

# Introduction to **Child Language Disorders**

Evidence-Based Assessment and Intervention

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# PREFACE

Imagine being in class with your favorite professor. They are sitting on the edge of their desk, leaning forward, smiling warmly. They radiate enthusiasm as they invite you and your classmates to immerse yourselves in the topic—to ask questions, propose answers, challenge preconceived notions, and make connections to real-world applications. Your curiosity is piqued, your brain is engaged; you can't wait to learn more. This isn't a lecture. It's a collaborative conversational journey into child language disorders.

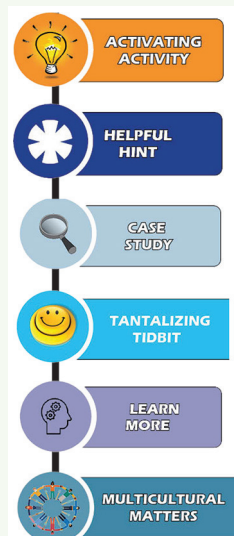
This is the premise on which this textbook is built. Rigorous and comprehensive, yet accessible and engaging, it is designed for undergraduate learners in language disorders (but graduate students might enjoy it, too).

Page after page of dense, decontextualized text? You won't find it here. Information is conveyed in shorter paragraphs, bulleted lists, and abundant, full-color visuals to honor and support the learning style of digital natives who digest information differently than most textbooks offer. Embedded links and QR codes lead to topic-relevant online resources where interest-sparking topics can be further explored. Chapters are organized with multiple headings and logical sequences, maximizing the cognitive resources available for new learning.

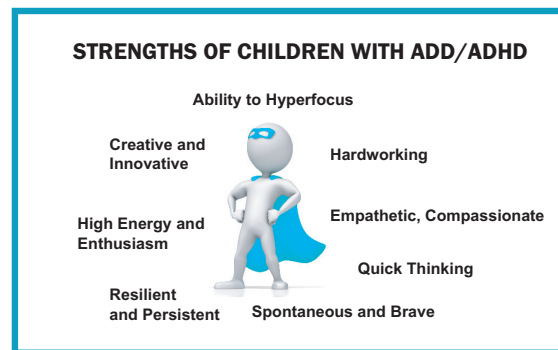


Overly formal, zzz-inducing writing style? Not in this text. The learning conversation is friendly and supportive, seasoned with tantalizing tidbits, helpful hints, and case studies. Activating activities ignite synapses and invite readers to join the learning conversation. “Pause and apply” prompts after each main topic encourage students to connect new concepts to practical situations and provide instructors with structured opportunities to support deeper learning. Essential vocabulary and big-picture learning outcomes are presented at the beginning and again at the end of chapters to encourage self-application of a plan-do-review learning sequence.

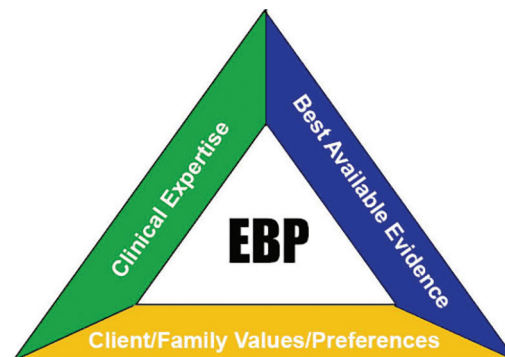
Same old menu of topics? Yes and no. Curated core content prepares learners for the responsibilities of an undergraduate or speech-language pathologist assistant (SLPA)-level practitioner or for advanced study at the graduate level. But wait, there's more! Learners are also invited to explore contemporary topics (e.g., language disorders in a digital world, trauma-informed care) and to presume competence of neurodiverse learners, focusing on the unique strengths they bring to the table. “Multicultural matters,” embedded in the chapters, encourage



reflection on and awareness of our inherent biases and equip students to engage with children, families, and colleagues in a culturally relevant manner.



And speaking of presumed competence, while fully aware that undergraduates have not yet had coursework in the area of research, the authors believe that it is never too early for students in communication disorders to understand the key role of empirical evidence as the foundation of our professional practice. From infants and toddlers whose language is late to emerge to adolescents with developmental language disorders (DLD), in assessment and intervention planning across the five subdomains of language, evidence is the common denominator that guides effective and ethical clinician decision-making. In each case, application of the three prongs of evidence-based practice (EBP) is explained in undergraduate-friendly language, creating a bedrock on which advanced study can be built.

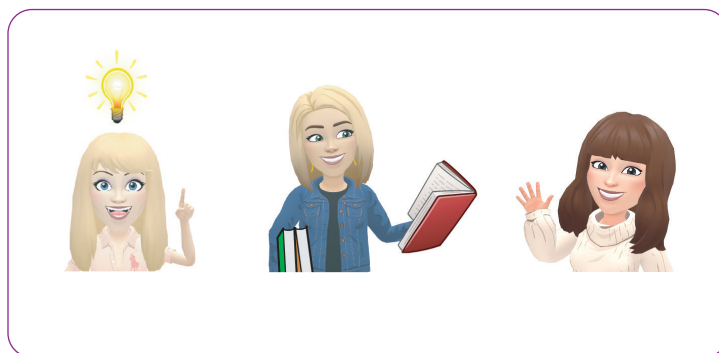


Rigid teaching sequence? Ask 10 instructors to list the logical progression of topics or chapters for a course on language disorders, and you will get *at least* 10 different answers (speaking from experience). To allow for maximum flexibility, the text begins with four foundational chapters that function as a framework around which the information in the remaining 10 chapters can be connected—regardless of the order in which they are taught. Call-outs embedded in text direct students to the chapters that introduce or explain a new or unknown concept, term, or topic. This allows instructors the freedom to teach material in an order that makes sense to them without the concern that students will not have the prerequisite information necessary to process the content effectively.

In addition, a comprehensive library of electronic resources is available for both learners and instructors on a PluralPlus companion website (see inside the front cover for access instructions). Podcasts that summarize the chapter in small bites, videos to demonstrate concepts and therapy techniques, practice quizzes and application activities, flashcards, and therapy-enhancing book lists support student learning. Instructors have access to visually engaging and accessible lecture slides with presentation notes and multimedia supports, a sample course syllabus, in-class activities, scoring rubrics, a test bank, and longer

term projects to cement learning associated with each topic area that can be dropped into a learning management system for online learning. An instructor's manual provides suggestions for adapting the text to compressed courses, team-based learning activities, and helpful outside resources.

The imaginary classroom that began this preface was led by a professor who not only loved their subject area; they truly enjoyed teaching at the undergraduate level. In reality, "they" is a mashup of the three authors of this textbook. One is a seasoned professor whose students refer to her as "Dr. Mom"; one is the creator of one of the first online SLPA programs in the country; and one is a recognized leader in school-based services. All spent many years as clinical service providers for children and adults with communication disorders who collectively taught us not only to be better speech-language pathologists (SLPs), but better humans. We are thrilled to share our knowledge, experience, and sometimes our weird senses of humor in this labor of love with you.



In his book, *When Breath Becomes Air*, author Paul Kalnithi asks:

***What is life without language?***

We know our answers. Perhaps this text will guide you to yours.

# ABOUT THE AUTHORS



**Shari Robertson, PhD, CCC-SLP, BCS-CL, ASHA Honors and Fellow**, is a Board-Certified Specialist in Child Language and a Professor Emerita from Indiana University of Pennsylvania. A nationally and internationally recognized speaker, Robertson has authored numerous articles, book chapters, texts, children's books, and clinical materials related to language and literacy. The 2019 President of ASHA and CEO of Dynamic Resources, Dr. Robertson has received the Editor's Award for Language by the Journal of Speech-Language-Hearing Research as well as the Annie Glenn National Award for Leadership in Language and Literacy.



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**Rachel Powell, PhD, CCC-SLP, ASHA Fellow**, is a Board-Certified Specialist in Child Language and serves as Director of Curriculum, Instruction, and Federal Programs for Brookhaven School District (Brookhaven, Mississippi). She specializes in language development, literacy acquisition, and school-based intervention. A speech-language pathologist with more than 20 years of experience in public education, she received the 2021 ASHFoundation Rolland Van Hattum Award for Contributions in Schools. Dr. Powell has taught university coursework in language, literacy, diagnostics, research, and speech sound disorders and served as the 2025 ASHA Convention Co-Chair.

## CHAPTER 1

# FOUNDATIONS OF LANGUAGE DISORDERS



### LEARNING OUTCOMES

1. Discuss the characteristics, components, and modes of language and how communication development fits into overall child development.
2. Explain how language and literacy are closely linked through the language-literacy hierarchy.
3. Form a working definition of language disorders.
4. Integrate evidence-based practice (EBP) into your professional schema of clinical decision-making for children with language disorders.



### ESSENTIAL VOCABULARY

- language
- form
- content
- use
- phonology/phoneme
- morphology/morpheme
- syntax
- semantics
- pragmatics
- communicative competence
- evidence-based practice

**L**earning to communicate is one of the most important achievements of human development. Language makes it possible to share our wants, needs, thoughts, and ideas and understand those of others. A well-developed language system is essential to academic and vocational success and helps us form strong social relationships.

The first step in your journey to learn about language disorders is to take a few steps back to revisit critical concepts about non-disordered language. This might seem counterintuitive, but effective assessment and intervention for children with language disorders is built on a comprehensive knowledge base of non-disordered language and its development. To put it simply, “If you don’t know what is typical, how would you be able to effectively identify and treat language that is atypical?”



### ACTIVATING ACTIVITY

You have decided on a career in communication disorders. Consider these scenarios:

- A colleague confesses she really doesn’t know what “language” means in speech-language pathology. How could you explain it in terms she can understand?
- Your principal asks you to justify your role in helping children succeed in school. What would you say about the importance of oral language in the development of strong reading, writing, and classroom skills?
- A parent at an individualized education program (IEP) meeting asks you to explain what a language disorder is. How would you respond to her?
- You are designing an assessment and intervention protocol for a 7-year-old child. What factors should you take into consideration to ensure that your practice is built on evidence?

This chapter (and the rest of this text) will help you shine in these scenarios and more.

**Language** is a complex system of communication that allows humans to express and understand abstract concepts, solve problems, and participate in their social and cultural environment. It is a powerful, highly specialized skill, evolving from a baby’s first cry and continuing throughout the lifespan. As a preprofessional, it might seem a little intimidating to know that a comprehensive knowledge of this exceedingly complex system is just the “first step” in the clinical management of language disorders. But, while language is complex, as shown in Figure 1–1, it can be broken into three critical dimensions—properties, components, and modes—that help us better understand its broad scope.

## The Properties of Language

There are between 7,000 and 7,200 unique languages in use around the globe, and the three key properties that define the nature and function of language apply to all 7,000+ of them!

### Language Is Rule-Governed

All languages have a set of conventions that organize their use. This applies to both the structure of the language and its applications in social contexts. Native speakers typically learn and use the majority of the rules of their language without conscious thought or formal instruction. They apply these rules

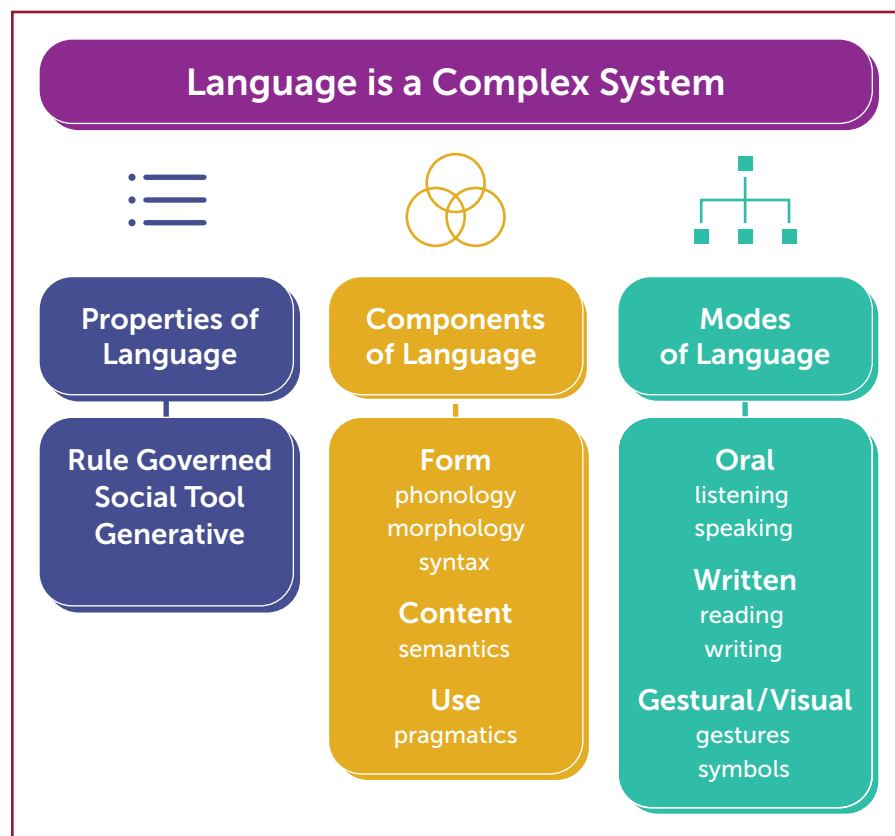


**FIGURE 1-1.** Language is a complex system.

when they talk, write, or both—often without even realizing it. However, they will absolutely notice when the rules are violated by another speaker or writer.

Consider the following narrative and answer the questions that follow as you progress.

- *One day the frog was swimming in the pond. She hopped on the stump, did the dance, and sang the song.*

Are you asking yourself: “What frog? What pond? What stump? What dance? What song?” Of course you are. That’s because this speaker (or writer) violated a rule of English regarding how articles are used in narratives.

Let’s try again.

- *One day, a frog was swimming in a pond. She hopped on a stump, did a dance, and sang a song.*

Is this better? Of course it is. Because this time the writer “introduced” the nouns correctly by using *a* rather than *the*.

Let’s add another line to the story.

- *Once the song was done, she hopped off the stump and jumped back into the pond.*

Are you still wondering about the song, the stump, and the pond? Probably not. Once a noun is introduced using the article *a* (or *an*), it’s perfectly fine to pair *the* with that particular noun until

everyone lives happily ever after. (But should the writer/speaker revert to using *a frog* instead of *the frog*, you will most likely assume another frog has joined the story.) Prior to this exercise, you very likely were not consciously aware of the rules regarding the use of articles in narrative discourse, but you almost certainly noticed when they were violated.

Languages are jam-packed with these kinds of “hidden” (and not so hidden) rules that native speakers learn without much conscious thought or formal instruction. It’s a different story, though, when you are trying to learn a new language after the age of 4 or 5, when your brain is predisposed to learn language. Successful second language acquisition is more than just learning different words to represent concepts you already know (e.g., Lightbown & Spada, 2021). In fact, memorizing new vocabulary is typically the easy part. Your ability to learn the rules of that language is a big factor in whether or not you will be able to ask directions to the Acropolis on your trip to Greece, rather than just saying words in Greek that have something to do with the Acropolis.

## Language Is a Social Tool

The use of tools is also a highly evolved human behavior. Tools help us to accomplish a goal or complete a task more easily. For instance, if you are trying to pound a nail into the wall, a hammer is a handy tool. You could conceivably use your hand, but it’s faster, more efficient, and a lot less painful when you substitute a good ball-peen hammer for your fist.

Language is considered a **social tool** because it helps us accomplish goals in our social environment more easily. For example, if your intent is to close the window, you could either walk over and close the window or you could ask someone to “please close the window.” As long as you have a cooperative communication partner, the result is the same in either case: The window gets closed.

## Language Is a Generative System

Children aren’t parrots. Learning to talk is not a matter of a child simply repeating what they hear the adults around them say. The odds of a child hearing every possible combination of words, sentence constructions, and social conventions, memorizing them, and then spitting them back at the appropriate time are pretty slim.

Rather, once a basic vocabulary has been established (around 50–100 spoken words), children begin to apply the rules of language they have internalized to generate an infinite number of novel utterances to express their ideas and needs (e.g., Bates et al., 1988). Creative errors by children who are learning language, such as calling a microwave a “microstove” or insisting “Eve do, alone!” provide us with an inside peek into this fascinating property of language (and provide for great family stories).



- Why is it critical for language learners to be able to internalize rules of grammar without specific instructions?
  - Consider a child who is nonverbal or not yet verbal. Could they use language as a social tool? Why or why not?
  - Think of a creative error that you, a sibling, or a child you know made that became part of the family vocabulary. Why do you think this happens?
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## The Components of Language

Language has been classically defined across three separate but interrelated components: form, content, and use. Although each component has a specific focus, a language user must be able to manage all of the subskills from all three components to be considered a competent communicator. The Venn diagram shown in Figure 1–2 is the classic representation of these components and their subskills (L. Bloom & Lahey, 1978).

### Language Form

Language **form**, the underlying structure of language, is heavily dependent on rules (because language is a rule-governed system). There are rules for combining and manipulating sounds; rules for combining roots, prefixes, and suffixes to create words and meaning; and rules for combining words into sentences. These rules make up the three subskills of language form: phonology, morphology, and syntax. Phonology is specific to the sounds of speech. Because morphology and syntax work together in the creation of meaningful utterances (and text), these two skills are grouped under the collective term grammar, as shown in Figure 1–3.

### Phonology

All languages have a set of rules that dictate how the sounds and phonemes of that language are combined, or **phonology**. In English, there are sounds and sound combinations, such as /ŋ/ or /bw/, that are never used in the initial position of words and syllables, and sounds and sound combinations, such as /h/ or /sv/, that are never used in the final position.

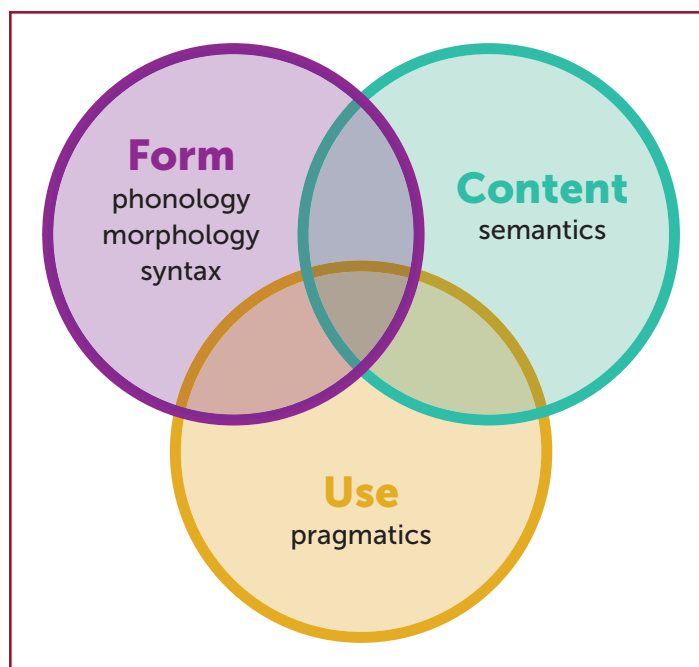


**FIGURE 1–2.** The components of language (Adapted from L. Bloom & Lahey, 1978).

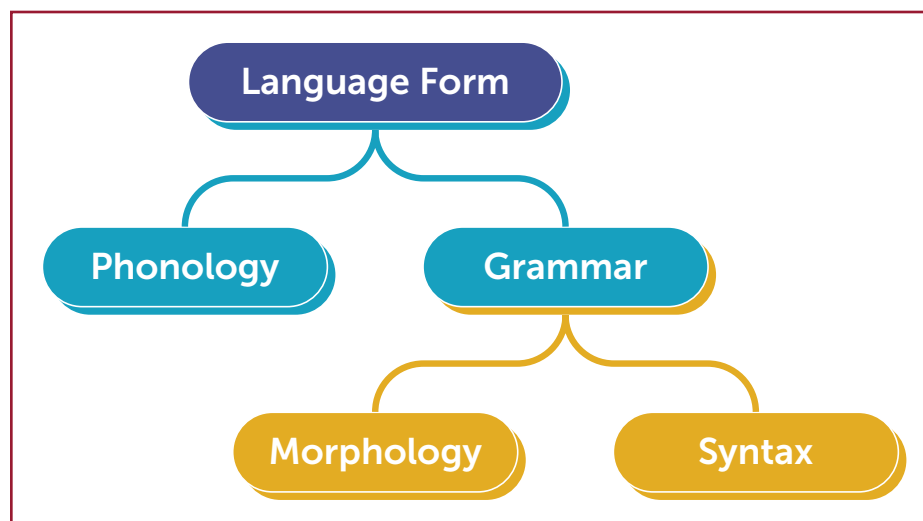


**FIGURE 1-3.** Language form: phonology and grammar.

Although languages from the same or similar linguistic families (e.g., Romance languages, Germanic languages) have some rules that overlap, there are numerous phonological rules that are specific to each language. For instance, in German, final consonant sounds are always devoiced. French (but not English) includes numerous words that begin with /ʒ/. In Hawaiian, all syllables and words must end with a vowel. Spanish and Portuguese include the rolling “r” that most native English speakers struggle to pronounce.

These rules are so entrenched that native speakers of a language can identify nonsense words that could, conceivably, be a “real” word in their native tongue versus those that could not. “Spet” would fit the parameters of English phonological rules and hence be identified as a potential “real” word by native English speakers, but not by Hawaiian speakers. On the other hand, the state fish of Hawaii is a “humuhumunukunukuapua’a,” which clearly doesn’t adhere to English phonological rules. (But you can just call it a reef trigger fish in English.)

Interestingly, babies initially babble using some phonemes that are not included in the language of their parents or caregivers. However, these sounds disappear fairly quickly, so that English babies babble in English (i.e., they use only the sounds and sound combinations found in English), Swedish babies babble in Swedish, and Japanese babies babble in Japanese (e.g., Best et al., 2016). Although this text does not specifically focus on phonological disorders, delays and/or disruptions in phonological development are associated with, and an early sign and symptom of, language delay (e.g., Stoel-Gammon, 2011; Vandewalle et al., 2012). So, it is important to consider the entire language system in the clinical management of children with language disorders.

### Morphology

Words are constructed of both units of sounds (**phonemes**) and units of meaning (**morphemes**). For instance, you may be aware of all four sounds in the word *cats*, but unless you know that the final /s/ means there is more than one cat, you may be in for a surprise if you think you are adopting a kitten and it turns out to be a litter.

When we combine phonemes in the right way, we produce meaningful units of language or morphemes. Like phonology, there are rules, specific to each language, that govern how morphemes are

used to combine and form words. Some morphemes, such as “house,” “sing,” and “big,” carry meaning without having to be attached to other morphological units. These are referred to as **free morphemes** because they can stand alone as meaning units.

**Bound morphemes**, which are prefixes or suffixes, have a degree of stand-alone meaning. For instance, most of us know that the prefix *mega-* means big. However, unless it is attached to another morpheme, such as “megaphone” or “megasaurus,” we don’t know to what big thing it refers. Being able to manipulate bound morphemes is critical to academic skills such as comprehension, reading, writing, and spelling (e.g., Deacon et al., 2014). Figure 1–4 provides examples of some common prefixes and suffixes.

Similar to other rules of language, you most likely learned how to recognize, combine, and remove morphemes of your native language with little effort or conscious thought. However, children with language disorders may struggle with the rules of morphology for the same reasons that negatively affect other aspects of language development. You will learn more about morphological development and intervention in Chapter 8.

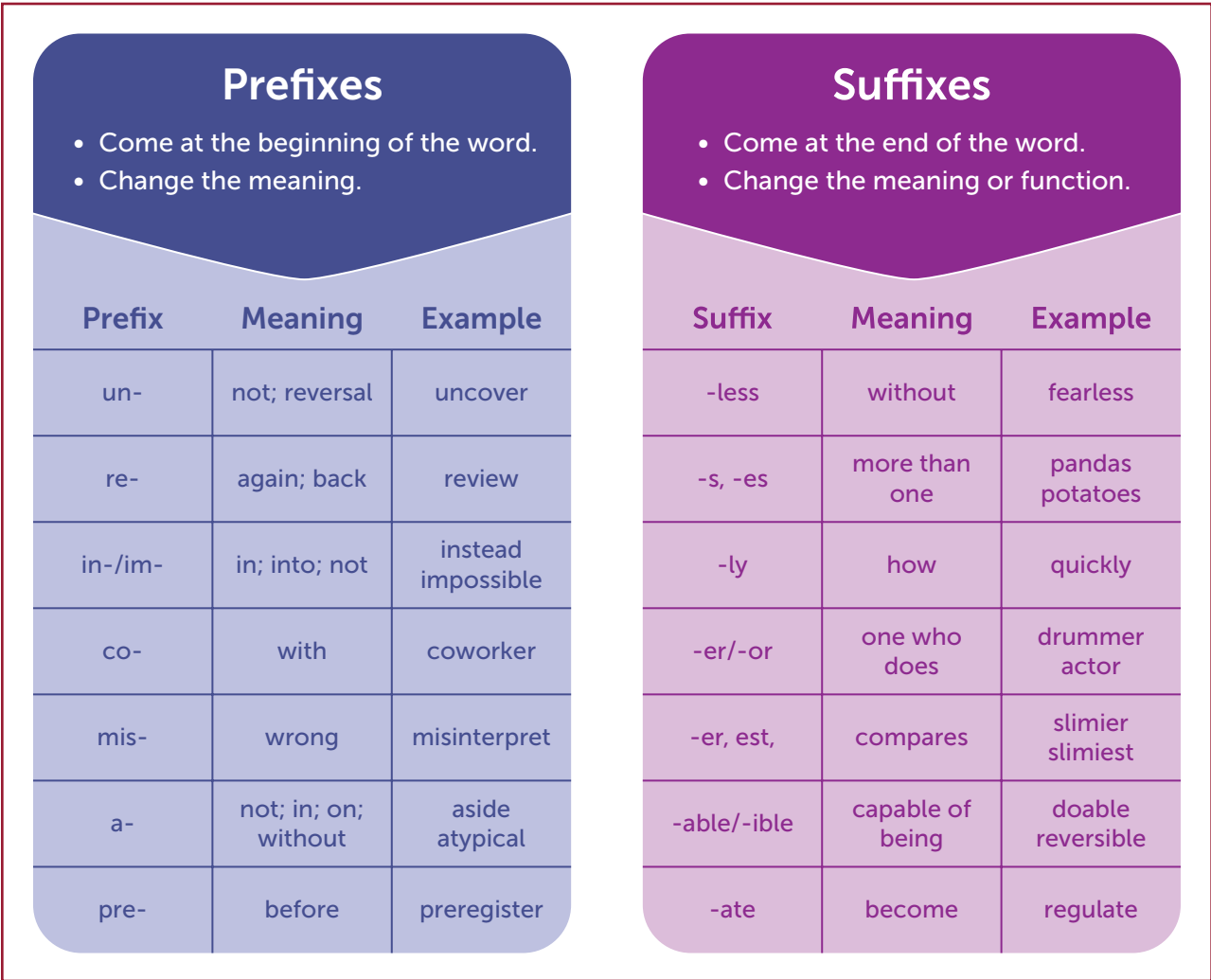


**FIGURE 1–4.** Common prefixes and suffixes.

## Syntax

**Syntax** refers to how words are combined in phrases, clauses, and sentences to convey meaning. As with the other subdomains of language form, syntactic rules are not linguistically universal. They are specific to each language.

For instance, English relies heavily on word order, requiring a strict subject-verb-object (S-V-O) sequence when constructing simple declarative sentences. In addition, adjectives must come before the noun they modify. Adverbs are close to the verb they modify. Violations of any of these rules make it difficult for the receiver to understand the sender's message. However, some languages, such as Polish and Russian, have free word order, relying instead on case markers at the ends of the words to denote their role in the sentence (and you thought English was complex).

Children who have difficulty with language form will most likely struggle to both send and receive messages. They may be able to understand simple statements such as "The dog barked." However, they will likely face challenges understanding sentences with phrases and clauses added to the main clause, such as "The dog who was looking out the window barked at the mailman when he approached the house." In the same way, a child with language delays might be able to retell two facts or events in simple sentences but not be able to combine them into a single sentence that expresses their relationship.

Consider a team of third-grade students who are participating in a science fair with their volcano experiment. When asked about their experiment, a student with typically developing language can explain the relationship between events using a complex sentence such as: "The volcano erupted because the baking soda reacted with the vinegar, which produced a gas and forced the liquid to bubble up." However, a student who is not able to form sentences that include adverbial and relative clauses will have to muddle through and hope their listener can fill in the blanks. At best, they might manage something like, "The volcano erupted. The baking soda reacted with the vinegar. Carbon dioxide gas forced the liquid to bubble up." You will learn more about syntax and intervention to address deficits in Chapter 7.

## Language Content

Language **content** (**semantics**) refers to the meaning that is conveyed through language. This includes the meanings of individual words as well as the way they are combined to create meaningful sentences. As children's vocabularies grow, they have more words to choose from and more ways to combine them to express their thoughts, ideas, wants, needs, narratives, or any other message. Semantics is not the same as syntax. It is possible to follow all the syntactic rules of English but still produce sentences that do not make sense.

Consider this sentence.

- *The heavy feather quickly ate the elephant.*

Now, answer these questions about the syntax of the sentence.

- ☐ Does this declarative sentence follow subject-verb-object order?
- ☐ Does the adjective come before the noun?
- ☐ Is the adverb near the word it modifies?

If you checked all the boxes, you are correct. This sentence follows all of the rules of English syntax. But,

- ☐ Does this sentence make sense?