

Teaching Morphology to Improve Literacy



A Guide for Teachers

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What is morphological awareness?

A **morpheme** is the smallest unit of meaning. Some words have only one morpheme (e.g., *jump*, *maple*, *tiger*) while many others are made up of two or more morphemes.

For instance, the word *bananas* contains two morphemes:

1. “banana” → tells us about the fruit
2. the suffix “-s” → tells us about how many of that fruit

Therefore, adding prefixes and suffixes—both of which are examples of morphemes—can alter a word’s meaning (Hennessy & Apel, 2017). Together, prefixes and suffixes are known as **affixes**.

A **root word** is the most basic form of a word.

Affixes can be added to the root word to change its meaning. For example, *connect* is the root word of words such as *disconnect*, *connected*, and *connecting*.

Individuals who can consciously recognize, comprehend, and manipulate these small units of meaning are engaging in **morphological awareness** (Kirby & Bowers, 2012). In other words, morphological awareness is an understanding that prefixes and suffixes can be added or taken away to change the meaning of a word (Ebbers, 2017).

The following resources provide comprehensive lists of common English root words, prefixes, and suffixes, as well as their meanings and examples:

- ★ <http://www.prefixsuffix.com/rootchart.php>
- ★ <https://www.pburgsd.net/cms/lib04/NJ01001118/Centricity/Domain/174/List-of-English-Morphemes.pdf>
- ★ http://teacher.scholastic.com/reading/bestpractices/vocabulary/pdf/prefixes_suffixes.pdf



Why should I teach morphological awareness?

Morphological awareness provides a powerful tool for improving many areas of literacy:

Vocabulary comprehension: When a child comes across an unfamiliar word in a text, they can break it apart and use their knowledge of the root, prefixes, and suffixes to infer the meaning of the whole word (Apel & Henbest, 2016). For example, knowledge of the prefix “mis-” meaning “wrongly” can help the student figure out that “mishear” means “to hear incorrectly or wrongly”.

Reading aloud: Morphological awareness facilitates reading aloud because it helps students clarify pronunciation (Wolter & Green, 2013). For example, if they can identify the boundary between the prefix “mis-” and the root “hear”, it is more likely that they would correctly pronounce the /s/ and /h/ separately, rather than incorrectly as a combination like “sh” as in “ship”.

Spelling: Students cannot learn to spell words solely by sounding them out because a single letter in English can represent more than one sound. Knowledge of morphemes can make spelling of complex words or spelling exceptions easier for students to remember (Goodwin & Ahn, 2010). For example, even though the words *called* and *bald* rhyme, awareness of the past tense morpheme *-ed* gives an explanation for the different spellings.

Phonological awareness: Increasing the salience of written morphology could act as a scaffolding tool to build up awareness of speech sounds in struggling readers. One strategy is to link the sounds that make up the word (phonological structure) to its spelling and meaning representation (Bowers, Kirby, & Deacon, 2010). For example, a student must use both phonological and morphological awareness to process how the suffix *-ian* changes both the pronunciation of the letter “c” and meaning of the word *music* to *musician*.

Reading comprehension: 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).

Which students will benefit most?

Typically achieving students: Explicit teaching of morphological awareness will benefit all students in your class (Bowers et al., 2010). Morphological awareness enhances students' existing skills by providing them with an additional tool to use when they encounter a challenging word (Goodwin, Lipsky, & Ahn, 2012).



Students with language and literacy difficulties: Poor phonological awareness is a common characteristic of struggling readers (Bowers et al., 2010). Children with language difficulties may not have a strong morphological knowledge base and thus are less effective at applying this valuable strategy on their own during reading or writing (Wolter & Green, 2013). With repeated practice in the classroom, these students may become more comfortable independently applying this strategy, and can use this as a compensatory tool to help overcome their difficulties of reading words based on their sounds. Furthermore, breaking down an unfamiliar word into chunks that they understand makes decoding and accessing meaning easier. This leaves more mental resources available for the student to use for comprehension of the text as a whole (Nagy, Berninger Abbott, Vaughan, & Vermeulen, 2003).

English language learners: Pointing out cognates (similar units of meaning between the native language and English) can augment an English language learner's understanding of culturally decontextualized text (Goodwin et al., 2012). For instance, the word *bicyclette* in French is similar to its English equivalent *bicycle*. If you are familiar with both languages, you can point out the similarity between *bicycle* and *bicyclette*, and inquire as to whether they mean the same thing. Then, you can extend this to other French words beginning with the morpheme *bi-*, such as *bilingue* (bilingual), *biannuel* (biannual), and *bidirectionnel* (bidirectional). Using cognates to decipher unfamiliar prefixes, suffixes, and root words can strengthen reading comprehension and vocabulary for English language learners (Goodwin et al., 2012).

When should I start teaching morphological awareness?

By the age of ten, morphological awareness is a better predictor of decoding ability than is phonological awareness (Mann & Singson, 2003). Despite this, phonological awareness commonly overshadows morphological awareness in that students are more often encouraged to sound out unfamiliar words than to break down these words into meaningful units. While research has not clearly established at which age morphological awareness instruction is most effective, it has been shown that children as young as four years old have some morphological awareness (Berko, 1958).

There are many studies that support addressing morphological awareness in the early years in elementary school, whereas traditionally it has been a focus in middle school and high school. Nagy et al. (2003) emphasized that struggling readers may benefit from explicit morphological awareness instruction as early as grade two. The authors evaluated 98 second-graders who were considered below-average readers and found a strong relationship between the students' morphological awareness and their reading abilities.

Therefore, there is value in addressing morphological awareness early on in elementary school so that students can use this knowledge as a tool to aid with literacy. Whereas phonemes must be combined to create meaning, morphemes are meaningful on their own. Thus, morphemes are more salient and easier to access, which allows students to complete more challenging tasks at the morpheme level than they can at the phoneme

level (Goodwin & Ahn, 2010). For instance, *care* and *careful* share a common meaningful unit, whereas words that differ by one phoneme (e.g., *cat*, *mat*) do not. The importance of this becomes apparent when considering that 60% of new words that students read are made up of familiar morphemes that can lead the reader to its meaning (Carlisle, 2000).



What words should I choose to target first?

Boosting your students' levels of motivation and ensuring they have many successful encounters with the new material are two very important factors when introducing morphological awareness (Ebbers, 2017):

Frequency: Select familiar roots, prefixes, and suffixes that commonly appear in their everyday life. For instance, students can easily grasp the meaning of the prefix *un-* meaning “not” when provided with recognizable examples such as *unlock*, *uncover*, or *unsafe*. In contrast, words such as *veracity* or *procrastinate* are much more unclear.

Imageability: Choose words that are concrete so that it is easy for students to create a mental picture or even a drawing. For example, *raining* is easier to visualize than an abstract word such as *successful*.

Transparency: Pick words that made up of “transparent” morphemes, meaning that it is obvious how each morpheme contributes to the meaning of the word. For example, it is easier for students to understand that *beautiful* means “full of beauty”, whereas the meaning of the word *assignment* is less apparent from its morphemes.

What are some resources that I can purchase?

- ★ **Word Stems Combo** by Super Duper Publications (\$79.99)
 - ▶ <https://www.superduperinc.com/products/view.aspx?pid=PRE500&s=word-stems-combo&lid=41E46A95#.WjRqi0qnE2w>
- ★ **Morphology Practice Packs** by Emily Gibbons (\$6.99)
 - ▶ Prefixes: <https://www.teacherspayteachers.com/Product/Common-Prefixes-Practice-Morphology-Awareness-Activities-Orton-Gillingham-2952472>
 - ▶ Suffixes: <https://www.teacherspayteachers.com/Product/Common-Suffixes-Practice-Morphology-Awareness-Activities-Orton-Gillingham-2971590>
- ★ Book: **Ish** by Peter H. Reynolds (\$4.95)
 - ▶ <https://www.scholastic.com/teachers/books/ish-by-peter-h-reynolds/>
- ★ Book: **Red Hot Root Words** by Dianne Draze (\$18.19)
 - ▶ <https://www.barnesandnoble.com/w/red-hot-root-words-book-1-dianne-draze/1007435871>
- ★ **Prefixes, Suffixes, Root Words eWorkbook** by ECS Learning Systems (12.99)
 - ▶ <https://www.staples.ca/en/ecs-learning-systems-prefixes-suffixes-root-words-grades-2-3-workbook-grade-2-grade-3-ebook/>

What activities I can do in my classroom?

Activity 1: Find the Roots

Objective: The students will understand the concept of root words.

Task: Explain to your students that the root word is the main word in a longer word. Work through examples, and provide your students with a list of complex words for them to practice identifying root words.

Example complex word list: nosey, hopeless, sleeping, carefully, breakable, tossed, troubling, dogs, judgmental, enjoyment

Activity 2: Fix the Prefixes and Suffixes

Objective: The student will understand the concept of affixes.

Task: Explain to your students that there are little parts added to the beginning of the word called *prefixes* and added to the end of the words called *suffixes*, and these prefixes and suffixes change the meaning of the word to make a new word. Direct your students to “fix” the broken root word by matching it with the correct prefix or suffix. Discuss how adding the prefixes and suffixes changes the meaning of each root word.

Example: Care	-ment
Base	-ish
Break	-y
Blue	-ed
Quick	-ion
Mood	-ful
Tempt	-ing
Transit	-ly
Hope	-able
Cry	-less

Activity 3: Word Sort

Objective: The students will recognize word families based on morphemes.

Task: Instruct the students to examine and sort the listed words based on their morphemes. Then, encourage them to predict the meaning of the morpheme based on their current knowledge and the patterns they observe.

Example word list: judgment, disagree, colourful, argument, distrust, eventful, apartment, discomfort, fearful, hateful, disadvantage, wonderful, resentment, discontent, statement

Activity 4: Big Word Breakdown

Objective: The students will use their knowledge of morphemes to decipher the meaning of unfamiliar words.

Task: Instruct the students to skim a chapter of their textbook (for any subject) and write down 10 big words. For each word, have the student identify the root word and any prefixes or suffixes. They should write down the meaning of each of these parts, and then use this to infer a definition of the whole word.

Example: subsequently

Prefix: sub- = under

Root: sequent = following in a sequence

Suffix: -ly = characterized by; act in that way

Possible meaning: acting in a way that follows “under” something else in a sequence

Student friendly definition: something that occurs *subsequently* to something else occurs later than or after it in time

Activity 5: Spotlight

Objective: The student will apply their knowledge of morphological awareness to determine the meaning of curriculum-related words.

Task: Select one or two complex, curriculum-specific words from your lesson. When it comes up during your lesson, explicitly assess the word’s morphologic structure and inquire about its meaning.

Example: When teaching shapes in your math class, write the word “triangle”. Explain that the prefix “tri” means three, and this shape is called a “triangle” because it has three angles. Relate this to other words that share this prefix, such as tricycle, triceratops, and triplet.

Activity 6: Building Blocks

Objective: The student will blend prefixes, suffixes, and roots to create complex words.

Task: Make flashcards with a variety of prefixes, suffixes, and roots. Instruct the students to physically manipulate the flash cards to create as many real words as they can.

Encourage the students to compare and contrast the meanings of words. Alternatively, students could also build words by assembling large pieces of Lego that have prefixes, suffixes, and roots written on them.

Example list: en-, content, un-, joy, light, -ment, -al, courage, -ous, dis-, -ly, re-

Activity 7: Build the Word, Use the Word

Objective: The students will apply their knowledge of units of meaning by using them in a sentence.

Task: Provide the students with a list of root words plus one prefix or suffix. Have the students add the prefix or suffix to the root word and then use the new word in a sentence.

Example: Suffix: -less. Root words: fear, hope, thought.

Fear → fearless. The fearless firefighter ran into the burning building.

Activity 8: Sort 'n' Spell

Objective: The students will devise a spelling rule based on knowledge of affixes.

Task: Provide the students with a list of words and have them group the words according to spelling. The two groups should be distinguished by a pair of affixes that mean the same thing but are spelled differently. Encourage the students to examine the words to come up a rule for when to use each of the affixes.

Example list: honorable, visible, predictable, enjoyable, fashionable, edible

Rule: When the root word looks like a whole word, add the suffix -able.

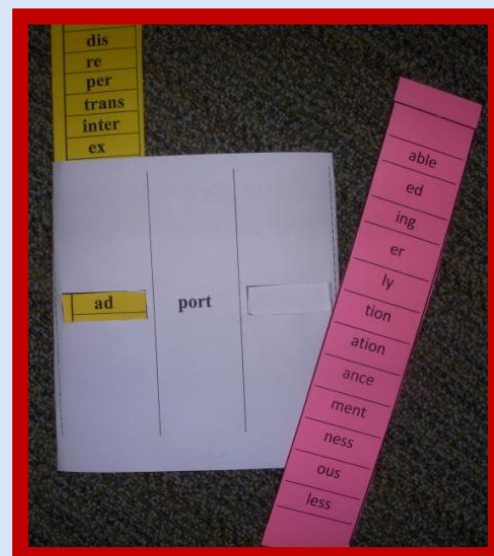
When the root word is not a full word, use the suffix -ible

Activity 9: Rocking Roots

Objective The students will understand how adding different prefixes and suffixes to a root words changes its meaning.

Task: Help the students create a foldable model, as depicted in the figure to the right. Elicit a discussion on what the root word means on its own, and how adding different prefixes and suffixes changes its meaning.

Example: In the figure to the right, the root “port” is used as the central focus, and the student can modify the prefix and/or suffix displayed by pulling on the tabs. Examples of adjustments that can be made to the root word “port” are: transportable, important, supporting, deported.



For more activity ideas, check out this document from the Florida Center for Reading Research (2007): <http://www.fcrr.org/curriculum/PDF/G4-5/45VPartTwo.pdf>

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Pictures obtained from:

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