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## Guiding Question

In what ways can word study help increase academic skills?

## Today's Agenda

- Why teach morphology
- Overview of the layers of language
- Early morphology concepts and practice activities
- How and when to teach - and to whom
- Morphology is the study of the structure of words as it relates to meaning.
- It is also known as structural analysis.
- Morphology may also include the study of word history or etymology.

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## Why teach Morphology <br> 

Vocabulary development

- When students come across an unfamiliar word in text, they can break it up and use their knowledge of the root, prefixes, and suffixes to infer the meaning of the whole word.

Reading accuracy

- Morphological awareness facilitates oral reading accuracy because it helps students with pronunciation. For example, if they can identify the prefix mis and the base word hear, they will more likely read mishear correctly, instead of keeping the sh together and reading it as $/ \mathrm{sh} /$.

Spelling

- Knowledge of morphemes helps students spell more accurately. For example, the words best and dressed rhyme, but awareness of the past tense suffix helps us know that dressed needs the morpheme -ed to spell the final sound /t/.


## Comprehension

- Since morphological awareness increases vocabulary and decoding efficiency, more cognitive resources can be used to process the text as a whole. Further, as vocabulary and word knowledge increase, comprehension increases.


## Consider syllabication vs. morpheme work

- syllable division
- gob/lin, nap/kin, in/vite, for/get
- At/lan/tic
- res/ted
- morpheme work
- rested
- distrust
- twisting

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## Who Benefits?

- Typically developing learners
- HiSET learners
- Students with language and literacy challenges
- English language learners



## Basic Terms

## Phoneme: smallest unit of sound

Morpheme: smallest unit of meaning in a word
e.g. biographers: 4 morphemes: bio-graph-er-s

Types of Morphemes:
root or combining form: inspector, micro/scope
base word: unlikely
prefix: re-, un-, dis-
suffix: -able, -ed, -ly $\}$ affixes

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## Base word vs. Root word

- A base word is of Anglo-Saxon origin
- It can stand alone
- Also known as a free morpheme.
ook
read
make
bend
bending, bendable
- A root word is of Latin origin
- It is unlikely to stand alone
- Also known as a bound morpheme.
spect
aud
sens
cred
incredible, creditor


## 3 Layers of Language

- Words of Anglo-Saxon origin ~25\%
- Common, short, everyday word used frequently in ordinary situations
- Majority are phonetic for reading (farm, boat, tree)
- Make up the majority of Dolch and Fry lists
- Non-phonetic words are taught as irregular words (said, enough, was)
- Words of Latin origin $>55 \%$
- Sophisticated, academic words (inspection)
- Latin roots are unlikely to stand alone
- Can have prefix + root + suffix(es)
- The Latin root usually receives the stress: a - tract' - ive
- Words of Greek origin ~11\%
- Specialized words used mostly in sciences, medicine, technology
- Morphemes are called combining forms since they do not predictably function as roots and affixes (microscope)

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# "Silent letter patterns such as <br> kn, wr, ough, ould, and igh are remnants of Anglo-Saxon, in which those 'silent' letters were sounded." 


-McCardle \& Chhabra, 2004

The Structure of English - 3 Layers of Language

| HISTORIC STRAND | LETTER-SOUND CORRESPONDENCES |  | SYLLABLE PATTERNS |  | MORPHEME PATTERNS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANGLO-SAXON AND NORSE | Short vowels | $\begin{aligned} & \text { sat } \\ & \text { let } \end{aligned}$ | Closed | bat hundred | Compound Words | thunderstorm toothbrush |
|  | Long vowels | cake <br> spider my | Open | me | Suffix | carted (ed) <br> softly (ly) |
| 100 AD- Angles and Saxons 700 AD- Vikings | Consonant Digraphs | this which | Vowel-consonant- <br> e | make invite | prefix | unlike |
|  | Vowel teams | feed boat | r-controlled | corn | Prefix/suffix | unlikely |
|  | Diphthongs | $\begin{array}{\|l\|l\|} \hline \begin{array}{l} \text { boy } \\ \text { saw } \end{array} \\ \hline \end{array}$ | Consonant-le | cradle |  |  |
|  | R-controlled | $\begin{aligned} & \text { her } \\ & \text { car } \end{aligned}$ | Vowel team | tree, toy |  |  |
|  | Silent letters | kn, wr |  |  |  |  |
| LATIN - FRENCH (ROMANCE) | $\begin{array}{\|l\|l\|} \hline \text {-tion } \\ \text {-sion } \\ \text {-cian } \\ \hline \end{array}$ | station session musician | Multi-syllabic with roots plus prefix and/or suffix |  | Roots plus prefix and/or suffix |  |
|  | $\begin{array}{\|l\|l\|} \hline \text {-tial } \\ \text {-cial } \\ \hline \end{array}$ | partial special <br> special | Prefix Root Su <br> inter- rupt <br> re- spect <br> ad- mit <br> intro- dict <br> pre- port | -sion <br> -tion <br> -cial <br> -ual <br> -or |  |  |
| 1066 - Normans | -tious | cautious |  |  |  |  |
|  | Schwa / $/$ / | competition |  |  |  |  |
|  | ch /sh/ | machine champagne |  |  |  |  |
|  | que /k/ | antique bouquet |  |  |  |  |
| GREEKS <br> 1485 - Renaissance | ch /k/ | chemist chorus | Combining forms  <br> auto- -graph <br> micro- -scope <br> photo- -meter <br> phon- -logy/-ology <br> psych-  |  | microscope chronometer phonology physiologist psychology architect symphony |  |
|  | ph | physics graph |  |  |  |  |  |
|  | y /i// /ī/ | gym cycle |  |  |  |  |  |
|  |  |  |  |  |  | (M. Henry) |

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Morphology Exercise
Directions: For each word, circle the origin of the word and then explain how you know.

| Word |  | Origin |
| :---: | :---: | :---: |
| invasion | Anglo-Saxon Latin-French Greek |  |
| archaeology | Anglo-Saxon Latin-French Greek |  |
| frostbite | Anglo-Saxon Latin-French Greek |  |
| inspection | Anglo-Saxon Latin-French Greek |  |
| contractor | Anglo-Saxon Latin-French Greek |  |
| fearless | Anglo-Saxon Latin-French Greek |  |
| chronometer | Anglo-Saxon Latin-French Greek |  |
| beneficial | Anglo-Saxon Latin-French Greek |  |
| flashlight | Anglo-Saxon Latin-French Greek |  |
| wrought | Anglo-Saxon Latin-French Greek |  |
| theology | Anglo-Saxon Latin-French Greek |  |
| malicious | Anglo-Saxon Latin-French Greek |  |



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## Common Prefixes for Initial Instruction

| un- | not, opposite of |
| :--- | :--- |
| re- | back, again |
| mis- | badly, wrongly |
| dis- | not |
| in- | not |
| in- | in |
| de- | down, apart |
| pre- | before, ahead |
| ex- | out |
| con- | together, with |
| sub- | under |
| inter- | between |

## Morpheme cards



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prefix un-


Did you $\qquad$ your bag after your trip?

Do not forget to $\qquad$ the cord.

It is $\qquad$ to ride your bike in traffic.

If you $\qquad$ the gate, the pups will escape.
$\qquad$ Dan, I like math class.


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## Practice - Prefix Spin \& Win



## Virtual spinner wheelofnames.com



## Directions

- You will need the circle spinner and word cards. Print them on cardstock.
- You will need a plastic spinner (Amazon sells 4-inch plastic spinners) Cut out the circle and use an Exacto knife to cut a hole to click in your plastic spinner. It is best if you can laminate your spinner circle first, so that it will hold up well. Or use a virtual spinner.
- Cut out and divide the cards into 6 piles, face up.
- Take turns flicking the spinner and then taking and reading the words on top of the piles that have your target prefix. If you shuffle the cards up into random piles, this game will move more quickly.
- You can play 10-12 spins, or play until there are no more cards.
- The player with the most cards wins.



## Common Anglo-Saxon Suffixes

- -ing, -er, -ed
- helping, helper, helped
- -s, -es
- cats, wishes
- -ly, -less, -ness, -ful
- quickly, blameless, goodness, hopeful
- -en, -er, -est
- wooden, bigger, biggest
- -y
- muddy


## Morpheme cards: Suffixes





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| Early Latin Prefixes |  |  |
| :---: | :---: | :---: |
| PREFIX | KEY WORD | MEANING |
| sub- | submarine | under |
| con- | connect | with, together |
| in- | inactive | not |
|  | invade | in, into |
| ex- | extract | out |
| con- | connect | together, with |
| re- | retract | back, again |
| trans- | transport | across |
| inter- | interrupt | between, among |
| ob- | object | against |

## Prefixes

| prefix | key word | meaning |
| :---: | :---: | :---: |
| un | unhapay | not |
| sub | submarine | nde |
| re | redo | again, back |
| De | descend | dom, upart |
| Pre | predict | before ahead |
| Mis | Misspell | bady, wrondy |
| In | Incoirrect | not, in |
| Dis | Dislike | not |
| Fore | foretell | before cinead |
| ex | exif | out |
| Per | Permanent | Throughor |
| trans | transmit | across |
| Post | Postporie | after |
| Con/com | Concrete | 「o |
| inter | Intermediate | between |
| ad | omit | Iotsinem |
| Pro | Progrese | forwerd |
| $a b$ | absent | away from |
| $a$ | asleep | in. ins: ${ }^{\text {a }}$ ? |



## Common Latin Roots for Initial Instruction

| form | to shape |
| :--- | :--- |
| port | to carry |
| rupt | to break or burst |
| ject | to throw |
| tract | to pull |
| scrib, script | to write |
| spec, spect | to see, watch, observe |
| stru, struc, struct | to build |
| dic, dict | to say or tell |
| flect, flex | to bend or curve |
| mit, mis | to send |
| fer | to bend or yield |
| cred | to believe |

## Morpheme cards: Roots



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Factors to consider in selecting morphemes




Latin root: pend - to hang



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## Your Turn



- extract - $\qquad$
$\qquad$
- instruct - $\qquad$
$\qquad$
- reject -

Sample word list

| transport | deport | destruction |
| :--- | :--- | :--- |
| export | dictate | deduct |
| disrupt | interrupt | erupt |
| conduct | deportation | induction |
| report | obstruct | rupture |
| construct | diction | construction |
| predict | structure | predictable |

## Root Word Matrices



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## Boxing: mixed morphemes

| credible | crediting | abrupt | disruptive | eruptive |
| :---: | :---: | :---: | :---: | :---: |
| corrupt | rupture | incredible | corruption | rupturing |
| disrupt | eruptive | interrupt | credit | accredit |
| eruption | creditor | credulous | bankrupt | discredit |
| interrupting | disrupting | creditor | credentials | abruptly |



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## Morphology Riddles



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## Sentence Reading - Modified Cloze

Did the class $\qquad$ a survey of lunch preferences? conduct deduct

Does the U.S $\qquad$ cars to other countries?
import export

We will $\qquad$ appropriately with the visitors.
interact interrupt

Will the expenses $\qquad$ the city?
rupture bankrupt

The bank will issue us $\qquad$ to purchase the equipment.
credible credit

The decision about an extra day off is $\qquad$ -.

## Would You Rather Sentences

1. Would you rather have a ruptured eardrum or an eruptive pimple?
2. Would you rather be a person who is interrupting others all the time or someone who never gets uninterrupted sleep?
3. Would you rather be a porter for Beyonce or get a portable television for your kitchen?
4. Would you rather structure an essay or construct a tower with Legos?
5. Would you rather meeting an impending deadline alone or depend on the contributions of others?

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## Common Greek Combining Forms

COMBINING FORM
gram, graph
mono
bio
auto
chrono
hydra, hydro
hyper
logy
micro
phon
phos, phot
dem

KEY WORD
graphic
monopoly
biology
autograph
chronology
hydrant
hyperactive
biology
microscope
telephone photograph democracy

MEANING
to write, written
one
life
self
time
water
over
study of
small
sound
light people


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See how many words you can make:


| micro | scope | o/logy |
| :--- | :--- | :--- |
| graph | morph | gram |
| phon | photo | bio |
| therm | auto | chron |
| tele | meter | path |

## o/logy means the study of List some ologies that you know...



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- Arachibutyrophobia: Fear of peanut butter

| Anglo-Saxon | Latin/French | Greek |
| :--- | :--- | :--- |
| water | aquarium | hydrosphere |
| sun | solar | helium |
| star | stellar | astronomy |
| earth | revrain | geography |
| life |  | biology |

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How Many?

| Word | \# of Phonemes | \# of Morphemes |
| :--- | :--- | :--- |
| mismatched |  |  |
| icy |  |  |
| wishes |  |  |
| unselfish |  |  |
| extractor |  |  |
| me |  |  |

## Sample lesson plan

Objective: To introduce prefix dis- (not or opposite of)
Morpheme review: -s, -es, -ing, -ed, -y , -ly, un-, re-, pre-, in- (inland, inability), mis-

NEW: introduce dis- (not or opposite of); add to prefix list with key word (dislike), make morpheme cards

Words to read:
dislike, disrespect, disagree, disable, disappear, disassemble, disconnect, discontent Words to review:
misspell, mistreat, misjudge, preheat, predict, restart, reaction, retrain

## Sentences to read:

Did Jack disassemble the computer to fix the drive?
Did the convict distrust the verdict?
Do not disrespect the judge in this case.
It is unlikely that we can disable the switch.
Can Frank and Lester disagree and still be pals?
Will you disconnect the plug from the outlet?
Did Dad disinfect the drain with bleach?

| dislike | disown | disrespect | disagree |
| :---: | :---: | :---: | :---: |
| disable | disappear | disassemble | misspell |
| disconnect | mistreat | misjudge | predict |
| restart | retrain | preheat | reaction |

## What means drill:

Tell me:
3 prefixes that mean not or opposite of (un, in, dis)
the prefix that means wrongly or badly
the prefix that means before
the prefix that means back or again
the suffix that means happening now.

## Spelling dictation:

3 prefixes that mean not or opposite of (un, in, dis)
disorder, distrust, disable, dismantle, dislocate, reinvent, recount, unable
Did you disable the car so that it will not start?
Did the clerk file in a disorderly way?
Can you rewire this portion of the cable?

Read a passage or chapter
Exit ticket - tell me a word that has prefix dis

## Chameleon Prefixes (Assimilated Prefixes) con (together, with) connect, convene, convince

col + I: collect, collide, collusion, collate
cor + r: correct, corrupt, corrode, correspond
com + m: commit, commute, commune, comment
+b : combine, combustible, combat, combattant

+ p: compare, compute, compact, complaint


## Chameleon Prefixes

in (in, not) inland, inability

il + I: illegal, illegible, illustrate, illiterate
ir $+r$ : irregular, irritate, irrigate, irrational
im + m: immune, immortal, immoral

+ b: imbibe, imbalance, imbecile
+ p: impart, import, impress, improve


## Chameleon Prefixes

sub (under, from below) subway, submarine, subtract
suc + c: success, succeed, succulent
suf + f: suffer, suffuse, sufficient
sug + g: suggest, suggestive
sup + p: support, suppose, suppress


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