knot | radi- | ray | ventr- | belly; underside |
| -nom-;-nomy | ordered knowledge; law | re- | again; back | -verge | turn; slant |
| non- | not | rect- | right; correct | vig- | strong |
| not- | back | ren- | kidney | vit-;viv- | life |
| nuc- | center | ret- | net; made like a net | volv- | roll; wander |
| ob- | against | rhag-; -rrhage | burst; forth | -vor- | devour; eat |
| ocul- | eye | rhe-; rrhea | flow | xanth- | yellow |
| oct- | eight | rhin- | nose | xero- | dry |
| odont- | tooth | rhiz- | root | xyl- | wood |
| -oid | form; appearance | rhodo- | rose | zo-; -zoa | animal |
| olf- | smell | roto- | wheel | zyg- | joined together |
| oligo- | few; little | rubr- | red | zym- | yeast |
| -oma | abnormal condition; tumor | sacchar- | sugar |  |  |
| omni- | all | sapr- | rotten |  |  |
| onc- | mass; tumor | sarc- | flesh |  |  |