

Discovering the Hidden Treasure of Morphology

Grades K-5



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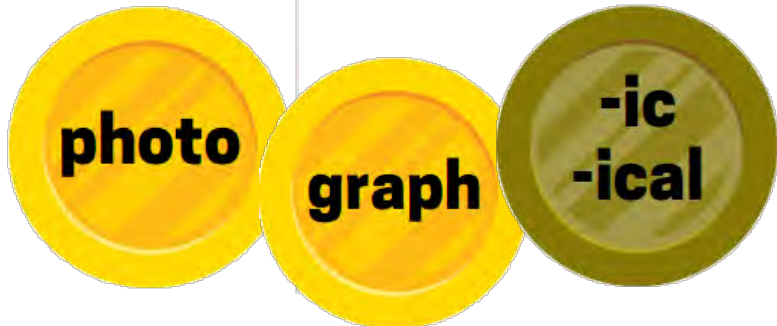
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Morpheme Match Session Starter

As soon as you are seated and settled, begin using the base words, root words and affixes at your table to **collaboratively** create as many words as you can as a team.

Record your words on **Handout #1 Morpheme Match**.

Consider all the ways this activity could impact student learning.



Work as a team. How many words can you create?

<u>graph</u>	<u>photograph</u>	<u>photic</u>
<u>graphic</u>	<u>photographic</u>	_____
<u>graphical</u>	<u>photographical</u>	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Objectives

- ✘ Examine the progression of morphology from kindergarten to grade 5 in the Foundations, Communication and Vocabulary strands of the B.E.S.T. English Language Arts (ELA) Standards.
- ✘ Identify resources in the appendices of the B.E.S.T. ELA Standards related to morphology instruction.
- ✘ Curate 3 evidence-based activities aligned to the progression of the morphology benchmarks and instructional best practices.

What is morphology?

Having a common understanding of **academic language** is essential to explicit instruction.

Work with a partner. Use the **glossary** beginning on **page 212** in the *B.E.S.T. ELA Standards* book to fully define morphology and key related terms.

How can the glossary impact instructional practices and student learning?



Morphology is the system of word - forming elements and processes in a language. It is also the knowledge of meaningful word parts in a language including prefixes, suffixes and base words. These **morphemes** are the smallest meaningful units in a writing system. An affix is a letter or group of letters added to the beginning (prefix) or end (suffix) of a word to change its meaning. A **base** word is the part of the word that cannot be broken down. It stands on its own as a word. A **root** is a word or part of a word from which other words are obtained by adding a prefix or suffix.



Why should we teach morphology?

The Reading Rope (Hollis Scarborough, 2001)

Language Comprehension

Background Knowledge

Vocabulary Knowledge

Language Structures

Verbal Reasoning

Literacy Knowledge

Increasingly
Strategic

Skilled Reading

Fluent execution and coordination of word recognition and text comprehension.

Word Recognition

Phonological Awareness

Decoding (and Spelling)

Sight Recognition

Increasingly
Automatic

Scarborough, H. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97-110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy*. NY: Guilford Press.

Why should we teach morphology?



Why should we teach ***morphology***?

Why should we teach morphology ***explicitly***?

It is important to teach phonological awareness, phonics, **morphology** and etymology (history of origin), syntax, text reading fluency, vocabulary, semantics, and written expression in an **explicit, sequential, systematic, and cumulative** manner.

-B.E.S.T. ELA Standards Book page 206

Morphology in the Vocabulary Strand



ELA.5.V.1.2	Apply knowledge of Greek and Latin roots and affixes, recognizing the connection between affixes and parts of speech , to determine the meaning of unfamiliar words in grade-level content.
ELA.4.V.1.2	Apply knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in grade-level content.
ELA.3.V.1.2	Identify and apply knowledge of common Greek and Latin roots , base words, and affixes to determine the meaning of unfamiliar words in grade-level content.
ELA.2.V.1.2	Identify and use base words and affixes to determine the meaning of unfamiliar words in grade-level content.
ELA.1.V.1.2	Identify and use frequently occurring base words and their common inflections in grade-level content.
ELA.K.V.1.2	Ask and answer questions about unfamiliar words in grade-level content.

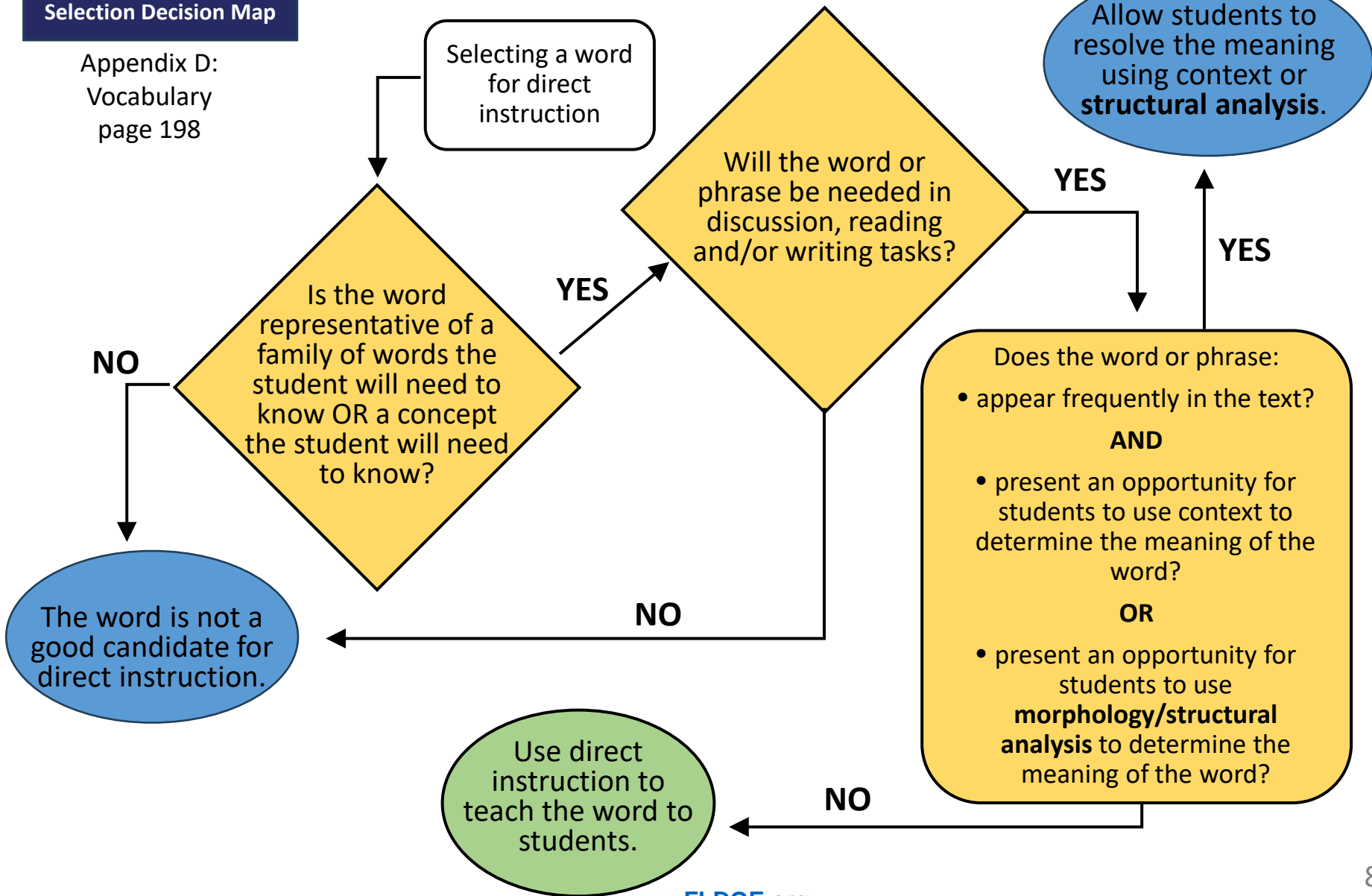
B.E.S.T. ELA Standards page 24

Notice the **bolded language**. It indicates what is **new** at each grade level. What do you notice in the progression of this benchmark?



**Academic Vocabulary
Selection Decision Map**

Appendix D:
Vocabulary
page 198





Morphology Resources in Appendix D

3rd – 5th Grade Sample List

Greek and Latin Roots

Root	Meaning	Examples	Origin
ant, anti	against, opposed to, preventative	antagonist, antibiotic	Greek
aqua	water	aquarium, aquatic	Latin
aud	to hear	audiobook, audience	Latin
auto	self	autobiography, autograph	Greek
bio	life	biology, biography	Greek
cent	one hundred	century, percent	Latin
chron	time	chronological, chronic	Greek
cir/circum	around	circumference, circumstance, circular	Latin
duc/duct	lead, make	deduce, produce, educate	
form	shape	formation, format	
geo	earth	geography, geology	
graph	write	autograph, graphic	
hetero	different	heteronym, heterogeneous	
homo	same	homonym, homogenous	
logy	study of	biology, zoology	
mal	bad	malfunction, malpractice, mal	
meter/metr	measure	thermometer, perimeter	
micro	small	microscope, microphone	
mono	one	monologue, monotonous	
multi	many	multimedia, multitask	
photo	light	photograph, photosynthesis	
port	to carry	import, transportation	
scope	viewing instrument	microscope, telescope	
spect	to look	inspection, spectator	
tele	far off	television, telephone	
vid/vis	to see	visual, video	

Morphology Base Words

Frequently occurring base words for 1st grade	Base words for 2nd grade
close	answer
do	break
give	button
happy	connect
help	equal
jump	fair
kind	follow
like	hand
open	know
pack	learn
play	obey
ride	point
talk	see
teach	thought
walk	try



Common Prefixes

Prefix	Definition	Examples
anti-	against	antibiotic, anticlimax
auto-	self	autograph, autobiography
bi-	two	bicycle, binocular
de-	opposite	devalue, dehumidify
dis-	not, opposite of	detach, deploy
em-, em-	cause to	empower, entangle
fore-	before, front of	forecast, foresee
im-, im-, il-, ir-	not	impossible, innocent
inter-	between, among	international, interject
micro-	small	microscope, microwave
mid-	middle	midway, middy
mis-	wrongly	misunderstand, misconduct
multi-	many, much	multicolor, multipurpose
non-	not	nonsense, nondescript
oct-	eight	octopus, octagon
over-	over, too much	overall, overworked
poly-	many, much	polygon, polymer
pre-	before	prevent, preview
quad-	four	quadrilateral, quadrant
re-	again	rebuild, recall
semi-	half, partly, not fully	semicircle, semiformal
sub-	under	submarine, subconscious
tele-	far, distant	telephone, television
trans-	across, change, through	transfer, transportation
super-	above, beyond	superhuman, superficial
trans-	across	transcontinental, translucent
tri-	three	tripod, triangle
un-,	not, opposite of	unable, unhappy
uni-	one	unicycle, unicorn
under-	under, too little	underground, undercurrent

Common Suffixes

Suffix	Part of Speech	Definition/Meaning	Examples
-able, -ible	adjective	is, can be	collectable, gullible
-age	noun	result of an action; collection	manage, acreage
-al, -ial	adjective	having characteristics of	circumstantial, seasonal
-ian	noun	one having a certain skill, relating/belonging to	American, electrician
-ite	verb	to make, have, become	differentiate, duplicate
-ed	verb/adjective	past tense verbs; adjectives	accomplished, accepted
-er	noun/adjective	made of	hydrogen, mistaken
-ence, -ance	noun	act; condition of	excellence, importance
-ent, -ant	noun	an action, condition; causing a specific action	student, contestant
-er, -or	noun	one who; action or process; more	teacher, boxer
-est	adjective	the most	coldest, largest
-ful	adjective	full of	beautiful, hateful
-ic	adjective	having characteristics of	historic, asymmetric
-ies, -ies	noun	plural, more than one	parties, babies
-ify	verb	to make, have, become	amplify, justify
-ing	verb	verb forms; present participles	helping, running
-ion, -tion, -sion	noun	act; process	confusion, inspection
-ish	adjective	like; similar	childish, bookish
-ist	noun	the person who is	loyalist, nutritionist
-ity, -ty	noun	state of	responsibility, speciality
-ive, -ative, -tive	adjective	adjective form of noun	active, comparative
-ize	verb	to make; to cause to become	criticize, apologize
-less	adjective	without	helpless, effortless
-logy, -ology	noun	science of; study of	biology, archeology
-ly	adverb	how something is	fluently, briefly
-ment	noun	state of being; act of	payment, employment
-ness	noun	state of; condition of	sickness, wilderness
-ous, -eous, -ous	adjective	having qualities of	courageous, gracious
-s, -es	noun	more than one	books, boxes
-ship	noun	the state of being something	friendship, leadership
-y	adjective	characterized by	cloudy, thirsty



Morphology in the Communication Strand



Conventions Progression by Grade Level												
Standard Introduction Level	Symbol											
The skill has not been introduced.												
The skill is introduced.	I											
The skill is mastered.	M											
The skill should be reviewed as students encounter and create more complex text.	R											

Skill	K	1	2	3	4	5	6	7	8	9	10	11	12
Begin each sentence with a capital letter and use ending punctuation.	I, M	R	R	R	R	R	R	R	R	R	R	R	R
Capitalize the days of the week, the months of the year, and the pronoun I.	I, M	R	R	R	R	R	R	R	R	R	R	R	R
Form regular plural nouns orally by adding /s/ or /es/.	I, M	R	R	R	R	R	R	R	R	R	R	R	R
Use interrogatives to ask questions.	I, M	R	R	R	R	R	R	R	R	R	R	R	R
Capitalize proper nouns.	I	M	R	R	R	R	R	R	R	R	R	R	R
Form and use simple verb tenses for regular verbs by adding the affix -ed.	I	M	R	R	R	R	R	R	R	R	R	R	R
Form plurals -y to -ies.	-	I	M	R	R	R	R	R	R	R	R	R	R
Form and use complete simple sentences.	I	M	R	R	R	R	R	R	R	R	R	R	R
Use possessives.	I	M	R	R	R	R	R	R	R	R	R	R	R
Use subject-verb agreement in simple sentences.	I	M	R	R	R	R	R	R	R	R	R	R	R
Conjugate regular and irregular verb tenses.	-	I	I	M	R	R	R	R	R	R	R	R	R
Form and use regular and frequently occurring irregular plural nouns.	-	I	I	M	R	R	R	R	R	R	R	R	R
Form and use the past tense of frequently occurring irregular verbs.	-	I	I	M	R	R	R	R	R	R	R	R	R
Use apostrophes to form contractions.	-	I	M	R	R	R	R	R	R	R	R	R	R
Use interjections.	-	I	M	R	R	R	R	R	R	R	R	R	R
Appropriately use pronouns.	-	I	M	R	R	R	R	R	R	R	R	R	R
Use commas in a series.	-	I	M	R	R	R	R	R	R	R	R	R	R
Use plural possessives.	-	I	M	R	R	R	R	R	R	R	R	R	R
Maintain consistent verb tense across paragraphs.	-	-	I	M	R	R	R	R	R	R	R	R	R
Form and use irregular plural nouns.	-	-	I	M	R	R	R	R	R	R	R	R	R
Form and use the progressive and perfect verb tenses.	-	-	I	M	R	R	R	R	R	R	R	R	R
Use simple modifiers.	-	-	I	M	R	R	R	R	R	R	R	R	R
Use prepositions and prepositional phrases.	-	-	I	M	R	R	R	R	R	R	R	R	R
Form and use compound sentences.	-	-	I	M	R	R	R	R	R	R	R	R	R
Use quotation marks with dialogue and direct quotations.	-	-	I	M	R	R	R	R	R	R	R	R	R
Use commas to indicate direct address.	-	-	I	M	R	R	R	R	R	R	R	R	R
Use subject-verb agreement with intervening clauses and phrases.	-	-	-	I	M	R	R	R	R	R	R	R	R
Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.	-	-	I	I	M	R	R	R	R	R	R	R	R

Skill	K	1	2	3	4	5	6	7	8	9	10	11	12
Use conjunctions.	-	-	-	I	M	R	R	R	R	R	R	R	R
Use principal modals to indicate the mood of a verb.	-	-	-	I	I	M	R	R	R	R	R	R	R
Use appositives, main clauses, and subordinate clauses.	-	-	-	I	I	M	R	R	R	R	R	R	R
Recognize and correct inappropriate shifts in tense and number.	-	-	-	-	I	M	R	R	R	R	R	R	R
Use conjunctions correctly to join words and phrases in a sentence.	-	-	-	-	I	M	R	R	R	R	R	R	R
Use verbals including gerunds, infinitives, and participial phrases.	-	-	-	-	I	I	M	R	R	R	R	R	R
Use comparative and superlative forms of adjectives.	-	-	-	-	I	M	R	R	R	R	R	R	R
Use pronouns correctly with regard to case, number, and person, correcting for vague pronoun reference.	-	-	-	-	I	I	M	R	R	R	R	R	R
Appropriately use colons.	-	-	-	-	-	I	M	R	R	R	R	R	R
Appropriately use ellipses.	-	-	-	-	-	I	M	R	R	R	R	R	R
Appropriately use hyphens.	-	-	-	-	-	I	M	R	R	R	R	R	R
Vary sentence structure.	-	-	-	-	-	I	M	R	R	R	R	R	R
Appropriately use passive and active voice.	-	-	-	-	-	-	I	M	R	R	R	R	R
Use semicolons to form sentences.	-	-	-	-	-	-	I	M	R	R	R	R	R
Use verbs with attention to voice and mood.	-	-	-	-	-	-	I	M	R	R	R	R	R
Add variety to writing or presentations by using parallel structure and various types of phrases and clauses.	-	-	-	-	-	-	I	I	I	M	R	R	R
Use knowledge of usage rules to create flow in writing and presenting.	-	-	-	-	-	-	-	-	I	I	M	R	R

B.E.S.T. ELA Standards pages 196-197

Dig into the *Conventions Progression by Grade Level* chart. Which skills require morphology instruction?



Morphology in the Foundations Strand



Dig into the *Progression of Foundations Benchmarks* chart. Which benchmarks require morphology instruction?

Phonics and Word Analysis	ELA.K.F.1.3	Use knowledge of grade-appropriate phonics and word-analysis skills to decode words accurately. a. Demonstrate knowledge of the most frequent sound for each consonant. b. Demonstrate knowledge of the short and long sounds for the five major vowels. c. Decode consonant-vowel-consonant (CVC) words. d. Encode consonant-vowel-consonant (CVC) words.
	ELA.1.F.1.3	Use knowledge of grade-appropriate phonics and word-analysis skills to decode words accurately. a. Decode words using knowledge of spelling-sound correspondences for common consonant digraphs, trigraphs, and blends. b. Decode simple words with r-controlled vowels. c. Decode and encode regularly spelled one-syllable words. d. Decode words with inflectional endings. e. Decode two-syllable words with regular patterns by breaking the words into syllables. f. Decode words that use final -e and vowel teams to make long-vowel sound.
Phonics and Word Analysis	ELA.2.F.1.3	Use knowledge of grade-appropriate phonics and word-analysis skills to decode words. a. Decode words with variable vowel teams (e.g., oo, ea, ou) and vowel diphthongs (e.g., oi, oy, ow). b. Decode regularly spelled two-syllable words with long and short vowels. c. Decode words with open (e.g., hi, baby, moment) and closed (e.g., bag, sunshine, chop) syllables and consonant -le (e.g., purple, circle, stumble). d. Decode words with common prefixes and suffixes. e. Decode words with silent letter combinations (e.g., knight, comb, island, ghost).
	ELA.3.F.1.3	Use knowledge of grade-level phonics and word-analysis skills to decode words. a. Decode words with common Greek and Latin roots and affixes. (See 3.V.1.2) b. Decode words with common derivational suffixes and describe how they turn words into different parts of speech (e.g., -ful, -less, -est). c. Decode multisyllabic words.
	ELA.4.F.1.3	Use knowledge of grade-level phonics and word-analysis skills to decode words. a. Apply knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read and write unfamiliar single-syllable and multisyllabic words in and out of context.
	ELA.5.F.1.3	Use knowledge of grade-appropriate phonics and word-analysis skills to decode words. a. Apply knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read and write unfamiliar single-syllable and multisyllabic words in and out of context.






Explicit

Systematic

Integrated

Marks the Spot! Best Practices for Teaching Morphology

-  Examine the progression of morphology from kindergarten to grade 5 in the Foundations, Communication and Vocabulary strands of the B.E.S.T. ELA Standards.
-  Identify resources in the appendices of the B.E.S.T. ELA Standards related to morphology instruction.
-  Curate 3 evidence-based activities aligned to the progression of the morphology benchmarks and **instructional best practices**.



Systematic

Integrated

Explicit Instruction

- Start with basic concepts.
- Provide explicit examples.
- Use visual aids.
- Engage in word analysis.
- Explore word families.
- Create interactive practice opportunities.
 - ✓ Read-alouds with analysis
 - ✓ Word walls
 - ✓ Word analysis exercises

Explicit

Systematic Instruction



- Base vs. Root Words
- Common Compound Words
- Morphemes vs. Syllables
 - Free vs. bound morphemes
- Affixes
 - Inflectional endings
 - Derivational endings
 - Prefixes
 - Suffixes
- Greek & Latin Root Words

Integrated

Systematic

Explicit

Integrated Instruction

- Start whole group or small group lessons with a short morphology warm-up activity.
- Include a Word Study center with engaging activities in center rotations during your reading block.*
- Model the use of morphology to decode and determine the meaning of unfamiliar words during read-alouds.
- Create a morphology bulletin board to weekly showcase a new affix, word family (base or affix) or root word.
- Include words from past and recent Word Studies on weekly spelling tests.



Explicit

Systematic

Integrated



Marks the Spot!

Evidence-Based Strategies for Teaching Morphology



Explicit

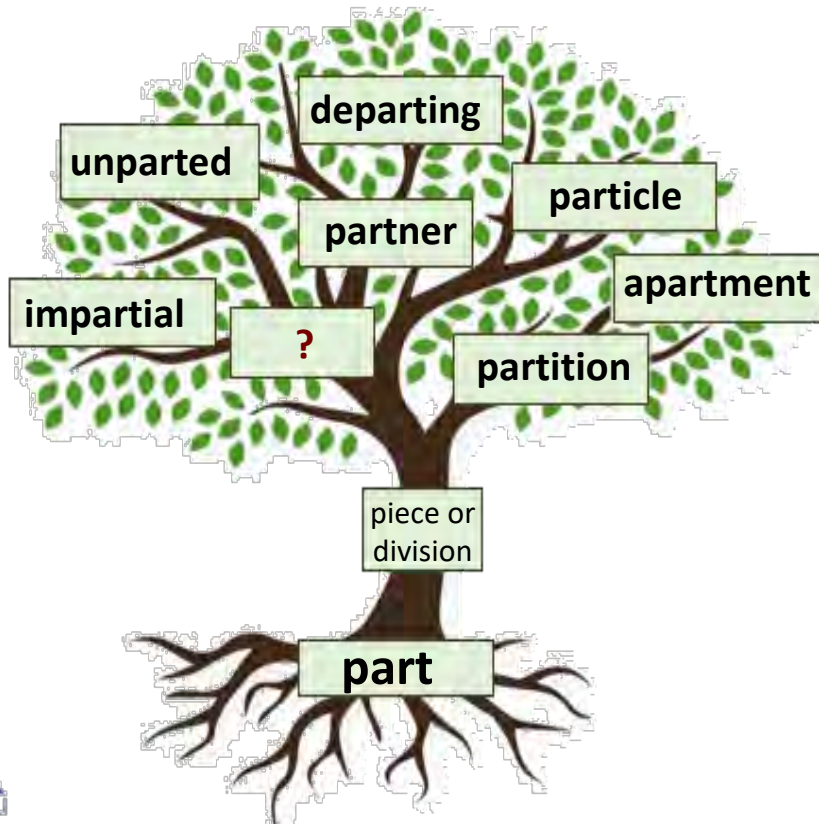
Systematic

Integrated

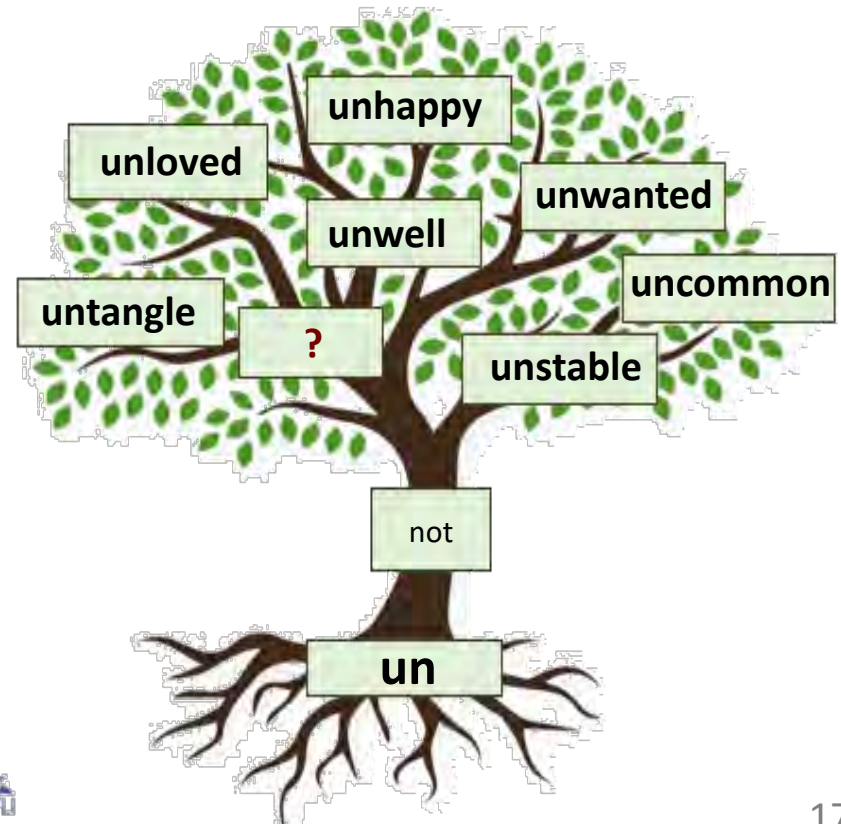
- ✘ Examine the progression of morphology from kindergarten to grade 5 in the Foundations, Communication and Vocabulary strands of the B.E.S.T. ELA Standards.
- ✘ Identify resources in the appendices of the B.E.S.T. ELA Standards related to morphology instruction.
- ✘ **Curate 3 evidence-based activities aligned to the progression of the morphology benchmarks and instructional best practices.**

Morpheme Trees

Base or Root Word Tree



Affix Tree



Word Families and Connected Text

part

departing
departed
departs
impartial
partial
partner
partners
partnering
particle
particles
apartment
apartments
partition
partitioned
partitioning

Treasure Hunt

One bright morning, in a dusty box in the attic, Lily found an old map that belonged to her grandpa, who had **departed** a long time ago. She asked her friend Pete to be her **partner** on a quest to follow where the map would lead them, a spot where a treasure might be buried. **Particles** of sand scratched the soles of their feet and **partitioned** tree branches allowed beams of sunlight through, forcing them to squint, but the hope of discovering a long-forgotten treasure was much more exciting than the **partially** completed puzzle awaiting them back at Pete's **apartment**.





Digging Into A Mentor Text – PQRST


7 Being at Sea

For myself, my duty is to report all that is said, but I am not obliged to believe it all alike—a remark which may be understood to apply to my whole History.
—Herodotus (ca. 484–425 B.C.E.), Greek historian, *The History of Herodotus*

To remain ignorant of things that happened before you were born is to remain a child. What is a human life worth unless it is incorporated into the lives of one's ancestors and set in an historical context?
—Cicero (106–43 B.C.E.), Roman leader whose real name was Marcus Tullius, *The Orator*

History, in every country, is so taught as to magnify that country; children learn to believe that their own country has always been in the right and almost always victorious, that it has produced almost all the great men, and that it is in all respects superior to all other countries.
—Bertrand Russell (1872–1970), English philosopher

Herodotus (hi-ROD-uh-tuhs), who lived in the fifth century B.C.E., is thought to be the world's first real historian; the first to collect information carefully and to organize it into a compelling narrative. (He was a great writer; read him, and you'll be carried away.) You could call Herodotus scientific in his approach to knowledge of the past, which made him wary of big talkers and fanciful tales. Like the Greek natural philosophers (those who dealt with the world of nature), he was looking for verification (proof) and truth. So when he heard that Hanno, a Phoenician sea captain, claimed to have **circumnavigated** the whole continent of Africa in a voyage that took three years, well, he was skeptical. He knew a tall tale when he heard one. When Hanno reported that, far below the equator, the noonday Sun is in the northern half of the sky, that seemed ridiculous. The Greeks knew the skies well, and no one had ever seen the Sun anywhere but in the south.



This statue fragment from Alexandria is thought to depict Herodotus, the world's first real historian.

- 🚩 **P (Prefix):** find the prefix and identify its meaning
- 🚩 **QR (Queen Root):** find the root (which is the queen of the word) and identify its meaning
- 🚩 **S (Suffix):** find the suffix and identify its meaning
- 🚩 **T (Total):** put the meanings of the units together to gain the word's meaning

“So when he heard that Hanno, a Phoenician sea captain, claimed to have **[traveled around all sides of]** the whole continent of Africa in a voyage that took three years, well, he was skeptical.”

Digging Into A Mentor Text – PQRST – Your Turn

Read the second page of this text. Which word(s) can you identify that would provide practice using this strategy?

Write out the word sum on your handout and share it with a partner.

- 🚩 **P (Prefix)**: find the prefix and identify its meaning
- 🚩 **QR (Queen Root)**: find the root (which is the queen of the word) and identify its meaning
- 🚩 **S (Suffix)**: find the suffix and identify its meaning
- 🚩 **T (Total)**: put the meanings of the units together to gain the word's meaning

Being at Sea 59

Still, Herodotus reported what he had been told, making it clear that he doubted the whole thing.

Today we know that the Earth's skies are not the same in the Southern Hemisphere as they are north of the equator. Phoenician mariners must have reached southern Africa; the story Hanno told was too wild to make up.

While the Babylonians and Egyptians were mostly farmers and herders, people of land and river, the Phoenicians and Greeks were more independent breeds: they were people of the sea. Many were mariners or merchants or both. In order to do their jobs well, they had to study the heavens. The stars held practical importance for seagoers; they couldn't leave that knowledge to others.

The Phoenicians lived in what is now Lebanon, at the eastern end of the Mediterranean, and also at a satellite city, Carthage, in North Africa. They are said to be the first who went boldly into the open sea (although their greatest contribution to the world may be the alphabet, an idea that no one else had come up with). By 500 B.C.E., when Hanno set out, the Phoenicians

CIRCUMNAVIGATE means "to sail all the way around" something. Since *circum-* is Latin for "around," a **CIRCUMFERENCE** is the distance around the perimeter of a circle. If you draw a square (or any other figure) around the circumference, you are **CIRCUMSCRIBING** the circle. A **MARINER** is a seafarer, from the Latin root *mare*, which means "sea." Galileo, a Renaissance scientist (1564–1642), spotted big dark blotches on the Moon, mistook them for seas, and called them **MARIA** (the plural of *mare*). We now know these "seas" are bone-dry plains, but no one has bothered to change the name.



Unearthed Session Treasures

- ✘ Examined the progression of morphology from kindergarten to grade 5 in the Foundations, Communication and Vocabulary strands of the B.E.S.T. ELA Standards.
- ✘ Identified resources in the appendices of the B.E.S.T. ELA Standards related to morphology instruction.
- ✘ Curated 3 evidence-based activities aligned to the progression of the morphology benchmarks and instructional best practices.

Reflect on everything you've learned today. What is one treasure you will take away? How will you use it?

Discovering the Hidden Treasure of Morphology



We value your feedback!

Please complete
the **evaluation** for
this session in the
Whova App.

1. Open the Whova App.
2. Open the 'Agenda' and click on the session you just attended.
3. Click on 'Session feedback' or 'Rate session' and complete the five-question evaluation.



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