

Scientific Terminology – Base Vocabulary – 100 Words to Know in Our Labs and Beyond!

determine / determination
examine / examination
apply / application
elucidate / elucidation
evaluate / evaluation
characterize / characterization
distribute / distribution
propagate / propagation
disperse / dispersal
deposit / deposition
precipitate / precipitation
evacuate / evacuation
validate / validation
assure / assurance
inoculate / inoculation
incubate / incubation
vaccinate / vaccination
occur / occurrence
provide / provision / provider
obtain / obtainment
terminate / termination
eliminate / elimination
calculate / calculation
proceed / process / procedure
compute / computation / equate / equation
cooperate / cooperation
collaborate / collaboration
coordinate / coordination
respond / response / responsibility
integrate / integration – compete / competition
passionate / compassionate
respect / respectfulness
rely / reliability
inhibit / interfere / disturb
progress vb (*prə-'gres*) / progress n (*'prə-grəs*)
compose / component
particle / particulate
assemble / assembly
deficient / deficiency / insufficient
flush / flushing / rinse / rinsing / wrap / wrapping
propose / proposal / inquire / inquiry
notice / notification / report / communication
diversify / diversification
refer / referring / referral / reference
err / error / erroneous / true-false / truth-untruth
confirm / falsify / rectify / enthuse / excite / inspire
assume / assumption / unlikely / improbable
equivocal / ambiguous / uncertain
unequivocal / unambiguous / certain
probable / possible / acceptable
to make and learn from mistakes
endure / endurance / compromise
network / networking
succeed / success / graduate / graduation
celebrate / celebration

"*action*" words: to do, to make – to carry out
look / smell / feel / sense / notice
perform / performance / appear / appearance
work / test / check / search / research
attempt / figure out / try / trial
investigate / investigation / assay (vs. essay)
determination / examination
remind / remember / reinforce – underline
prove / proof / disprove / disproof
disapprove / disapproval
confirm / confirmation – double check
evaluate / evaluation / assess / assessment
corroborate / corroboration
validate / validation – reject / rejection
rehearse / rehearsal / give your best, *and then*:
party / relax / sleep / meditate

lab / laboratory / laborious – industrious
hardworking – diligent
ordering / contacts / networking
tidy / tidiness – clean up after yourself !
consider / considerable / be considerate !

sample / example / specimen(s)
probe / sensor / detector
debris / artifact / junk / trash
hazardous waste / toxicity / careful / caution
reuse / recycle
raw / crude / untreated / pure / ultrapure
certain / uncertain / indeterminate / concern
opaque / obscure / vague / uncertain
save / economize / economy
resource / equipment / value
explain / explanation
preliminary / temporary
possibility / impossibility

exams / lectures / lab courses / seminars
academy / academic / academician
workshops / tutorials / life-long learning
colleagues / collegiality / integrity
fellow students / peer / mentoring
counseling / consultation / briefings
let me explain this to you ! pronounce it right!
he told me to / she didn't tell me to ...
gratitude / appreciation / acknowledgment
advise / adviser / advice / grant applications
idea / educated guess / assumption / suggestion
propose / proposal / evident / evidence
to have no clue / procrastinate (hold off)
thesis / theses – hypothesis / hypotheses
writing / proofreading / publishing / editors
cite (*not*: site) / citations / references
plagiarism / scientific misconduct / integrity
liability / insurance / security / lab safety briefings

mechanisms / techniques / methods / technology
analysis / analyses / analytical
synthesis / synthesize / diagnosis
catalysis / catalytic
hydrolyze / hydrolysis / hydrolysate
dissolve / solution / solute / dilute / dilution
evaporate / evaporator / rotavap
calibrate / calibration
sequence / sequential
centrifuge / centrifugation / spin
gel / jelly / gelatin / gelation
chromatography – electrophoresis
eluate / eluant / eluent / stationary phase
spectroscopy / spectrometry / spectra
photospectrometer / cuvette / tube
syringe / diaphragm valve
pipet (pipette) / micropipets (expensive!)
microscopy / photography / magnification
microscope slide / coverslip
magnify / magnification
TLC / GC / HPLC / NMR / MS / PCR
distill / distillation
pellet / supernatant – vial / tube / flask
tweezers / forceps / tongs
equilibrium / steady state / kinetics
weigh / scales / balance / imbalance
weight / height / width / depth / breadth
million / billion / trillion
0.1 ml *but* 10,000 years
2 ml (*say*: two milliliters)
protein / enzyme / enzymatic
monomer / polymer
polymerize / polymerase
amylase / mayonnaise / ligase / ligand / ligate
acid / acidic / caustic / corrosive
lye / base / basic / alkali / alkaline
alkaloids / saponins / phenolics
ethereal/essential oils
terpenes / terpenoids / flavonoids / carotenoids
glycosides / saccharides / aglycon(e)s
antibiotic(s) / bacteriocin
bacteria / bacterial / bactericidal
disinfect / disinfection / sterilization
detergent / sonicate / sonication
nitrogenous base / nucleotide
adenine / thymine / guanine / cytosine
amine / ammonia / amino acid
glycine / alanine / phenylalanine
homolog(ue) / analog(ue) / homologous
homozygous / heterozygotic
homogeneous / heterogeneous
ethane / ether / ethanol / methanol
ethanoic acid (acetic acid)
sodium / potassium / sulfur / sulfuric acid
chlorine / bromine / iodine

system / systematics / systematist
taxon(a) / taxonomy / taxonomist
ecology / genetics / geneticist / paleontology
botanist / pharmacognosy / medicinal plants
pharmacist / drugs / medicines / medication
biotechnology / procedural / design
zoology / ornithology - aves (avian) - goose (geese)
nature / natural / native
endemic / indigenous
this/these species (sp./spp.) / genus (genera)
specific / specify / specification
get to the point! be precise!
speciation / extinction
phylogeny / phylogenetic
evolution / evolutionary
sequence / sequential
parsimony – likelihood
apomorphy / synapo- / plesio- / symplesio-
monophyly / paraphyly
statistics / inference
plot / chart / extrapolate / implicate
diameter / circumference

microbe / microorganism / germ
lyse / lytic / lysis – tissue
sterile / fertile / labile / stable
incubate for approx. 5 min
an average of 2 mm in diameter
grow / spread / proliferate
culture / medium
nutrition / nutritional
metabolism / pathways / target

journal / article / review / presentations
punctuation / comma rules! / serial commas
colon / semicolon / bold / italics / e.g. / i.e.
quote / unquote / subscript / superscript
parenthesis / parentheses / apostrophe / prime
series / serial / erratum / errata / appendixes
hypo- / hyper- / sub- / super- / inter- / intra-

criterion / criteria
phenomenon / phenomena / parameter
anterior / posterior / lateral
spectrum / spectra / spectacular
medium / media / mediocre
bacterium / bacteria / bacterial disease
coccus / cocci – bacillus / bacilli
spirillum / spirilla
fungus / fungi – nucleus / nuclei
mitochondrion / mitochondria
semipermeable / semidry
leak / leakage / lethal / oncogenic
LD₅₀ (median lethal dose)
radiation / radioactivity / shielding

make sure you know the meanings and pronunciation of these words – consult Merriam-Websters (*also at*: www.m-w.com), Oxford dictionary, and ACS Style Guide (a.o. reference copies in the secretary's office); both British and American spellings are accepted – but be consistent in using either one; take English classes; work on your vocabulary (10 words a day!), grammar, expression, presentation and communication skills. We wish you a productive, successful, and gratifying stay at IPMB – consultant: Theodor C.H. Cole (HD/23792) – pronunciations available from the institute's web site (downloadable voice-file) – Version 1.0