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Word Smarts

Morphology Development & Advanced Decoding

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c. terminology
d. word selection, preparation, and introduction

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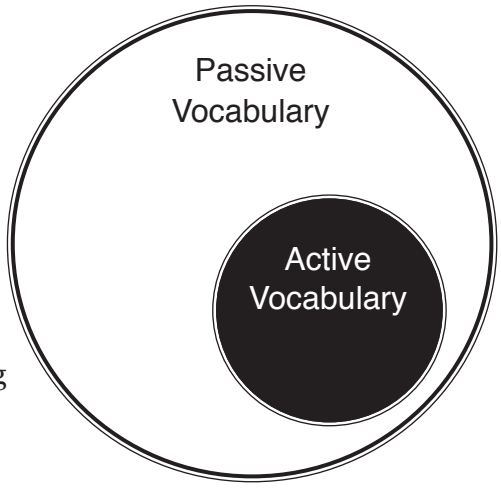
Different Kinds of Vocabulary & Levels of Word Knowledge

Passive & Active Vocabulary:

It is important to understand the difference between **passive** (receptive) and **active** (productive) vocabulary. Usually, a person's active vocabulary is much smaller than her passive vocabulary, and most if not all of that person's active vocabulary is included in her passive vocabulary. The words she uses in conversation and writing are typically a subset of those she understands (when she either listens or reads). Most readers encounter many words in text that are not commonly spoken. This knowledge is essential when selecting vocabulary words for students and also when deciding how to help those students learn the selected words.



Word Knowledge:

A person's understanding of indvidual words can also be seen on a continuum. Consider the following:

never encountered word	heard word before but can't define it	recognize word due to context or tone of voice	able to use and understand but not explain word	fluent with word - both use and definition

Categories of Vocabulary:

Reading vocabulary:
words you recognize when you read (typically the largest vocabulary)

Listening vocabulary:
words you recognize when listening to speech (increased by context and tone of voice)

Speaking vocabulary:
words you use in speech (typically a subset of listening vocabulary)

Writing vocabulary:
words you use when you write (many written words do not usually occur in speech)

A Suggested Sequence for Advanced Language Study: First Level Morphology

(Numbers in parentheses cross reference this sequence with my text, *Everything You Want To Know & Exactly Where To Find It*.)

Below is a sequence to be used as a guideline for elementary students and those who have word attack skills at the elementary level:

1. Elementary students (and those with fledgling word attack skills) should learn what base words, prefixes, and suffixes are and how they influence a word's meaning. Stick with roots that can stand by themselves as words (free morphemes). (80-89)

   Focus your study on several key areas:
   - understanding basewords, prefixes, and suffixes
   - identifying basewords in longer words (e.g., <u>like</u> in <u>unlikely</u>, <u>chair</u> in <u>chairs</u>)
   - understanding how prefixes change meaning (e.g., <u>mis</u>use means to use *wrongly*)
   - understanding how suffixes change meaning (e.g., cat<u>s</u> is more than one cat)

2. Begin a pack of basic prefixes (front is prefix followed by a dash, back is key word above meaning). Some instructors use green (for "go") for prefixes. Students should look at the prefix ("un-" for example) and say "un-, unhappy, not," in that order. (Anglo-Saxon prefixes to start 85)

3. Then, build a pack of basic suffixes (front is suffix preceded by dash, back is key word above part of speech). Where useful, include meaning. Often, meanings are abstract and obscure, and studying part of speech is more fruitful. Students should look at the suffix ("-ly" for example) and say "ly, likely, usually an adverb" in that order. (89)

4. Continue to add basic prefixes and suffixes to the students' learned stacks of cards as you introduce other elements of study. Once you have exhausted those that come from Anglo-Saxon, move into the more basic Latin affixes.

5. Teach (or review) noun, verb, adjective, and adverb. Without this knowledge students will not be able to apply their knowledge of suffixes.

6. Teach the way suffixes can change bases; include the terms consonant suffix and vowel suffix.

   - silent-e: drop the e before a vowel suffix (95)
   e.g., hope + ing = hoping *but* hope + less = hopeless

   - cvc doubling: 1 syl. word ending in cons.-vowel-cons., double before a vowel suffix (97)
   e.g., tap + ing = tapping *but* ship + ment = shipment
   send + ing = sending
   cook + ed = cooked

   - y: never drop the y. keep it or change it. vowel-y, keep the y (99)
   cons.-y, change the y to i unless the suffix begins with i.
   e.g., cry + ed = cried *but* stay + ed = stayed
   cry + ing = crying

7. Often in elementary school, students will have learned some final stable syllables. If these stable syllables are introduced at an earlier stage, it is only for decoding and spelling.

   Useful stable syllables to study at first: -tion (155), -ture (161), -ain (147), -age (147), -ous (151), -sion (155), -ate (149), -ive (173)

   Put these on cards, complete with hyphen. On the front should be the final stable syllable. On the back should be the pronunciation and a key word.

8. (for students with at least 4th grade word attack) Teach the two sounds of c and g. A number of upper elementary and middle school words contain soft c and g, and a number of bound roots at the next level of morphology contain soft c and g as well.

   - two sounds of c and g (c and g are soft before e, i, and y) (37)

   e.g., cent, cider, cyst, gentle, ginger, gym (words)
   e.g., -cid-, -cess-, -gen-, -cept-, -ced-, -cycl- (bound roots)

9. (for students with at least 4th grade word attack) Teach the Greek Code for reading/decoding. Have your students read words that contain elements of the Greek code on cards. Where appropriate, such words can also be dictated for spelling. Students should learn that words containing these elements usually come from the Greek.

   - y acts as i; ch says /k/; ph says /f/ (131)

   e.g., cyclone, python, echo, chronic, phylum, elephant

A Suggested Sequence for Advanced Language Study: Second Level Morphology

(Numbers in parentheses cross reference this sequence with my text, *Everything You Want To Know & Exactly Where To Find It*.)

Though advanced language study is flexible, it is useful to have in mind a sequence to guide your teaching. This sequence depends on the level of the student, the academic courses that student is taking, or a combination of both. Below is a sequence to be used as a guideline for students who have achieved at least fourth grade word attack skills. *Cover concepts on First Level Morphology sequence before beginning with these more advanced elements:*

1. Begin a pack of four or five basic prefixes (front is prefix followed by a dash, back is key word above meaning). Some instructors use green (for "go") for prefixes. While assimilated (chameleon) prefixes are some of the most common, if you use them at this stage, stick to their base forms and avoid their assimilations (e.g., study <u>in</u> but not <u>im</u>, <u>il</u>, or <u>ir</u>). Students should look at the prefix ("pre-" for example) and say "pre, preview, before," in that order. (regular prefixes - 112-4; assimilated prefixes - 115-23)

   8 good prefixes to study at first: pre-, in-, con-, re-, inter-, trans-, ex-, dis-

2. Then, build a pack of four or five roots (front is root surrounded by dashes, back is key word above meaning). Students should look at the root ("-rupt-" for example) and say "rupt, interrupt, to break," in that order. (124-7)

   6 good roots to study at first: -port-, -rupt-, -dic-/-dict-, -ject-, -mit-/-mis-, -spec-/-spect-/-spic-

3. From there, build separate packs of prefixes and roots. Stick to one language of origin for a time before introducing elements of another language.

4. If you have already introduced the stable syllables mentioned in the First Level Morphology sequence for decoding, return to them and layer in part of speech and other useful information for meaning and vocabulary development. Continue to build your pack of stable syllables and suffixes. Have your students practice reading and spelling words containing these elements. (Note: Make sure that students have a basic understanding of the key parts of speech.) Here are a few examples of useful stable syllables; more can be found in the text:

   a. useful stable syllables to study at first: -ment (146 - noun), -ist (147 - people noun), -or (147 - people noun), -ture (161), -ize (171 - verb), -ive (173 - adjective)

b.	-tion: most common	-sion (/shun/): after s, n, l (/zhun/): after vowels/r	-cian: for people (155)
	nation	propulsion, invasion	musician

c. -ous: adjective (dangerous) -us: noun (circus) (151)

d. -ate (/ate/): verb (locate) -ate (/et/): adjective/noun (immediate, pirate) (149)

5. As students build packs of prefixes, roots, and stable syllables, introduce the major word origins (Anglo-Saxon, Latin, Greek, and maybe French), and discuss their characteristics. Have students practice identifying words by their origins. Remember that the study of advanced word structure is cognitive. In other words you need to teach *how* the language works. Little of this concerns rote memory. (176-8)

6. Teach students that -ti- and -ci- say /sh/. Use students' base knowledge of -tion to get to this. (In other words, "if tion says /shun/, what does ti say?") Then, expand your stable syllable pack with /sh/ syllables. You should have a large pack of multisyllablic words that contain these /sh/ structures for reading and eventually spelling. (152-7)

-tion = /shun/		-cian = /shun/	
-ti- = /sh/		-ci- = /sh/	
-tial = initial	-tious = nutritious	-cial = racial	-cious = ferocious
-tient = patient	-tiate = initiate	-cient = ancient	-ciate = associate
		-ciency = efficiency	

7. Then, teach students -ture (as you taught -tion) and -tu- (as you taught -ti-). (158-9)

   -ture = /cher/ as in adventure
   -tu- = /choo/ as in mutual, spatula

8. As students continue to build packs of prefixes, roots, and stable syllables, examine the template of a typical Latinate word. Teach the three Latin connectives (-i-, -u-, -ul-). Teach the pronunciations of Latin connective i (e.g., medium, million, aptitude). (111)

9. Eventually, teach the breakdown of a Greek word (including elements and connective o). (129)

10. Teach assimilated/chameleon Latin prefixes. (115-23)

    e.g., ad changes to ar before r to make arrange
    dis changes to dif before f to make differ

Terminology for Advanced Word Structure

affix	morpheme that is attached to the root (usually either a prefix or a suffix)
assimilated prefix	(also called chameleon prefix) prefix that modifies its final sound (and spelling) to become similar or identical to the adjacent sound in a root for ease of pronunciation (e.g., ad changes to ar before range to make arrange; in changes to ir before regular to make irregular)
base word	(also called root word) free morpheme; word with no prefixes and suffixes (e.g., -port-, -kind-)
connective	letter(s) in English words used to combine two morphemes; connectives function as "glue" and are not morphemes themselves
Latin-based	connect a root to a suffix or two suffixes to each other (e.g., media, auditorium, regular). three common Latin connectives: -i-, -u-, and -ul-.
Greek-based	connective -o- often joins two combining forms or elements (e.g., photograph, democracy)
element	often used to describe Greek-based morphemes (rather than specifying whether they are roots or affixes) (e.g., -phon-, -crac-/-crat-, -bio-)
final stable syllable	cluster of letters at the end of a word whose pronunciation remains consistent regardless of the word in which it appears (e.g., -tion, -ble, -ture); *not* synonymous with the term suffix
morpheme	smallest component of a word that has meaning
bound morpheme	morpheme that only appears as part of a larger word (e.g., -struct-)
free morpheme	morpheme that can stand alone; often called base word or root word (e.g., -port-, -kind-)
phoneme	smallest unit of sound (e.g., /b/, /ch/)
prefix	affix placed before the root of a word (e.g., pre-, ab-)
root	core meaning in a word; some are bound morphemes (e.g., -struct-), and some are free morphemes (e.g., -port-)
suffix	affix placed after the root of a word; typically determines part of speech
vowel suffix	suffix that begins with a vowel (e.g., -ed, -ing, -ous, -ive, -ate, -us)
consonant suffix	suffix that begins with a consonant (e.g., -ment, -ly, -ful, -tude, -less)

note: In linguistics, the term "root" refers to the word (in another language) from which our current stem or base is derived. Typically, however, in word study with students, the term "root" is used interchangeably with "stem" and "base."

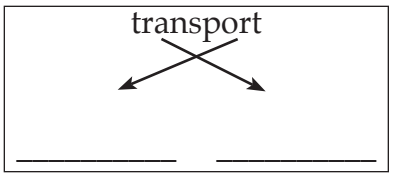
Useful Extender Activities for Prefixes & Roots

It is important to develop extender activities when introducing and studying a morpheme. No matter how well a student has memorized a pack of prefixes and roots, that rote memory will not apply to word study unless the student is specifically trained to seek out these morphemes in multisyllabic words and to use them to glean meaning. Here are some useful activities to expand upon the initial introduction of a root or prefix:

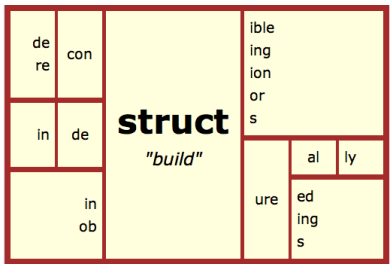
1. Have students generate a list of words that contain studied element.
2. Provide definitions, and have students retrieve from memory other, recognizable but less familiar, words that contain studied element.
3. Have students locate and mark element in longer, multisyllabic words.
4. Have students participate in morphemic awareness activities (oral manipulation of morphemes in words) based on element. (Donah's *Improving Morphemic Awareness* scripts this task for a number of morphemes and is available at wvced.com.)

Teacher:	Say constructed.	*Student:*	constructed
Teacher:	Change the /ed/ in constructed to /ing/.	*Student:*	constructing
Teacher:	Add re to the beginning of constructing.	*Student:*	reconstructing
Teacher:	Drop the first prefix and the /ing/ in reconstructing.	*Student:*	construct
Teacher:	Add /iv/ to the end of construct.	*Student*:	constructive.

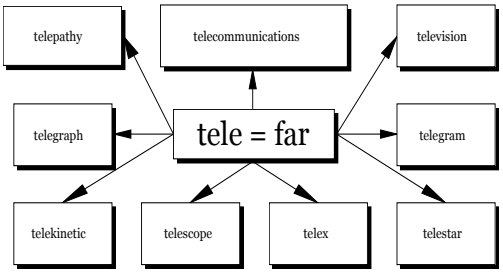
5. Have students write literal definition of given word using knowledge of element meaning, or have them provide word to match provided literal definition (criss-cross sheets). An example is at right.



6. Have students read phrases/sentences that include examples of words containing element.
7. Have students write sentences with words containing given element.
8. Have students build matrix from list of words containing studied element, or have students use teacher-made matrix to generate list of words containing studied element. An example of a matrix for the base -struct- is at right. (Bowers' *Teaching How the Written Word Works* explores this practice and is available at wvced.com.)



9. Have students write a prefix or root in the center, and map or web words that come from that word part. More advanced students can even link those webbed words to other prefixes and roots. An example of a simple word web for the Greek element -tele- is at bottom right.
10. Have students locate words that contain familiar prefixes and roots in magazine or newspaper articles. This practice teaches students to recognize learned word parts and proves their frequency and therefore the usefulness of studying them.
11. Provide advanced students with a "word of the day," which they must analyze at the phonological (phonemes, syllables, blends/digraphs, etc.) and morphological (language of origin, prefix/root/suffix, advanced structures, meaning if possible) levels. This provides both review and a fascinating study!



A Note on Procedure for Word Origins

phonological division	morphological division
e la tion	e lat i on
in som ni a	in somn i a
con tra dic tion	contra dict i on

A significant conceptual difference exists between basic phonological decoding (division by sound) and morphological work (division by meaning). With morphology we no longer examine words based on straightforward syllabication; rather, we examine them based on parts for meaning. Examples are above at right. Morphological study leads to an understanding of more challenging spellings and an enhanced vocabulary.

Recall & Recognition Drills (taken from Shirley A. Kokesh)

After a concept has been taught, it must be drilled if it is to be remembered. Drills are on two levels:

1. Recognition: instructor provides a set of potential answers and one question
   student must choose the correct answer from the given set
2. Recall: instructor provides one question
   student must provide the answer from memory

A great deal of student failure occurs because teachers tend to go from teaching directly to the higher level drill of recall....or testing! While a small percentage of students can function well in such a system, it places most in a position of threat, uncertainty, and insecurity. If students fail, many times the instructor repeats the procedure instead of adding necessary lower level drills of recognition.

For example: After explaining the meanings of three to six morphemes (teaching), if you then say, "Now let's go through these morphemes again, only this time you tell me the definitions," you are testing (recall) not practicing (recognition).

Instead, after teaching the meanings of several new roots or prefixes, insert the following recognition drill:

1. Put three of the word part cards in front of the student:

port	struc/struct	vid/vis

2. Define one of these roots: "to build"
3. The student "recognizes" the root he thinks is right by tapping or removing it, saying, "struc/struct."
4. The teacher places a new card on top of, or in place of, struc/struct and gives the second definition of the drill.
5. If the student chooses the wrong answer, say, "Try again!" Don't display a new card. Rather, define the word that was mistaken so that the student can get immediate feedback to correct his error.
6. When all cards have been drilled, then it is appropriate to go to the testing level (recall). Gather cards in a deck. Flash and test: "Give me the definitions for each card you see.

A Technique for Reviewing Word Parts & Vocabulary Terms Independently

To study your cards use

"The Box Method"!

1) Put down 4 cards to form your "BOX"
Word up, definition down:

democracy	convention
primary	delegate

2) Quiz yourself
Pick up a card, do you know the definition?

YES! Set it aside, and place a new card in your box.

NO... carefully review the back of the card until you feel you know it, then put it back in your box, and choose another card from your box to answer.
No card leaves the box until you get it right once.
Keep putting aside the cards you know and reviewing the ones you don't until you know them all!

3) Now try it with the definitions up!

This is a much more effective way to learn your cards than just flipping through the deck!

"The Box Method" William Van Cleave & Shirley Kokesh
Instruction sheet by Susan Schambach and Cheryl Swanson, Triad Academy, Winston-Salem, N.C.

Identifying Morphemes

Box the root. Underline the prefix(es) and/or suffix(es).

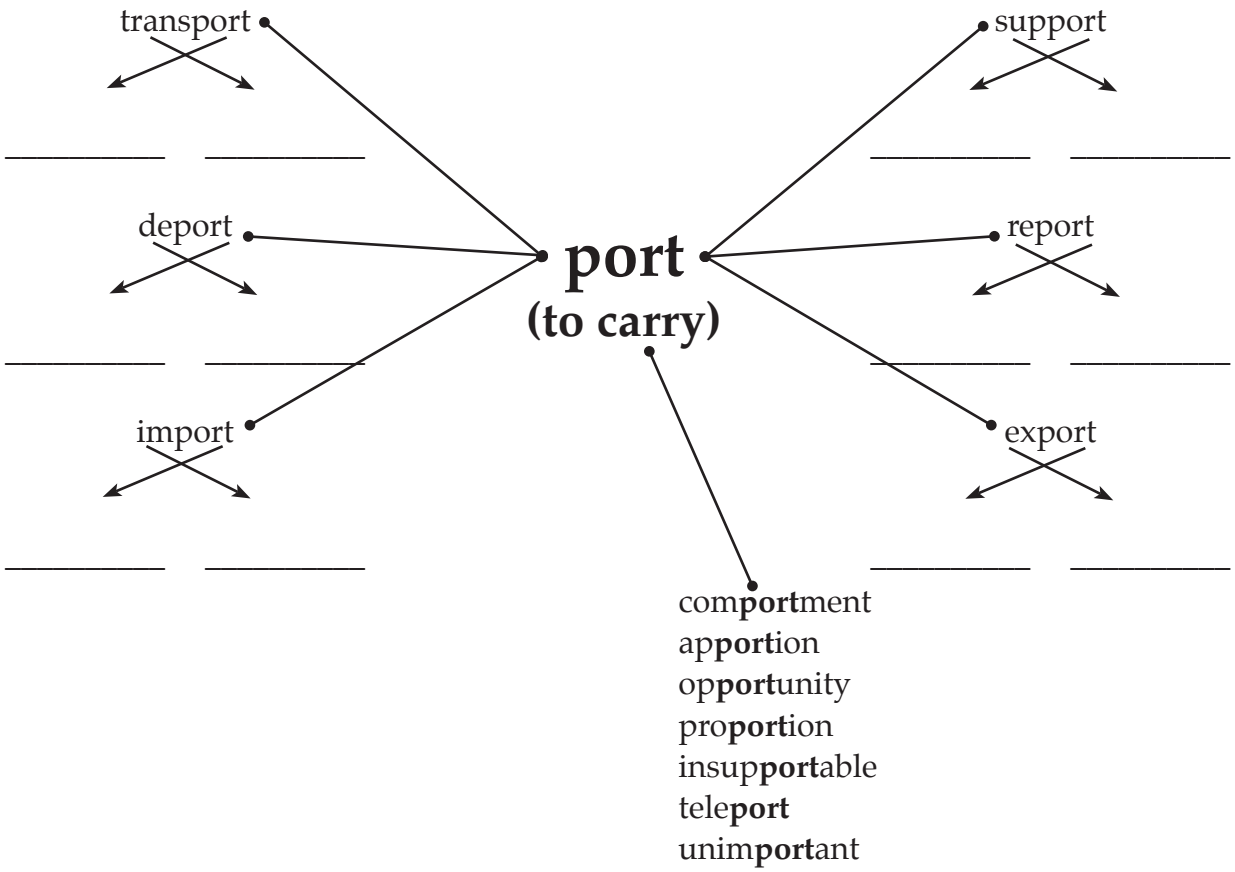
cook	worthless	pennies	washed
cooking	worthlessness	rays	hopefully
uncooked	worthiest	ugliest	brightness
recooked	greater	fatherhood	understandable
overcook	pregame	underactive	unwholesome
worth	likelihood	unceasingly	quitter
unworthy	liking	understated	livelihood

Some Sample Activities

1. Suffixes often determine part of speech. Examine these words to see how their parts of speech change as different suffixes are added:

prefix	prefix	root	connective	suffix	connective	suffix	suffix
inter	de	part		ment		al	ly
dis	pro	port	i	on		ate	ly
	ad	vent		ur(e)		ous	
		nat		ur(e)		al	ly
	re	med	i	at(e)	i	on	
	ir	reg	ul	ar		ly	

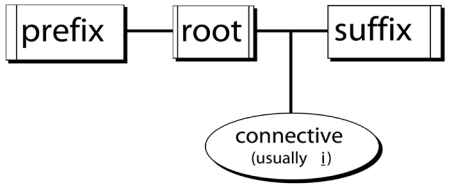
2. A variety of word webs are useful for advanced word structure study. Examine this web for the Latin root <u>port</u>, meaning "to carry."



Tracking Word Origins

Latin Words: 55%

General Trends



usually multisyllabic words

few vowel teams besides ai: assail, retain

Common Structures

connectives i, u, and ul: mediate, monument, muscular, solitude

ti, si, and ci = /sh/: notation, racial

tu = /choo/: eventual, fortunate, spatula

ture = /cher/: adventure, furniture, nature

chameleon prefixes: attention, collapse, difference, illegal

ct, pt: act, tempt

soft c before e or i: certain, city

Anglo-Saxon Words: 20%

General Trends

usually one syllable words

numbers 1-1000: one, twenty

basic color words: brown, green

simple body parts: arm, throat

most sight words: could, do

most vowel teams: boat, toil

short words with silent letters: doubt, know

Common Structures

ff-ll-ss words: cliff, tall, grass

ch = /ch/: chair, chin, church

ck, tch, and dge: trick, witch, grudge

th in short words: than, thin, thick

k in short words: kelp, kill, kind

wh: when, whisper

ng: hang, song, sting

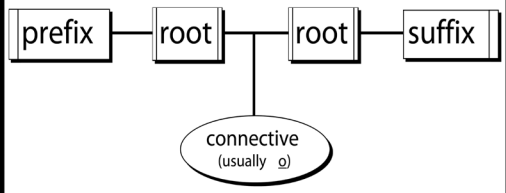
wr: wrist, write

wild/old words: child, pint, post, told

2 syllable consonant-le words: bubble, fizzle, trickle

Greek Words: 11%

General Trends



often involve science, school, or the arts

Common Structures

connective o: democrat, photograph

y = i: cyclone, gym, myth, type

ph = /f/: phobia, phonics, typhoon

ch = /k/: monarch, orchid, school

k in longer words: kilometer, kinesthetic

th in longer words: athlete, thyroid

silent initial p: pneumonia, psychology

ending -ology: archaeology, biology

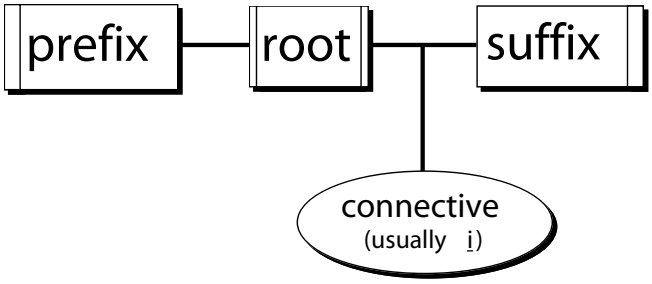
ending -ic: charismatic, chronic, music

A two-color poster-size version of this chart is available from W.V.C. ED.
Please do NOT copy this chart except for personal reference.

Latin Connectives Practice Sheet

Box roots, circle connectives, and underline affixes.

expedient	evaluate
muscular	stimulant
petunia	tempestuous
emporium	deteriorate
magnitude	stadium
virtuous	brilliant
industrious	regulate
auditorium	alleviate
hysteria	mysterious
peninsula	testimony
solarium	impediment
opinion	imperial
turbulent	honorarium
editorial	radiant
spectacular	triangular
sanitarium	immaculate
popular	magnesium
comedian	monument



Three key Latin connectives are i, u, and ul. You should accent the syllable that comes before the Latin connective:

sól i tude **món** u ment **rég** ul ate

u and ul are always long:

promiscuous manual muscular

Latin connective i is by far the most common.

Use these rules for pronouncing it:

1. i = /ē/ before a vowel suffix: curious
2. i = /y/ after l or n: peculiar
3. i = /ĭ / before a consonant: multitude

A sampling of useful suffix rules:

-ous = adjective -ate /ate/ = verb
-us = noun -ate /et/ = adj./noun

Selecting Word Origins

AS = Anglo-Saxon; G = Greek; L = Latin

bang
mutual
chromosome
forty
declension
pyre
expenditure
laugh
orchid
distribute
psychology
surreptitious
what
telepathy
from
manuscript
pathology
does
white
biology
consequence
watch

regenerate
phase
those
abbreviate
phonograph
epidemic
miss
abnormal
contraception
elbow
philanthropist
hundred
evacuate
phonics
incredulous
moat
recuperate

bonus words:
biodegradable
graphomotor
subatomic

Identifying Morphemes

1. Box the root.
2. Underline the prefix(es) and/or suffix(es).
3. For each word write a partner word that shares its root.

deconstructed	photographic
obstructed	synchronize
confide	anarchy
adjective	sympathetic

Generating Words

Identify a morpheme.
List other words containing that morpheme.

beneficial	legal
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

thermometer	biography
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____