



scROOTinEYES academic vocabulary in the Science and Engineering Practices

Figure 1: Asking Questions and Defining Problems

Vocabulary	Root/Affix	Meaning(s)
question	quest	Latin root, to search, inquire
formulate	form	Latin root to shape

Figure 2: Developing and Using Models

Vocabulary	Root/base-word/Affix	Meaning(s)
construction	con	English prefix, with, join, together, thoroughly
	struct	Latin root, build
simulation	simil, simul	Latin root, like, resembling
predictions	pre	Latin prefix, before
	dict	Latin root, say
hypothetical	hypo	Greek prefix, under
proposed	pro	prefix, forward
	pos	Latin root, to put, place, or set, position

Figure 3: Planning and carrying out investigations

Vocabulary	Root/base-word/affix	Meaning(s)
conducted	con	English prefix, with, together, thoroughly
	duct	Latin root, to lead
variables	var	Latin root, to change, different
specifying	spec	Latin root, to see, look
parameters	para	prefix, alongside, beside, near, beyond
	meter	Greek root, measure
proposed	pro	prefix, forward
	pos	Latin root, to put, place, or set, position

durability	dura	Latin root, hard, lasting, thick, tough
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Figure 4: Analyzing and Interpreting Data

Vocabulary	Root/base-word/affix	Meaning(s)
graphical	graph	Greek root, to write
visualization	vis	Latin root, to see
comparison	com	Latin prefix, with, jointly, together
	par	Latin root, equal

Figure 5: Using Mathematics and Computational Thinking

Vocabulary	Root/base-word/affix	Meaning(s)
computation	com	Latin prefix, with, jointly, together
	put	Latin root putare, to think
variables	var	Latin root, to change, different
constructing	con	English prefix, with, join, together, thoroughly
	struct	Latin root, build
simulations	sim	Latin root, like, resembling
recognizing	re	Latin prefix, again, repetition, backward motion
	cog	Latin root, learn, know
enable	en	Prefix, cause to
prediction	pre	Latin root, before
	dict	Latin root, say
proposed	pro	Latin prefix, forward
	pos	Latin root, put, place, or set, position

Figure 6: Constructing Explanations and Designing Solutions

Vocabulary	Root/base-word/affix	Meaning(s)
construction	con	Latin prefix, with, join, together, thoroughly
multiple	multi	English prefix, many
proposed	pro	Latin prefix, forward
	pos	Latin root, put, place, or set, position

coherence	co	Latin prefix, with, jointly, together
	her (hes)	Latin root and its variant, to stick

Figure 7: Engaging in Argument from Evidence

Vocabulary	Root/base-word/affix	Meaning(s)
evidence	e	prefix, out
	vid	Latin root, to see
defend	de	Latin prefix, down, from, away
	fend	Latin root, ward off, guard, protect, support
formulate	form	Latin root, to shape
collaborate	col	prefix, with, together
	labor	base-word, work
revise	re	Latin prefix, again or again and again to indicate repetition, back, backward to indicate withdrawal or backward motion
	vis (vid)	Latin root, and variant, see

Figure 8: Obtaining, Evaluating and Communicating Information

Vocabulary	Root/base-word/affix	Meaning(s)
communicate	com	prefix, with, together, in association and (with intensive force)
inquiry	in	Latin prefix, in, into, towards, on, or not
	quir	Latin root, seek, look for
diagrams	dia	Greek prefix, passing through, thoroughly, completely, opposed in moment
	gram	Greek suffix, something

		written or drawn by hand or machine
graphs	graph	Greek root, to write
equations	equa (equi)	Latin root, equal, the same
symposia	sym(syn)	prefix, together, with
	pos (pon)	Latin root, put, place, set, position
validity	val	Latin Root, worth, health, strength
evaluate	e	prefix, out
	val	Latin root, worth, health, strength