

Morphology

Morphology is the conventional system by which the smallest units of meaning in words - bases, prefixes and suffixes; combine to form complex words (Bowers, P. N., Kirky, J.R., & Helene Deacon, S). In its simplest form it is the study of the structure of words and their meanings.

Some studies have found that explicit teaching of morphology can have a positive impact on reading comprehension; including significant progress for students with English as an Additional Language or Dialect (Amirjalili & Jabbari, 2018). There is also evidence that explicitly teaching students the patterns for morphemes had a significant effect on improving decoding and phonological awareness (Goodwin & Anh, 2013).

It is important that children are taught the interrelation between morphology, phonology and etymology, as when we combine all three areas, it teaches children how our writing system works (Bower & Shanahan, 2021). Morphological instruction however, should never replace a structured synthetic phonics approach and the other essential elements in the Science of Reading.

During systematic phonics instruction in the early years, students can be taught the function of morphemes in reading and spelling by introducing simple plural suffixes such as 's' when reading and writing CVC words. For example: pet= one pet pets= more than one pet (Shanahan, 2021).

Definitions

morpheme: the smallest unit of meaning within a word. Morphemes are classified as either being a base or root word (bed, stand, rupt) or an affix (a bound morpheme that occurs before or after a base or root word)

etymology: the origin and historical development of a linguistic form, tracing its language from one to another.

affix: a bound morpheme that comes before or after a base or root word (prefix or suffix)

prefix: A bound morpheme that comes before a base or root word (dis- pre- un-)

suffix: A bound morpheme that comes after a base or root word (-ly -ing -ed)

base word: a word that can not be broken down into a smaller meaning eg. head, happy. Also referred to as a root word.

root word: a word that can not be broken down into a smaller meaning eg. rupt, astro. Also referred to as a base word.



Layers of Language

Greek:

Specialised words - especially in science eg. photosynthesis

Latin:

Technical, sophisticated words used in formal settings eg. textbook or literature

Anglo Saxon:

Common, short, everyday words used frequently in ordinary situations eg. book, yard, rain, head

Adapted from M. Henry, 1987; After Calfee & Associates, Stanford University



Recommended Teaching sequence

1. Anglo Saxon morphemes -

- Based on the vocabulary that children already use: Explicitly teach base words, prefixes and suffixes and how each influence a word's meaning
- Teach words with multiple morphemes using a Word Matrix and Word Sums
- Start with words with one base word (one morpheme only) eg. CVC words such as sit, pig, jump; and teach simple suffix plurals such as 's', 'ing' and how they change the meaning (cat, cats= 2 cats)
- Identify base words in longer words (pig, pigs, jump, jumping, jumped, playing, playful)
- Look at how prefixes can change meaning (<u>mis</u>use= use the wrong way/badly; tie a shoelace/<u>untile</u> a shoelace)
- Teach and review *nouns* as students need to apply knowledge of suffixes and prefixes eg. noun: -er, -hood, -ness, or, -ist, -ment,
- Teach and review *adjectives* as students need to apply knowledge of suffixes and prefixes eg. –er, -est, -ful, -ous, -able, -ible
- Teach and review adverbs as students need to apply knowledge of suffixes and prefixes eg. –ed, -ing, -en, -fy, -ate, -ize

2. Latin morphemes - as above

3. Greek morphemes - as above plus: teach 'c' as in cyclone, 'ch' as in chemist, 'ph'- as in phone

Word Matrix- word family map

		ful	ness
		S	
un	help	ing	
		ed	
		er	S

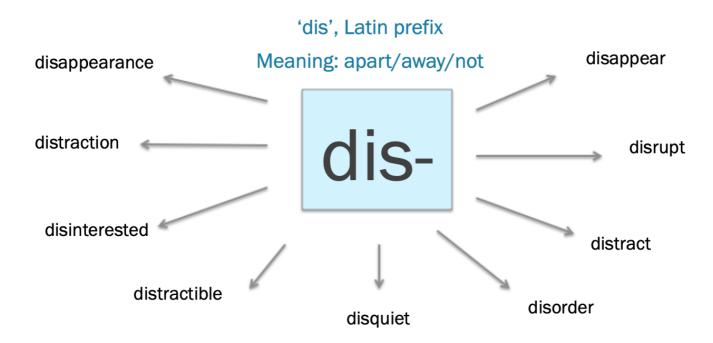


Word Sums- showing the underlying structure of a word with more than a base

un + help + ful + ness → unhelpfulness

Word Webs game:

- 1. Explicitly teach the new morpheme and its definition
- 2. Ask students to redefine the morpheme and its meaning into a sentence
- 3. Students draw some of the words with the morpheme in their Vocabulary Books
- 4. Practice reading the words with the morphemes in subsequent days
- 5. Play Word Webs with the targeted morpheme or review morphemes.
- 6. Students work in mixed ability pairs to list as many words as they can with the target morpheme.
- 7. Pairs share their words with the class. Students need to be able to say the meaning of the words.
- 8. Pair or group with the highest number of words is the winner.



Common Morphemes

Prefixes	Meaning	Examples
in-	into; not	into, incomplete
un-	not	undo, untie
mis-	wrong	mistaken, misunderstand
dis-	away, separate, not	discolour, disappear
de-	down, away from	deescalate, depend
pre-	before	prejudice, preview
a-	not, in, on, without	atypical, aside
pro-	in favour of, positive, in front of	professional, proactive
con-	together, with	connect, confident
com-	with, together	compliment, command,
		company, committee
re-	back again	replay, recycle
sub-	under	submarine
ex-	out, away from	extension, extraordinary

Suffixes	Meaning	Examples
	more than one	coto coto
-S	more than one	cats, eats
-er	one who does; more	teacher, banker; shorter
-ly	in a certain way	quickly, naughtily
-ed	in the past	walked, cried
-ing	an action or result	painting
-less	without	boneless
-ship	how something is, to do with	friendship
	status	
- y	a state of being	bony, shiny
-ible	ability	flexible
-ful	having qualities of, full of	beautiful
-ion	a process, state or result	decoration
-able	able to be	inflatable
-est	most	biggest
-ish	a little	childish

Root/base words	Meaning	Examples
hope	(from Greek 'elpis) to anticipate with pleasure	hoping, hopeful, hopeless
play	(From 'plega') to move at a brisk pace, move with joy	playful, player, playing
walk	German/Dutch	walked, walking, sidewalk
able	ability	unable, disable, ability
port	to carry (Latin)	transport, porter, reporter
ject	to throw, to throw down (Latin)	inject, interject, subject
rupt	to break (Latin)	disrupt, interrupt

Prefixes: Example Lesson

- 1. Write the morpheme (prefix) dis- on the board
- 2. How many syllables? (1)
- 3. How many phonemes? (3)
- 4. Explain meaning: dis- is often found at the beginning of a word. It is a prefix. It means 'the opposite of, away/not
- 5. Word building: I am going to build a word with dis- as a prefix. What could it mean? When we see a word that starts with dis- we know it means not/away/opposite of.
- 6. Word generation: Can we think of words that begin with dis-? Model generating a list.
- 6. Practice: Let's make some more words with dis- (in mixed ability pairs), using the Word Web. Students could use magnetic morphemes.
- 7. Review: Put the dis- word in the Word Jar. Follow up activities/review in subsequent days/weeks.



Polysyllabic/Multi-morphemic level Word Building Example Lesson:

- * Could use magnetic morphemes for this lesson
- 1. These are the morphemes that make the word disruptive: dis- rupt- ive
- 2. Build the word: 'disruptive'
- 3. How many syllables? Let's clap it out.
- 4. What is the meaning of disruptive? Explain the meaning of each morpheme.
- 5. Here is a sentence with 'disruptive'. Can you think of a sentence for disruptive? Think Pair Share
- 6. Show the word with alternate morphemes using the Word Matrix or Word Sums graphic organiser.
- 7. Follow up activities/review/Word Jar in subsequent days/weeks



Word Matrix template
~For teaching words with multiple morphemes use a Word Matrix or Word Sums (Shanahan, 2021)

		ful	ness
		S	
LID	help	ing	
un	Петр	ed	
		er	S

Word Sums

~For showing the underlying structure of a multi-morphemic word

help + ful + ness = helpfulness

+ + + = _____

+ + + = _____

+ + + = _____

+ + + = _____

+ + + = _____

+ + + = _____

Activity cards:

Anglo Saxon, Latin and Greek morphemes

Cut and laminate back and front, to make words, with magnets attached; or use them as a Card Shuffle to sort into root words, suffixes and prefixes



Anglo-Saxon morphemes

un	ʻun' Anglo Saxon prefix, Meaning: not
end	'end', Anglo Saxon Prefix, Meaning: the opposite side, limit
hand	'hand' Anglo Saxon root, Meaning: person who works with their hands
king	'king', Anglo Saxon Root, Meaning: leader of people
come	'come' Anglo Saxon Root, Meaning: together, come
head	'head' Anglo Saxon Root, Meaning: chief person, leader

hold	'hold', Anglo Saxon Root, Meaning: watch over, to keep, tend to
way	'way', Anglo Saxon Root, Meaning: path, road
rain	ʻrain', Anglo Saxon Prefix, Meaning: wet, moist
with	'with', Anglo Saxon Root, Meaning: back, against
hood	hood', Anglo Saxon Root, Meaning: covering, protection, guard
court	ʻcourt', Anglo Saxon Root, Meaning: enclosed yard

high	'high', Anglo Saxon Root, Meaning: of great height, exalted
fare	'fare', Anglo Saxon Root, Meaning: food, go
cast	'cast', Anglo Saxon Prefix, Meaning: to throw
ing	ʻing', Anglo Saxon Suffix, Meaning: form of verb- action
less	'less', Anglo Saxon Suffix, Meaning: without/lacking
ly	'ly', Anglo Saxon Suffix Meaning: having the quality of

some	'some', Anglo Saxon Root, Meaning: plural, same
self	'self', Anglo Saxon Root, Meaning: one's own person
farm	'farm', Anglo Saxon Root, Meaning: land-cultivated
le	ʻle', Anglo Saxon Suffix, Meaning: to, liable to
ward	'ward', Anglo Saxon Root, Meaning: guard, protect
bear	'bear', Anglo Saxon Root Meaning: in a satisfactory manner

wel	'wel', Anglo Saxon Root, Meaning: in a satisfactory manner
ed	ʻed', Anglo Saxon Suffix, Meaning: past tense (verbs)
yard	ʻyard', Anglo Saxon Root, Meaning: garden, enclosure
ish	'ish', Anglo Saxon Suffix, Meaning: adjective form-belonging to/ somewhat
fore	'fore', Anglo Saxon Root, Meaning: before, front
dom	ʻdom', Anglo Saxon Root, Meaning: house

knight	'knight', Anglo Saxon Root, Meaning: servant, boy, youth
bow	ʻbow, Anglo Saxon Root, Meaning: to bend
be	'be', Anglo Saxon Root, Meaning: all round, thoroughly
play	ʻplay', Anglo Saxon Root, Meaning: move lightly and quickly
help	'help', Anglo Saxon Root, Meaning: assistance

Latin morphemes

	orphemes
rupt	ʻrupt' Latin Root, Meaning: break
pro	'pro', Latin Prefix Meaning: before, in favour of, on behalf of
dent	'dent', Latin Root, Meaning: tooth
struct	'struct', Latin Root, Meaning: build
dis	ʻdis', Latin Prefix Meaning: apart/away
centi	'centi', Latin/Greek Prefix, Meaning: one hundred/one hundredth

ive	'ive' Latin Suffix Meaning: tending to/of the quality of
pre	ʻpre', Latin Prefix Meaning: before
ject	ʻject', Latin Root, Meaning: throw
able	'able', Latin Suffix, Meaning: capable of or worthy of
	•
bi	ʻbi', Latin Prefix Meaning: two
duct	'duct', Latin/Greek Root, Meaning: lead, convey

cede	ʻcede' Latin Root, Meaning: go, move, yield
tract	ʻtract', Latin Root, Meaning: pull
con	ʻcon', Latin Prefix, Meaning: together, with
ion	ʻion', Latin Suffix, Meaning: action/process
ible	'ible', Latin Suffix Meaning: capable/worthy of
script	'script', Latin/Greek Root, Meaning: record, write, written

im	ʻim' Latin Prefix, Meaning: not
or	ʻor', Latin Suffix, Meaning: one who
vis	ʻvis', Latin Root, Meaning: see
flect	ʻflect', Latin Root, Meaning: curve, bend
ile	ʻile', Latin Suffix Meaning: ability to, belonging to
mobile	'mobile', Latin Root, Meaning: moving

numer	'numer', Latin Root, Meaning: number
in	ʻin', Latin Prefix, Meaning: not
fer	'fer', Latin Root, Meaning: bear, carry
flect	'flect', Latin Root, Meaning: bend, curve
port	ʻport', Latin Root, Meaning: bear, carry, entrance
er	'er', Latin Suffix, Meaning: one who



ure	ʻure', Latin Suffix, Meaning: act or result
de	ʻde', Latin Prefix Meaning: away, off
re	ʻre', Latin Prefix, Meaning: again
ped	ʻped', Latin Root, Meaning: foot
al	'al', Latin Suffix, Meaning: of, like, related to

Greek morphemes

phemes
ʻphoto' Greek, Meaning: light
ʻgram', Greek, Meaning: drawn or written
ʻist', Greek, Meaning: an expert in
ʻphon', Greek, Meaning: sound
ʻauto', Greek, Meaning: self
ʻgraph', Greek, Meaning: writing

chron	'chron' Greek, Meaning: time
tele	ʻtele', Greek, Meaning: distant, far
cylc	'cycl', Greek, Meaning: circle, wheel
anti	ʻanti', Greek, Meaning: opposed to, opposite
kilo	'kilo', Greek number, Meaning: one thousand
ite	ʻite', Greek, Meaning: fossil

matic	'matic' Greek, Meaning: willing
hydro	'hydro', Greek, Meaning: water
meter	'meter', Greek, Meaning: measure, unit of measure
micro	'micro', Greek, Meaning: little, small
astro	'astro', Greek, Meaning: star
poly	ʻpoly', Greek, Meaning: many

therm	'therm' Greek, Meaning: heat
scop	ʻscop', Greek, Meaning: look at, examine
cosm	'cosm', abbreviation of 'cosmo', Greek, Meaning: universe
bio	ʻbio', Greek, Meaning: life
ism	ʻism', Greek, Meaning: state of being
logy	ʻlogy', Greek, Meaning: study

psych	'psych' Greek, Meaning: mind, spirit, soul
path	ʻpath', Greek, Meaning: suffer
naut	'naut', Greek, Meaning: sailor
geo	ʻgeo', Greek, Meaning: earth
ana	ʻana', Greek, Meaning: back, backward, upward
gen	ʻgen', Greek, Meaning: born, growing

phil	ʻphil' Greek, Meaning: love of
ic	'path', Greek, Meaning: of, relating to
У	
е	6
O	í

References

Amirjalili, F. & Jabbari, A. A., 2018, *The impact of morphological instruction on morphological awareness and reading comprehension of EFL learners*. Retrieved 5th August 2021, https://www.researchgate.net/publication/327778417_The_impact_of_morphological_instruction_on_morphological_awareness_and_reading_comprehension_of_EFL_learners

Goodwin, A.P. & Anh, S. (2013). *A meta analysis of morphological interventions in English: Effects on Literacy Outcomes for School Age Children;* Scientific Studies of Reading, 17:4. Retrieved July 25th 2021, from

https://www.tandfonline.com/doi/full/10.1080/10888438.2012.689791?scroll=top&needAccess =true

Shanahan, T. 2018. What Should Morphology Instruction Look Like? Reading Retrieved 5th August 2021, from

https://www.readingrockets.org/blogs/shanahan-literacy/what-should-morphology-instruction-look

Bowers, P. N., Kirky, J.R., & Helene Deacon, S. May 5, 2010; *The effects of morphological instruction on Literacy Skills.* Review of Educational Research; 80; 144. Retrieved from http://files.realspellers.org/PetesFolder/Articles/Bowers_Kirby_Deacon_2010.pdf

Henry, M. 1987; After Calfee & Associates, Stanford University in Henry, M. 2014. http://umw.dyslexiaida.org/wp-content/uploads/sites/13/2016/05/UNLOCKING-LITERACY.pdf

