

ἄνθραξ		hot coal
μάρτυρ		witness
σφίγξ		sphinx
φαινόμενον		thing shown
χαράκτηρ		engraver
βάθος		depth
τέλος		goal

Lesson 2

Stems and Cement -o-

An Observation: In English, the difference between verb stems and noun stems is often completely blurred: one can "fear a stop" and "stop a fear" or "voice your mind" and "mind your voice." In Greek, however, noun and verb stems are usually distinct and require different treatment.

Greek nouns and verbs usually consist of a stem plus an ending: the stem is the part most often used in English words.

1. Noun and adjective stems: how to figure out what is the stem

- In the etymology section of each entry, English dictionaries give either the stem itself, the "nominative" form, or the nominative and "genitive" of Greek words.
- When the form has a hyphen at the end, it is the stem itself. When it does not, it is necessary to determine the stem.
- If you need to determine the stem, a practical procedure is to simply look at a Greek word and a few of its English derivatives: the parts that are common to both the English words and the Greek word constitute the stem most of the time.
- For those who want more than a simply practical procedure, the following explains some technical details.
 - First, some background about Greek nouns and adjectives.
 - In Greek, the ending of nouns and adjectives must be changed depending on what function they play in a sentence:
 - The subject of the sentence is in the "nominative" case.
 - Possessives are in the "genitive" case.
 - English still has a few such cases: "he" and "she" are nominative, while "his" and "hers" are genitive, and "him" and "her" are yet another case called "accusative" or "objective") (Proto-Indo-European had at least eight cases:

some later members of the Indo-European family had more, some fewer: English has mostly lost them).

- Changing a Greek word from case to case is called "declining" the case. The entire structure of cases is called a "declension."
- There are three declension patterns in Greek: some words decline one way, some another way, and some yet another way: hence the Greek-derived English plurals *octopodes*, *stigmata*, and *hoi polloi* (derived from Greek plurals).
- Greek nouns or adjectives that have a nominative that ends in -α, -η, -ος or -ον all belong to a pattern called "first and second declension." To get the stem of such words, subtract those endings from the word.
- Examples of first and second declension words:

Greek Word	Transliteration	Meaning in Greek	Greek Stem	Transliterated stem	English derivative example
ἡμέρα	hemera	day	ἡμέρ-	hemer-	<u>eph</u> emeral, <u>hem</u> erocallis
φωνή	phone	voice	φων-	phon-	<u>phon</u> ology, <u>telephon</u> e
ἰατρός	iatros	physician	ἰατρ-	iatr-	<u>geriatric</u> , <u>iatro</u> genic, <u>psychiatric</u>
ὀστέον	osteon	bone	ὀστε-	oste-	<u>oste</u> ology, <u>oste</u> omyelitis

- Another pattern of nouns is called the "third declension." For nouns of the third declension, the nominative form and the genitive form is often quite different. To get the stem, subtract the ending -ος or -εως from the genitive case (which is usually given second).

Nominative Greek form	Genitive Greek form	Meaning	Greek stem	English Stem	English derivative
οὖς	ὠτός	ear	ὠτ-	ot-	<u>ot</u> itis
φύσις	φύσεως	nature	φύσ-	phys-	<u>phys</u> ics

- There are other patterns of Greek nouns and adjectives, and there are exceptions to the above patterns: covering the issues exhaustively would require a great deal of time and effort, and is not worth it for basic English etymology. Curious? Learn ancient Greek!

2. Verb stems

Some English dictionaries give Greek verbs with the present indicative endings -ω or -ομαι. Other dictionaries give them with the present infinitive endings -ειν or -εσθαι. Still others simply give the stem with a hyphen at the end. If the form is not simply the stem with a hyphen at the end, subtract the endings to get the stem.

Greek verb	English transliteration	Meaning	Greek stem	Transliterated stem	English derivative example(s)
κινέω	kineo	I move	κινέ-	kine-	<u>kin</u> ematics, <u>cin</u> ema
παύομαι	pauomai	I stop	παύ-	pau-	<u>pau</u> se
φάγειν	phagein	to eat	φάγ-	phag-	coproph <u>age</u> , sarcoph <u>ag</u> ous
στρέφεσθαι	strephesthai	to turn	στρέφ-	streph-	<u>streph</u> osymbolia

Some verbs have more than one form of the stem (for example, στρέφ- / στρόφ-, from which many English words derive (e.g. *strephosymbolia*, *ommastrephes*, *apostrophe*, *strophe*, *boustrophedon*). In Greek, the different forms most often involve changing the vowel from e to o or vice versa, or even omitting the vowel. Compare "strong" verbs in English (e.g. *eat*, *ate*, *eaten*). This type of change in the vowel is called **ablaut**.

3. Cement -o-

Most Greek stems are connected to other Greek stems with an -o- in English words. That is the "Cement -o-."

Why o?

In Greek itself, when words whose nominative ends in -ος form compounds, they keep the omicron after the stem and omit the sigma. Because so many Greek words end in -ος, and because they keep the -o- omicron in Greek compounds, the "connective" or "cement" -o- became the standard connector for Greek roots in Greek, and from there it became the standard when combining Greek roots in English and other modern languages, as seen in words like *micr-o-phone*, *macr-o-scopic*, *oste-o-myelitis*, and *pyr-o-maniac*.

- Exceptions (there are always exceptions in the English language)
 - When the first stem ends in a vowel, the -o- usually remains (*oste-o-myelitis*), but not always (*agora-phobia*).
 - If the second stem begins with a vowel, the -o- is usually omitted (*phil-anthropy*), but not always (*hydr-o-electric*).
 - Dictionaries often list the -o- as part of the stem, for valid reasons.

NOTATE BENE:

- Cement -o- is used to connect stems.
- Cement -o- is NOT used to connect prefixes or suffixes to stems.
 - A few prefixes and suffixes have o's in them, but those are not instances of cement -o-.
 - For example *pro-* and *-osis* have o's in them that are not cement -o-.
- Some stems have o's in them. They too are not cement -o-. Examples include:
 - *odont-* "tooth"
 - *oste-* "bone"
 - *onym-/onomat-* "name"
 - *bio-* "to live"

EXERCISES

1. Transliterate the following Greek words, then find at least few English words that include each and their typical meanings in English words.

οἶκος
φωνή
παις, παιδός
πούς, ποδός
καρδιά
νόμος
ὁδός
ψυχή
φυτόν
ἔργον
φίλος
ἥλιος
ἄγειν
γράφω
πο(ι)έομαι
φοβέω
παύεσθαι
φάγειν

2. Write the Greek stems (and their meanings) which are contained in the following words:

microscope
monotheism
pediatrics
cardiac
agnostic
economics

presbyopia
 prognosis
 pseudonym
 sarcophagus
 cephalopod
 physiological
 laryngeal
 syringe
 hyacinth
 narcissus

3. Which words in the exercise above contain a cement -o-?

4. What's the difference between a hodometer and an odometer? Use the OED.

5. Match the words in column A with their synonyms in Column B

A	B
1. ameristic	a. bisexual
2. emblem	b. disorder
3. ataxia	c. triangulation
4. androgynous	d. composed
5. apathic	e. irregular
6. synthetic	f. sensationless
7. anaclastic	g. dissolution
8. analysis	h. recollection
9. anamnesis	i. unsegmented
10. synchronic	j. refracted
11. anomalous	k. injection
12. utopia	l. nowhere
13. trigonometry	m. contemporary

6. Find words that mean:

Rule of/power held by the people	_____
Rule of/power held by the worst people	_____
Rule of/power held by women	_____
Rule of/power held by the few	_____
Rule of/power held by the best	_____
Rule of/power held by one	_____
Rule of/power held by the mob	_____

Lack of ruling powers	_____
Rule of/power held by the old	_____
Rule of/power held by the sea(faring)	_____
Rule of/power held by the deserving	_____
Rule of/power held by the fathers	_____
Rule of/power held by the self	_____
Rule of/power held by the holy (priests)	_____
Rule of/power held by the mothers	_____
Rule of/power held by the rich	_____

7. See how far you can carry the following sequences (find the numbers in a later chapter):

triangle, square, pentagon, hexagon, ...

tetrahedron, pentahedron, ...

monarch, diarch, triarch, ...

(look up the first four of that last list in a dictionary: surprised?)

Lesson 3

PREFIXES

- Prefixes are combining forms that occur exclusively before stems or other prefixes.
 - A word may have more than one prefix: *an-ec-dote* ("not-given-out"), *syn-ec-doche*.
 - A prefix may be inside a word as the result of compounding: *ap-pend-ec-tom-y*.
 - Occasionally, by shortening, a prefix may come to be a word on its own:
 - *hyper*, from *hyperactive*.
 - *hypo* from *hypodermic*
 - *retro* from *retroactif* (French)
 - Adjectival stems are typically found before noun stems, but are not considered prefixes, because they occur frequently on their own. See lesson 8.
- Certain prefixes have more than one form, which is for the sake of euphony.
 - Some add a consonant if a vowel follows:
 - *a-* "not, without" is usually *an-* before vowels.
 - *ec-* is usually *ex-* before vowels.
 - Some assimilate to a consonant at the beginning of the following stem.
 - *en-*, *em-*, *el-*