



Morphology and Etymology Instruction

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Learner Objectives for the Day

- Examine how etymology instruction can improve decoding and encoding.
- Analyze how morphology instruction supports decoding and encoding.



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Components of Word Learning



Etymology



The study of the origins of words and the way in which their meanings have changed throughout history

Morphology



The study of the structure of words in language

Morphemes: the smallest units of meaning in language



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Scarborough's Rope, 2001

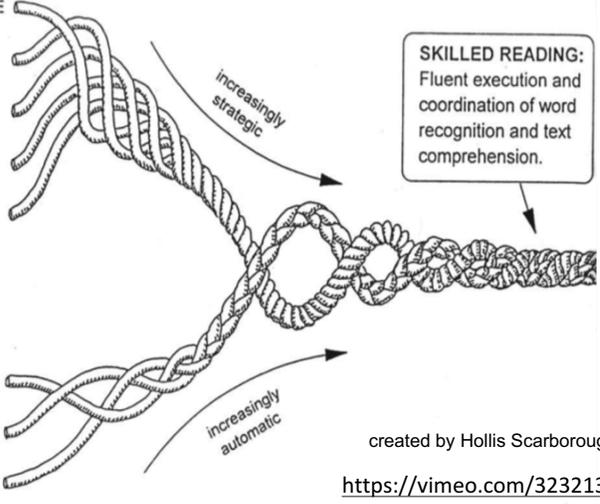


LANGUAGE COMPREHENSION

- BACKGROUND KNOWLEDGE (facts, concepts, etc.)
- VOCABULARY (breadth, precision, links, etc.)
- LANGUAGE STRUCTURES (syntax, semantics, etc.)
- VERBAL REASONING (inference, metaphor, etc.)
- LITERACY KNOWLEDGE (print concepts, genres, etc.)

WORD RECOGNITION

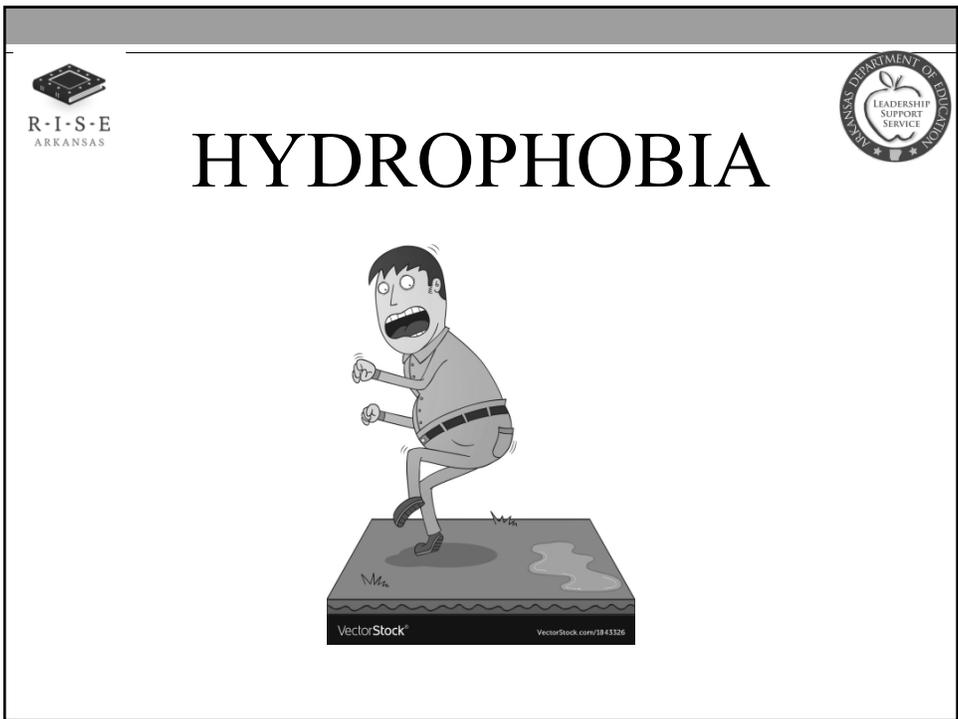
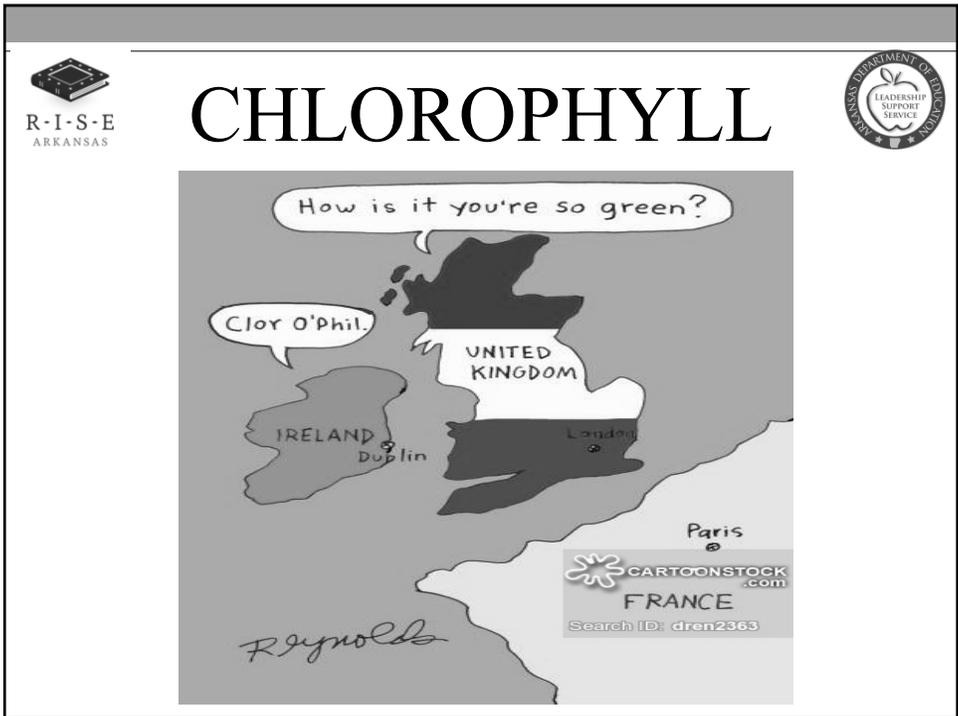
- PHONOLOGICAL AWARENESS (syllables, phonemes, etc.)
- DECODING (alphabetic principle, spelling-sound correspondences)
- SIGHT RECOGNITION (of familiar words)



SKILLED READING:
Fluent execution and coordination of word recognition and text comprehension.

created by Hollis Scarborough

<https://vimeo.com/32321310>

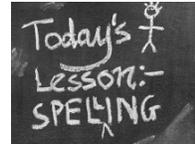




Facts About English Predictability



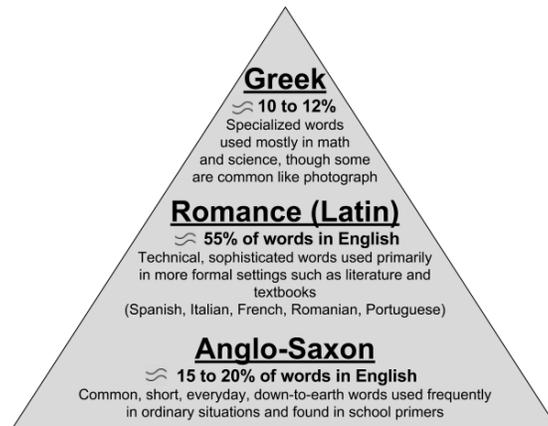
- 50% of English words are spelled accurately (no errors) by sound-symbol correspondence rule alone.
- 36% more are spelled with only one error using only phoneme/grapheme correspondence rules.
- 10% more are spelled accurately if word meaning, origin, and morphology are considered.
- Fewer than 4% are true oddities.



For further explanation see Moats, L. C. (2010). *Speech to print: language essentials for teachers*. Baltimore: Brookes. (page 110)



Origins of Morphemes: *Layers of Language*



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



The Anglo-Saxon Influence



How can you spot an Anglo-Saxon word?

- Common, everyday, down-to-earth words
- **Often** one syllable words, but can be compounded and affixed
- Consonant letters are used in a fairly regular manner
- Vowel pronunciations may have changed, but spellings have remained in original forms: *said, though, blood, eye, laugh*

Anglo-Saxon Words: mother, father, friend, daughter, eat, draw, hand, water, sorrow, think



The Latin Influence



How can you spot a Latin word?

- Closed, VCe, R-Controlled syllables: *rupt, script, scribe, form, cred, pend.*
- The letters -ct at the end a syllable: dict, duct, tract, struct, ject.
- Schwa sound is common
- Vowel digraphs in suffixes:
 - -ion (Usually preceded by t or s)
 - -ian (Usually preceded by c)
 - -ient, -ial (Usually preceded by t)



Latin Words: terrestrial, stellar, aquarium, equine, pacify, mandible, extremity, locomotion, designate, hostility

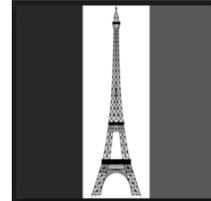


The French Influence: A Subset of Latin



Can you spot a French word?

- **ou** often used like in courage and couple
- **eau** often says /ō/ like in plateau
- **ch** says /sh/ like in machine and mustache
- **-que** says /k/ like in antique
- Soft **c** and **g** when followed by **e, i, y**
- Special endings such as **-ine, -ette, -elle**



French Words: amuse, cousin, cuisine, country, peace, triage, rouge, baguette, novice, justice, soup, coupon, nouvelle, boutique, champagne



The Greek Influence



Can you spot a Greek word?

- Syllables: Closed, open, unstable vowel digraphs
- y for /ī/ as in symphony or /ī/ in typhoid
- ch for /k/ as in orchestra
- ps for /s/ as in psychology
- ph for /f/ as in phonology
- mn for /n/ as in mnemonic
- rh for /r/ as in rhododendron
- pt for /t/ as in pterodactyl



Greek words: autobiography, kaleidoscope, photosynthesis, theater



Root vs. Combining Form



Latin roots, like **tract**, need to be combined with a prefix and/or a suffix to create a word. **tract**

Greek **combining forms**, like **graph** and **graph**, can be combined with each other, but they can also have prefixes or suffixes. **graph**,



Classroom Connection: Generating Words



The image shows a student's handwritten work on a piece of paper. At the top, the root 'tract' is written in four forms: 'Tracto', 'Tractare' (with 'infinitive' written below it), 'Tractavi', and 'Tractatus' (with 'supine' written below it). Below this, several words are defined in boxes:

- retract:** to draw back
- [tract]:** draw, pull, drag about, handle, manage, discuss
- NOT TWELVE BASES** (written vertically)
- subtract:** with things take away
- distract:** draw apart from doing
- treat:** bargain, deal from Latin 'tractare' (Related word)
- tractable:** easily managed or controlled
- extract:** draw out
- attract:** draw, pull in
- abstract:** to drag away, divert
- Contract:** agreement, draw together

At the bottom, it says 'By: Martha & Mayah'.



Stop and Think



How can studying etymology improve decoding and encoding?



Chunking Systems



Students need strategies for breaking down words. Take the word **orthographic**.

- o-r-t-h-o-g-r-a-p-h-i-c
 - 12 **letters**
- or-th-o-g-r-a-ph-i-c
 - 9 **graphemes**
- or-tho-graph-ic
 - 4 **syllables**
- ortho-graph-ic
 - 3 **morphemes**



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What Is a Morpheme?



A morpheme is the smallest unit of meaning.

cat = 1 morpheme

cats = 2 morphemes

teacher = 2 morphemes

finger = 1 morpheme

interruption = 3 morphemes

photographic = 3 morphemes



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How Is a Morpheme Identified?



Three 'Tests' of Morpheme Identity:

1. **Can meaningful linguistic units be identified and defined?** (*The letters "re" mean again in reconsider.*)
2. **Can other words be recalled in which that morpheme seems to be used?** (*Replant, recycle, and reapply all contain the same morpheme.*)
3. **What is the sense of the whole word in the context in which it is used?** (*Even though moth is a word, it is not a morpheme in mother.*)

Moats, L. C. (2010). *Speech to print: language essentials for teachers*.
Baltimore: Brookes. (page 136)



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Test Your Morphological Awareness



Identify the morphemes in these words that you will hear.

- **asking = ask + ing**
- **asked = ask + ed**
- **reflector = re + flect + or**
- **congregate = con + greg + ate**
- **chlorophyll = chlor(o) + phyll**



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Morphemes Matter



When adolescent students learn frequently used morphemes, this knowledge improves not only their spelling but also provides strategies for decoding and for building vocabulary.



National Institute for Literacy. (2007). Adapted from What Content-Area Teachers Should Know About Adolescent Literacy. Retrieved from http://www.nifl.gov/nifl/publications/adolescent_literacy07.pdf



Systematic, Explicit Routine for Morphology Instruction



- Introduce new morpheme.
- Practice reading, spelling, and defining words with the new morpheme.
- Incorporate opportunities to practice building words with the new morpheme.
- Practice reading and writing new words in context.



Classroom Connection: Morpheme Cards



<div style="background-color: yellow; padding: 10px; font-size: 24px; font-weight: bold; margin: 0 auto;">dis -</div> <p style="text-align: center; margin-top: 5px;"><i>Front of Card</i></p>	<p><u>Steps in Using Card:</u></p> <ol style="list-style-type: none"> 1. Name the letters. Prefix: d i s 2. How is it read? /dis/ 3. What does it mean? not 4. Give an example. disable
<p style="margin: 0;">Meaning: not Keyword: disable</p> <p style="text-align: center; margin-top: 5px;"><i>Back of Card</i></p>	

H15






Types of Morphemes

Free can stand alone	Bound cannot stand alone
 <ul style="list-style-type: none"> ● base words 	 <ul style="list-style-type: none"> ● prefixes ● suffixes ● many roots




Free Morphemes

Base Words

- cat
- teach
- swim
- hope



- All bases are free.
- Base words can be expanded into compound words. (**swimsuit**)
- A base word can refer to a complete English word that contains a root. (**civil**)



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Bound Morphemes



Latin roots, like *rupt*, need to be combined with a prefix and/or a suffix to create a word.

interruption |
projector



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Bound Morphemes



- **prefixes** (beginning of base or root)
- **suffixes** (end of base or root)
- most **Latin roots**

1. Bound morphemes cannot stand alone.
2. They are expanded with affixes (prefixes and suffixes).
3. They work as meaningful parts but only in combination with other morphemes.



Affixes



prefix	suffix
un- (26%) re- (14%) in- (11%) dis- (7%)	-s, -es (31%) -ed (20%) -ing (14%) -ly (7%) -er, -or (4%) -ion (4%)
H14 58%	80%



Types of Suffixes



Inflectional	Derivational
CANNOT change the part of speech.	CAN change the part of speech.
<ul style="list-style-type: none"> • Does change verb tense <ul style="list-style-type: none"> • jump to jumped • Creates plurals <ul style="list-style-type: none"> • book to books • Creates comparative <ul style="list-style-type: none"> • pretty to prettier 	<ul style="list-style-type: none"> • hope (noun or verb) • hopeless (adjective) • hopelessly (adverb)




Type of Suffix

Base	Suffix	Affixed Word	Type of Suffix
magnet	ic	magnetic	Inflectional Derivational
vowel	s	vowels	Inflectional Derivational
teach	er	teacher	Inflectional Derivational




Free and Bound Morphemes

Greek

Greek words that can be combined with other Greek words are called **Greek combining forms**.

Greek **combining forms**, like **photo** and **graph**, can be combined with each other.

Latin

Some Latin roots have evolved to become free morphemes.

Some Latin roots, like **script** and **fort**, can stand alone.



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Decoding Strategy: Pronunciation



- **Beginning:** Circle any familiar prefixes, such as *re*, *un*, or *mis*.
- **Ending:** Box any familiar suffixes, such as *ing*, *ed*, or *ful*.
- **Vowel:** Locate and put a line under each vowel grapheme in the word; remember that vowel teams represent one phoneme. Underline the final silent e twice.
- **Syllables:** Identify the syllable type to decode the vowel sound. Scoop under each syllable and blend from left to right.
- **Adjust:** Pronounce the word. Flex the accent and adjust the vowels to a schwa if needed.
- **Clarify:** Check the context to check for meaning.



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Classroom Connection: Decoding Derivatives



-Look for affixes in the word:

misunderstanding

-Look for the root or base: stand

-There is a closed syllable, so the vowel is short

stănd

-Now blend the morphemes to pronounce the word:

misunderstanding



How Words Are Expanded



Compounding

The combination of free morphemes

- Anglo-Saxon compounds
 - light + house = lighthouse
- Greek combining forms
 - photo + graph = photograph



Affixation

The expansion of words by adding affixes to free or bound morphemes

- Anglo-Saxon morphemes
 - fore + head = forehead
- Latin morphemes
 - pro + ject + or = projector
- Greek morphemes
 - photo + graph + ic = photographic



Assimilated Prefixes



Many prefixes change their forms to match the beginning sound of the root to which they are added. These **assimilated prefixes** are known as chameleons.

The prefix sub- meaning *under* or *from below*, as in subway, changes to sup- in support.

Moats, L. C. (2010). *Speech to print: language essentials for teachers*. Baltimore: Brookes. (page 125)

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Consonant vs. Vowel Suffixes

Consonant Suffixes	Vowel Suffixes
<p>Begin with a consonant</p> <ul style="list-style-type: none"> • -ful • -less • -ment • -s 	<p>Begin with a vowel</p> <ul style="list-style-type: none"> • -ing • -ed • -ent • -ate




Try It!

help + **ed** = **helped**

A **vowel suffix** was added, but the base ended with two consonants, so no spelling change was required.

free + **ing** = **freeing**

A **vowel suffix** was added, but a spelling change was not required because the base ended with a vowel digraph.



Try It!



hope + **less** = **hopeless**

A **consonant suffix** was added, so no spelling change was required.

hope + **ing** = **hoping**

A **vowel suffix** was added, so a spelling change was required to prevent a vowel team from appearing and changing the pronunciation.



Word Sort Activity



H21, H22

<https://www.youtube.com/watch?v=SMRYLV TUswU>



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Stop and Think



How can morphology instruction help students decode?





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Classroom Connection: Word Attack Strategy (meaning)



1. Look for prefixes and suffixes and circle them.
2. Look for roots/bases and underline them.
3. Establish the meaning of each morpheme. 
4. Try reading the meaning of each morpheme from **right to left**. 
5. Check the meaning of the word against the context of the text. 



Practice the Word Attack Strategy



The cheetah's excellent eyesight helps it find prey during the day. The cheetah is hard to see because its spotted coat blends with the tall, dry grass of the plains. Suddenly, the cheetah makes a lightning dash. It knocks its prey to the ground and then bites its throat. Once found throughout Asia and Africa, cheetahs today are racing toward extinction. Loss of habitat and declining numbers of their prey combine to threaten the future of these cats.



Morphology and Etymology in the Content Areas



Since morphological awareness increases processing efficiency and vocabulary knowledge, more cognitive resources are available to process the text as a whole. Additionally, as a student gets better at identifying words and their meanings, reading comprehension improves because he or she has more information to make inferences and generate an accurate map of the text (Goodwin & Ahn, 2010).

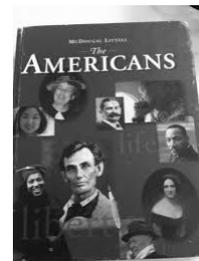
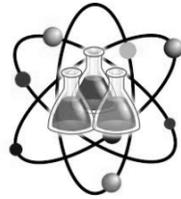


Content Area Vocabulary



Of course, different disciplines use different words; therefore, the frequency or value of prefixes, suffixes, and (especially) combining forms differs by discipline.

$$\begin{array}{l}
 2 > -3 \quad + - \\
 0.999\dots = 1 \quad \infty \quad \times \div \\
 \pi \approx 3.14 \quad 5^2 \\
 \sqrt{2} \quad 1 + 2 \cdot 3 \quad (1 - 2) + 3 \\
 5^{(2+2)} \quad 101_2 = 5_{10}
 \end{array}$$



H25



Morphology and Comprehension



Students who understand how words are formed by combining prefixes, suffixes, and roots tend to have larger vocabularies and better reading comprehension than peers without such knowledge and skills.

Stowe, Mary. School of Education Training & Technical Assistance Center. (n.d.). Retrieved January 26, 2018, from <http://education.wm.edu/centers/ttac/resources/articles/teachtechnique/teachingmorphology/index.php>



Stop and Think

How can comprehensive word study help to improve decoding and encoding?



Learner Objectives for the Day

- Examine how etymology instruction can improve decoding and encoding.
- Analyze how morphology instruction supports decoding and encoding.



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