



TEACHING READING IN BRIEF

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Teaching Latin Roots and Greek Combining Forms: A Tool for Literacy Intervention and Content-Area Learning

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In this article, the following topics will be covered:

1. What is a morpheme?
2. Why does morphology matter?
3. What should teachers know about Latin and Greek roots?
4. How can Latin and Greek roots be integrated into literacy intervention?
5. How can content-area teachers integrate Latin and Greek roots into their classes?

Before we begin, we want to share that we are writing from our perspective as public middle-school staff. We are a school librarian who doubles as the MTSS coordinator and a school-based speech-language pathologist. Both certified in Orton-Gillingham, we work with students who possess a wide range of reading and writing abilities and regularly collaborate with teachers across our building. We offer this article with two goals in mind: (1) to inspire teachers with evidence-aligned instructional recommendations for integrating Latin and Greek into their content-areas to benefit all students, and (2) to provide practical ideas for incorporating morphology, including Greek and Latin roots, into an Orton-Gillingham (OG) or Structured Literacy lesson for older students receiving literacy intervention.

1. What is a morpheme?

Before discussing the specifics of Greek and Latin roots, it is important to understand the concept of a morpheme. A **morpheme** is the smallest unit of meaning in a language. It is not necessarily a word on its own, although it could be. Morphemes include roots and base words, which are the core meaning of a word, and affixes (prefixes and suffixes), which are added to the beginning and end of a word. For example, the word **unpleasant** consists of three morphemes:

- Prefix **un-** means “not.”
- Base word is **please** (with the final e dropped when adding a vowel suffix).
- Suffix **-ant** turns a noun into an adjective, meaning the state or quality of being unpleasant.

2. Why does morphology matter?

It is accurate to describe English orthography (the writing system) as based on an alphabetic language; however, it is more accurate to call it a **morphophonemic orthography**, a system shaped by both sound-symbol correspondence and meaningful word parts (morphemes) with historical roots.

Curious Question:

Can you identify these five words to the correct language origin?

The words are **dictionary**, **coffee**, **cherub**, **squash**, and **Achilles**. The languages are Arabic, Greek, Hebrew, Narragansett, and Latin.

As Marisa Thomas explained in the [first article](#) in this series, English draws primarily from Anglo-Saxon, Latin, and Greek. Understanding the distinct spelling patterns of each brings logic to what seem like irregularities in spelling. When students explore words with curiosity and a spirit of investigation, they begin to see the structure and order of the language. This approach to morphology fosters higher-level thinking, builds confidence, and improves reading comprehension. In my experience, when I have fostered an approach to word identification built on curiosity and investigation, my students have seen themselves as more confident readers and writers. Eventually, they will develop the skills to decipher unfamiliar words independently, thereby enhancing their vocabulary and reading comprehension.

In upper elementary grades, middle and high school, vocabulary becomes increasingly content-specific, particularly in science and social studies. Morphological instruction, which focuses on meaningful word parts like roots, prefixes, and suffixes, is a powerful tool for unlocking academic language. Research shows it supports vocabulary development, spelling, and comprehension for all learners, especially those who struggle (Bowers, Kirby, & Deacon, 2010; Goodwin & Ahn, 2013). Teaching Latin roots and Greek combining forms in both intervention and content-area classes equips students with strategies to access grade-level vocabulary and successfully tackle unfamiliar words.

3. What should teachers know about Latin and Greek roots?

First, we want to reassure teachers that you don't need to study Latin and Greek as classical languages to teach them effectively. With just a basic understanding of Latin and Greek word structure and a handful of commonly encountered roots, you can begin incorporating Latin roots and Greek combining forms into your instruction. Well over half of English words are derived from Greek or Latin, and they have fairly consistent spelling patterns and meaning (Rasinski et al., 2008).

What is a Latin root?

Latin roots are used to form many complex, multisyllabic words in English. Recognizing Latin roots is important in deciphering the meaning of many academic words and can aid in vocabulary development and comprehension. Latin roots cannot usually stand alone, unlike many Anglo-Saxon words (**road, ditch, salt, one**). While Greek roots usually combine with other Greek roots, such as **tele/graph**, there are a handful of words that contain a Latin and Greek root within the same word, such as **television, cyberspace, and epicenter**. Latin-derived words tend to follow syllable structures with fewer spelling irregularities (unlike Anglo-Saxon words).

- Most Latin-derived roots are closed syllables (**ject, struct, vis**) and sometimes r-controlled syllables (**port, form, mort**).
- If you hear a long vowel sound in a Latin-derived word, it will most likely be spelled with an open or silent-e syllable (**rotate, rotation, produce, producer**). In contrast, a long vowel sound in an Anglo-Saxon-derived word can be spelled in a variety of ways, including vowel teams, open, or silent-e syllables.

- Consider the different spellings of long /ā/ in these Anglo-Saxon-derived words: ***baby, shape, day, rain, eight,*** and ***vein.*** Because of this variability, many students actually find it easier to spell Latin-based words once they've learned the basic patterns of Latin derivations.

In multisyllabic Latin and Greek-derived words, the accent will be on the root. This can lead to prefixes and suffixes containing an unaccented or schwa vowel sound. Therefore, explicitly learning common Latin and Greek roots (and affixes) can aid in word recognition, spelling, and meaning.

Common Latin Roots for Science

Latin Root	Meaning	Example Words
aqua	water	aquarium, aquatic, aquifer
dict	to say/speak	predict, contradict, dictionary
form	shape	transform, deform, uniform
port	to carry	transport, export, import
rupt	to break, burst	erupt, rupture
scrib/script	to write	describe, manuscript, inscription
struct	to build	structure, construction, destruction
terra	earth	terrain, terrestrial, territory
vid/vis	to see	vision, visible, evidence

Common Latin Roots for Social Studies

Latin Root	Meaning	Example Words
civ	citizen	civil, civilization, civic
cred	to believe	credible, credit, incredible
dict	to say/speak	dictator, edict, verdict
duc/duct	to lead	conduct, introduce, educate
jur/jus/jud	law/justice	jury, justice, judicial
liber	free	liberty, liberate, liberal
mand	to order	command, mandate, demand
pop	people	population, popular, populous
trib	to give	tribute, contribute, distribute

You can find common, **cross-curricular Latin roots** on the [Reading Rockets website](https://www.readingrockets.org/).

What is a Greek Combining Form?

A Greek root is often referred to as a Greek combining form (GCF) because the root is often modified to connect with other morphemes, usually by adding a vowel **o**, as in the Greek-derived words **hydrogen**, **meteorology**, and **phonogram**. According to the National Library of Medicine Open Resources for Nursing (2024), when a root is combined with a combining vowel, the word part is referred to as a combining form. In this article, we refer to Greek roots and GCF interchangeably. A GCF usually cannot stand alone as a complete word by itself but must be combined with other morphemes to form a full word. For example, **bio**, meaning life, combined with **-logy**, meaning the study of, is combined to form the word **biology**, the study of life and living organisms. Similarly, if we combine **bio** with **-graphy**, meaning writing, to form the word **biography**, we get a book or account of someone's life. GCFs are important in most academic vocabulary, especially in science and math (**hypothesis**, **polygon**).

Common Greek Combining Forms for Science (in addition to *bio*, *-logy*, *graph* listed above)

GCF	Meaning	Example words
astro	star, outer space	astronomy, astronaut, astrophysics
chrono	time	chronological, chronicle, synchronize
geo	earth	geology, geothermal, geode, geography
hydr	water	hydrate, hydroelectric, hydrology
macro	large	macroorganism, macroscopic, macronuclear
meter, metr	measure	thermometer, barometer, metric
micro	small	microscope, microbiology, microorganism
phon	sound	telephone, phonics, symphony
photo	light	photograph, photosynthesis
scope	to see, view	microscope, telescope, periscope
therap	treatment	therapy, therapeutic, hydrotherapy
therm	heat	thermal, thermodynamics, thermometer

Common Greek Combining Forms for Social Studies

GCF	Meaning	Example words
arch	rule, chief	monarchy, hierarchy, anarchy
auto	self	autobiography, autonomy, automatic
chrono	time	chronology, anachronism, synchronize
cracy	rule, government	democracy, theocracy, autocracy
demo	people	democracy, demographic, demography
ethno	race, people	ethnology, ethnic, ethnocentric
geo	earth	geography, geoculture, geopolitical
hist	tissue, or past events*	history, historian, prehistoric
log	word, reason, study	logic, dialogue, sociology
phon	sound	phonics, telephone, phonograph
polis, polit	city, citizen	metropolis, politics, police
tele	distance, far away	telecommunication, telegram, telephone

*Note: **Hist**, meaning tissue, is scientific, but **historia** in Greek relates to inquiry or past events in a social studies context.

When teaching GCF, students may need instruction in Greek letter-sound correspondences, which are shown in the following table.

Greek-Derived Letter-Sound Correspondences

Greek Spelling	Sound	Example Words
ph	/f/	<i>photograph, phone, graph</i>
ch	/k/	<i>chemistry, character</i>
ps	/s/	<i>pseudonym, psyche</i>
rh	/r/	<i>rhino, rhythm</i>
pt	/t/	<i>pterodactyl, pterosaur</i>
x	/z/ or /ks/	<i>xenophobia</i> (/z/) <i>axis</i> (/ks/)
y (as vowel)	/ĩ/ or /ī/	<i>symbol, gymnasium</i> (/ĩ/) <i>cyclone, hydrogen</i> (/ī/)

4. How can Latin and Greek roots be integrated into literacy intervention?

To understand why morphology instruction matters for students struggling with word recognition and spelling, we'd like to share a story about a student we tutored, Hannah (pseudonym). At twelve, Hannah often sat at her desk, frustrated that reading and spelling still felt so hard. Before beginning her first Orton-Gillingham (OG) lesson, she was given a battery of informal assessments to determine where OG instruction should begin, often referred to as pretesting. The data showed she needed to strengthen her ability to read and spell closed, single-syllable words. As you may recall, many Latin roots and affixes are closed syllables. So, while Hannah practiced reading closed-syllable words with greater accuracy and automaticity, we also introduced common Latin affixes, prefixes, and suffixes to help her decode and understand larger words. Once she was ready to read words with ending consonant blends, she could accurately read syllables like ***rupt***, ***ject***, and ***dict***. It is common in an OG lesson for a student to practice reading pseudowords or detached syllables (a syllable that is part of a multisyllabic word, such as ***san*** as in ***sandal***). This serves to target decoding accuracy, so why not make some of those syllables meaningful morphemes? In Hannah's science and social studies classes, her teachers reinforced this work by teaching Greek and Latin roots tied to academic vocabulary. Morphology instruction across settings helped Hannah build her vocabulary, deepen her content knowledge, and see her OG lessons as relevant and age-appropriate, even more than if she had only been reading simple closed-syllable words like ***cat***, ***spot***, or ***test***.

Let’s share another example of one of our seventh-grade students, Kayla (pseudonym). Hardworking and motivated, Kayla struggled with word recognition but had strong listening comprehension. During reading practice in her OG lesson, she was given detached syllables to read. After reading each syllable, she blended both syllables to read a multisyllabic word. While she was not yet ready to read and spell multisyllabic words, based on student data gathered at pretesting and during each OG lesson, reading detached syllables made Kayla feel empowered that her hard work in her intervention literacy lessons was preparing her for the more challenging vocabulary she would encounter later in the school day. To be clear, when Kayla was working on reading and spelling one-syllable words, she was not expected to read or spell multisyllabic words. However, the one-syllable words were presented as detached syllables, with Latin morphemes, to honor her intellect. The chart below provides suggestions for detached syllables that can be used for students who are working on closed syllables with consonant blends. As time went on, Kayla

First Syllable	Second Syllable	Entire Word
ex	am	exam
mis	hap	mishap
com	plex	complex
sub	ject	subject
con	trast	contrast
in	vent	invent
ob	struct	obstruct

grew more confident, not just in her word recognition and spelling, but also in her expanding vocabulary. She began to apply what she learned about morphemes in her OG lessons to unfamiliar words in her content-area classes, making meaningful connections across settings. We are pleased to report that she did progress to reading and spelling a range of multisyllabic words within an OG scope and sequence over time.

5. How can content-area teachers integrate Latin and Greek roots into their classes?

Teaching Latin and Greek roots isn’t just for students receiving literacy intervention, but for all students in all content-area classes. Morphology instruction provides innumerable benefits for all students, including our most marginalized students. It is important to keep in mind that although English is a melting pot of many languages, both Latin and Greek have had a profound impact on its development (Rasinski et al., 2008). Given the high percentage of English words that originate from either Latin or Greek, students receive a significant vocabulary boost if they can learn even a handful of roots or combining forms. This is why Rasinski et al. (2008) wrote in their book, *Greek and Latin Roots: Keys to Building Vocabulary*, that "although no single approach to vocabulary development has been found conclusively to be more successful than another, researchers agree that a focus on Greek and Latin derivatives offers a powerful tool for teachers to nurture students' vocabulary development" (p. 12-13). The good news is that this approach fits naturally into all content areas. As highlighted in the *New York Times* article, [In Memphis, the Phonics Movement Comes to High School](#),

when teachers across disciplines share responsibility for word-level instruction, the work becomes more manageable, and student outcomes improve significantly. Teaching Latin and Greek roots in content-area classes is a powerful example of how shared instructional practices can support both literacy and subject knowledge.

Teaching Latin and Greek roots should not wait until the upper grades, though. According to Dr. Louisa Moats' seminal book, *Speech to Print* (2020), "With systematic teaching, morphological awareness develops in tandem with phonological and orthographic awareness beginning in first grade" (p. 168). Young learners will begin their morphological journey with free bases (bases that can stand alone, such as **run**) versus bound bases, such as our Latin and Greek roots that need to be attached to an affix to represent a word (**struct**). Bound bases come into play around fourth grade and up.

One simple thing teachers can do in the early elementary grades is to be cognizant of their semantics when talking about affixes and bases. For example, it is more accurate to say, "a prefix is placed before the base," rather than "a prefix comes at the beginning of the word." This is because often base words have more than one prefix, and as students learn more prefixes, we want their definition to hold true. The same is true for discussion around suffixes. You can read more about teaching suffixes in the primary grades in the [second article](#) in this series by Jennifer Fitch.

According to literacy expert, William Van Cleave (2020), two important components are necessary for impactful morphology instruction. The first is that the instruction must be embedded into other content areas rather than taught in isolation. The second is that it must include a problem-solving approach, which means that, rather than the

teacher presenting the correct answer, the teacher and students discover it together. Teachers pose interesting questions and problems and then work through possible solutions with their students.

We want to clarify that a problem-solving approach is not in opposition to explicit instruction in morphemes; it builds on it. As students become more accurate in identifying and using morphemes, they need opportunities to apply what they've learned in new contexts. This kind of transfer, which aligns with the instructional hierarchy, makes problem-solving activities a natural and effective next step. This combination creates a powerful learning experience that students can take into their personal reading adventures. We also recommend the University of Michigan's *Dyslexia Help* (2025) blog post on [Morphological Awareness](#), which is chock-full of easy-to-teach activities.

Word Matrices

One helpful teaching tool that classroom teachers of higher grades can incorporate into the teaching of their content area is word matrices. A word matrix, sometimes called a morphological matrix, is a simple tool that illustrates how a group of related words is built from the same base or root (Ng et al., 2022). It often appears as three columns: one for prefixes, one for the root or base word, and one for suffixes (see example photos below.) Using this visual aid, the teacher helps students see how knowing a single root can lead to understanding and creating many related words.

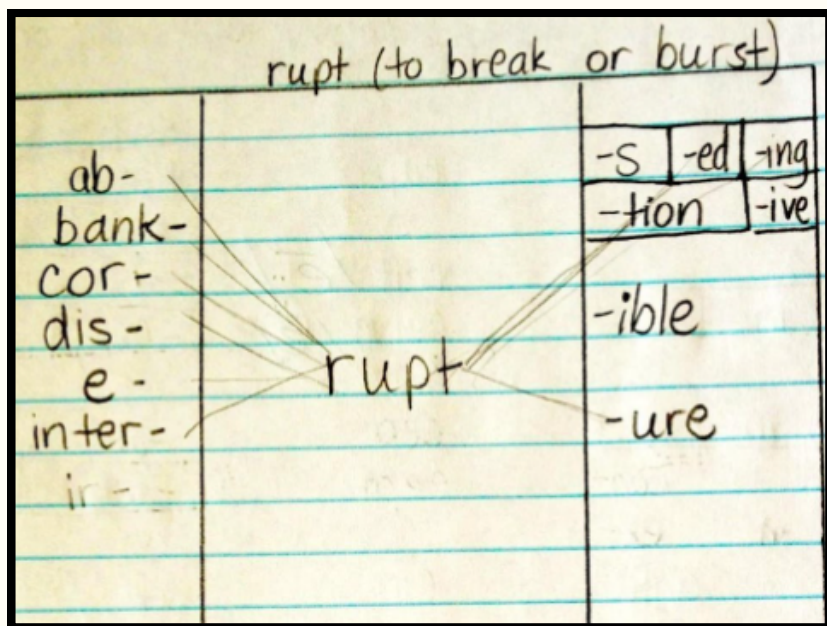
This activity can support rich vocabulary instruction and deepen students' understanding of word spelling. A word matrix also promotes a scientific, inquiry-based approach to learning:

the teacher poses a question, such as figuring out the meaning of an unfamiliar word, and students investigate how word parts (prefixes, suffixes, roots, spelling, and etymology) contribute to its meaning. A 2022 study investigated whether memory of morphologically complex words is improved if the word's morphology is taught, particularly if the words are taught in a base-centric format. The researchers (Ng et al., 2022) wrote that "the morphological matrix that organizes words around a common base may provide an important new tool for literacy instruction" (p. 1).

Below are the components of a word matrix (Frank, 2018), along with an example that students would see. The student, small group, or entire class would work together to produce a list of words that could be made from the components and then create sentences using those words. Frank's word matrix manual provided the examples below for teaching morphology.

Common prefixes form new words and change meaning or part of speech (2-4/matrix)	Latin root simple meaning	Most common inflectional suffixes change noun number or verb tense (-s/es, -ed, -ing)
Less common prefixes form new words and change meaning or part of speech (0-3/matrix)		Common derivational suffixes form new words and may change part of speech (3-5/matrix)

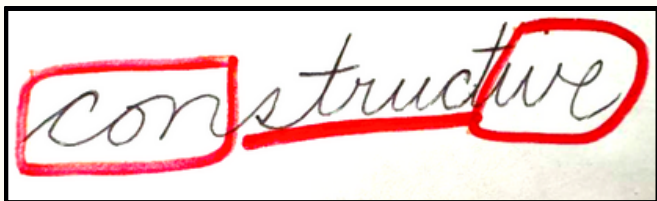
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1	<u>abrupt</u>
2	<u>bankrupt</u>
3	<u>rupture</u> , <u>erupt</u> , <u>eruption</u>
4	<u>interrupt</u> , <u>interruption</u>
5	<u>corrupt</u> , <u>corruption</u>
6	<u>disrupt</u> , <u>disruptive</u> , <u>disruption</u>

Photos courtesy of Peggy Price and her seventeen-year-old student

In our experience, it is important for developing readers to practice decoding whole words that contain Latin and Greek roots. A word matrix can be a visual tool to help students understand that if you know one root, you can read and spell many more words, but it does not provide the essential decoding practice that comes from students seeing a multisyllabic word and knowing how to break it apart to read the word accurately and eventually, automatically. Struggling readers often benefit from repeated exposure to words in both isolation and connected text to build accuracy and automaticity (Hook & Jones, 2002). When working with multisyllabic words containing Greek and Latin roots, students should be taught to identify and mark morphemes, such as prefixes, suffixes, and roots, by boxing, underlining, and/or highlighting them. For example, in the word **constructive**, the students boxed off **con-** as the prefix and **-ive** as the suffix, and then underlined the Latin root, **struct**, before blending and reading the whole word. See the [fourth article in this series](#) by Lara Morales on teaching prefixes, where she explains the importance of teaching part to whole and whole to part.



In short, Latin and Greek roots form the backbone of much of the English vocabulary, and understanding them allows students to unlock the meanings of thousands of words, fostering deeper engagement with texts.

Answer to this issue's Curious Question:

- **Dictionary** is from Latin
- **Coffee** is from Arabic
- **Cherub** is from Hebrew
- **Squash** is from Narragansett, spoken by the Native American tribe of the same name, who originated in what is now known as Rhode Island
- **Achilles** is from Greek

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Meet the Writers and Editors



Amy Blauvelt, MS. Ed. A/OGA

Kathryn is a dedicated speech-language pathologist with over 15 years of experience in the field. She began her career in medical settings, working with adults recovering from strokes, traumatic brain injuries, and other neurological conditions. However, her professional focus shifted eight years ago when she transitioned to public education, where she discovered a deep passion for working with school-aged children. While Kathryn has experience across early intervention, preschool, and elementary populations, she has found her greatest fulfillment in working with middle-school students. Her work at this level revealed a significant and often overlooked need: many students lacked foundational reading skills, and few educators were equipped to address these challenges in secondary education. This realization led Kathryn to specialize in literacy instruction. Kathryn holds a Master's Degree in Communication Disorders and Sciences from the University of Oregon. In 2024, she completed her Orton-Gillingham Associate Level training, further strengthening her ability to support students with language-based learning difficulties.



Kathryn Carver, M.S., CCC-SLP, A/OGA



Peggy Price, M.Ed., F/OGA is the Director of the Stern Center Orton-Gillingham Institute, the only Orton-Gillingham Academy (OGA) accredited training program in Vermont. She leads a talented team of OGA Fellows and Clinical Supervisors who provide a wide range of courses and workshops, district-wide consulting, and in-depth mentoring for educators seeking OGA certification. Peggy has taught Orton-Gillingham to students ages 5 to 44 and finds joy in watching both students and educators grow as they learn the structure of English. She holds a Master's in Special Education from Georgia State University and a Bachelor's in Psychology from Binghamton University.

Dorinne Dorfman, Ed.S., Ed.D., OG/A, has served as a teacher and principal for nearly 30 years in Vermont schools. After completing her undergraduate studies at Goddard College, she earned her Master's and Doctorate in Educational Leadership at the University of Vermont. As a postdoctoral Fulbright Scholar, she taught at the Technical University of Berlin and conducted research on democratic education in Germany. Since completing an Education Specialist Degree in Reading and Literacy Instruction at Bay Path University, Dr. Dorfman teaches evidence-aligned literacy at Barre Town Middle School.

