chapter 1

Know the Code

Teacher's Reference on How English Works

IN THIS CHAPTER, I'VE CREATED A CONCISE REFERENCE FOR YOUR teaching. The purpose is to provide you with basic information about how the English system of writing works so that when you teach, you have an understanding of the system. Keep in mind that this is an abbreviated treatment of the topic specific to *teaching*. Within the field of linguistics there continue to be debates about categories, divisions, and labels (Moats 1998). I organize categories of letter–sounds together and present figures for each group. These groups match the categories of letter–sounds taught in the three main units—Letter Lessons, First Words, and Beyond First Words. Throughout the chapter, I identify the unit in which a group of letter–sounds is taught. For example, as I describe the basic consonant sounds in English, I note that these are addressed in Letter Lessons. Read this chapter to check what you know and what's new to you, from details to definitions to understandings. In the next chapter, we will get into the meaty, rewarding work of using this knowledge to support children.

Speech Versus Writing: What's the Difference?

Although to literate adults, the connections between oral language and written language are obvious, some very important differences exist. These distinctions can actually make it challenging for a young child to acquire the written system. Use the brief written conversation between Robby and his mom in Figure 1.1 to think about the difference between oral and written language.

FIGURE 1.1

Oral Language	Written Language
Robby: Aymom. Goin'ta jimz.	**Robby:** Hey, Mom. Going to Jim's.
Mom: Waid uh minud.	**Mom:** Wait a minute.
Robby: Beback afree.	**Robby:** Be back at three.
Mom: Kay don be too lawn.	**Mom:** Okay. Don't be too long.

Funny, isn't it? But this is actually how we sound in our everyday speech. We blur things together, don't enunciate sounds, and often do not even speak in complete sentences. It's no wonder that children get confused when we begin teaching reading and start separating words or talk about "sounds in words." To them, words blend altogether and the "sounds in words" are larger units of meaning.

Speech does not operate like writing. First, speech and oral language have been around for far longer than writing. According to many, while humans have a biological predisposition to create and use oral language (Chomsky 1986), writing is an invention. The first record of a written language is generally believed to be the Sumerian language in the third century BC. Even today, there are still languages that do not have a written form.

Second, speech is less permanent than writing. The very purpose of writing is to record, or hold permanent, the spoken word. In writing, there is a cue where one word ends and the next begins: a white space. As we saw in the example of Robby's conversation with his mom, people do not pause between each word when they speak. Writing is discrete and there are clearly distinguishable parts and a hierarchy for organization. The building blocks of speech are sounds and the building blocks of writing are visual symbols: you hear speech (unless you are hearing impaired) and you see writing and then hear it again when it is read aloud, as shown in Figure 1.2.

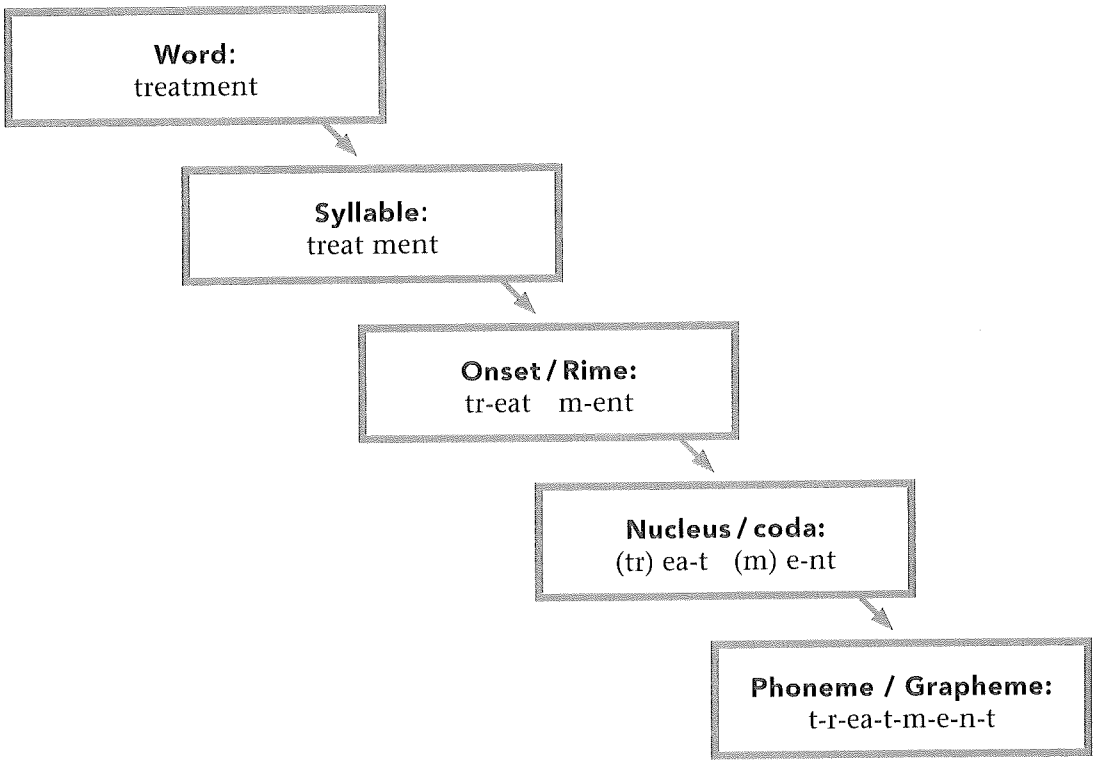
FIGURE 1.2

Phonemes, Speech Sounds Building Blocks of Speech	**Graphemes**, Letters Building Blocks of Writing
It is important to understand that phonemes are *speech* sounds, not just *sounds*. Think about sounds in your world that are not *speech sounds*—a lawn mower, two hands clapping. A *phoneme* is the smallest unit of sound in speech that distinguishes one word from another.	A grapheme is a letter or group of letters that represents a phoneme. The *grapheme* for a speech sound can be made up of one letter, as in the /a/ sound in *hat*, or it can be made up of more than one letter, as in the /a/ sound in *wait*. The vowel sound in *wait* has a grapheme made up of the letters *ai*.

Figure 1.3 shows the parts of words and how those parts map onto print.

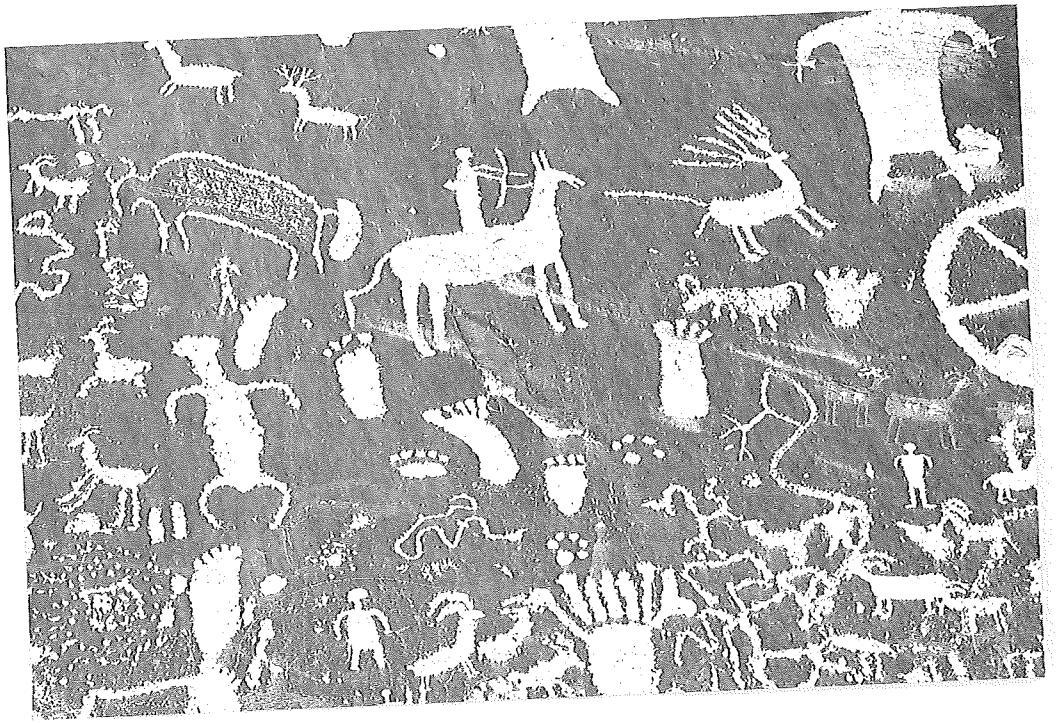
- A **word** is a single element of meaning that has a specific function (more about morphology below). Words can have one or more syllables.
- A **syllable** is a word or word part with at least one vowel, made with one push of breath. Syllables have vowels. Find the vowel groups in a word and you usually find the number of syllables in that word.
- A syllable can usually be broken down into an **onset** and a **rime**. The onset is the consonant sound(s) that comes before the vowel (e.g., ***c****-an*, ***th****-at*, ***tr****-ip*). Not all words have onsets (e.g., *at*, *in*). The rime is the part of the word with the vowel and all that comes after it (e.g., *c-**at***). Teachers often use the term *word family* or *phonogram* for the more technical term *rime*. The words *rime* and *word family* will be used interchangeably throughout the book. The rime can further be broken into a *nucleus* (which is always a vowel sound) and the *coda*, which is the part in a syllable what follows the vowel or ends the word.
- Lastly, words in English are broken down into **phonemes**.

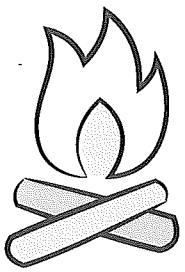
FIGURE 1.3 **Parts of a Word**



If this breakdown seems unnecessarily tedious, know that it is extremely useful in explaining how words work to a child. A teacher of prekindergarten, kindergarten, first grade, or second grade needs to show children how the parts work within this visual, written system. Teachers are making clear the relationships between the visual parts of writing and the spoken parts of English. When we teach children to read, we are teaching them how to *decode* or translate the *graphemes* into spoken words. We are also teaching them how to *encode* or *spell*: how to take spoken words and put them into a written form.

If we think about humans' invented writing systems and pay attention to the earliest attempts, we see that alphabetic approaches are complex, efficient, and parsimonious, but not natural or intuitive. They are also quite imperfect. The first attempts to "write down" speech were pictures or pictographs, symbols that directly represented the meaning of the spoken word (e.g., *table*, *man*, *girl*). We actually use pictographs today for signs and even in written texts. Of course, while pictographs are simple and straightforward because you only have one symbol for each word, they present several problems. First, it is difficult to represent words that are not concrete or imaginable, like abstract ideas (e.g., *love*), function words (e.g., *through*, *into*), or certain verbs (e.g., *wants*). Second, representing the words in a language in this way generates too many symbols for people to remember because oral languages have *at least* five thousand words that are essential and used heavily. For this reason, languages very quickly had to develop logographs or symbols representing words that could not be pictured.





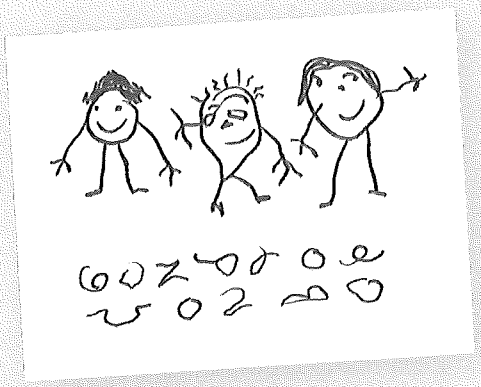
Smallest Word Units: Phonemes and Graphemes

Inventors of writing quickly learned that it is more efficient to develop a system based on a visual code that maps the sounds in a language. One way to be more efficient is to create symbols for sounds in speech and then recombine symbols to represent different words. In some languages with consistent syllable structures, like Japanese, developers created visual symbols to match *syllables*, a sound-based approach called a syllabary. In other languages, like English, developers created symbols to represent individual phonemes or speech sounds. Theoretically, an alphabetic system has a visual code for each speech sound. Although sound-based systems like syllabaries and alphabets are harder to learn initially, once you learn twenty to forty symbols, you are set up to read words.

In the simplest, most *transparent* alphabets, there is a symbol or grapheme for each speech sound / phoneme. This means, that once you learn the graphemes and sounds, you can recognize any word. Each grapheme is simply one alphabet letter. There is a direct, straightforward relationship between speech and print. The number of symbols closely matches the number of sounds. Cross-linguistic studies indicate that reading accuracy in very transparent languages (e.g., Greek, Finnish, German, Italian, French, Spanish) is almost complete for both words and nonwords by mid–first grade (Ziegler and Goswami 2005).

Pictures Are Natural for Young Children Too

As young children are becoming literate, they are like our early ancestors in that they use pictures to represent their ideas. In fact, their early approaches to symbolic representation are important and show cognitive development. At the initial stages of writing, children use pictures exclusively to represent their ideas. Then they begin to differentiate pictures from "writing," and often we see letter-like scribbles around their pictures, representing an important insight. Teachers can show young children how our alphabetic writing system works by drawing pictures and labeling them with words, thereby showing children how words differ from pictures.



English is not a *transparent* alphabet and it takes longer to learn. It is a *deep orthography*. (*Orthography* is a fancy name for spelling.) In deep orthographies, there is not a one-to-one sound–symbol relationship. Usually there are more sounds than symbols, so the letter symbols must be combined or altered to capture all the sounds (e.g., *sea, chip*). English has about forty-four sounds and twenty-six letters, but this number of sounds is often up for debate (Bizzochi 2017). In English, a deep orthography, children are only about 40 percent accurate with words and pseudowords by mid–first grade (Ziegler and Goswami 2005).

(Note: This does not mean that the incidence of dyslexia or severe reading difficulty at the word level is lower in Italian or Finnish. For about 5 to 10 percent of the population, serious word-reading difficulties occur regardless of the transparency of language because children still must have insight about the phonemic structure of words.)

Teachers of beginning readers must have a basic fluency with the letter–sounds or *phoneme–grapheme* relationships. I've included several figures that list this information, first for consonants and then for vowels. These figures will serve as a reference as you teach phonics. The vocabulary and language for particular letter–sounds will be used throughout the book. This is the toolbox of early literacy instruction. The divisions here are made mostly because they help organize the teaching of letter–sounds.

Some Consonant Sounds Can Be Similar

Say the sound for each consonant pair. What do you notice?

/p-b/ /t-d/ /k-g/ /v-f/ /z-s/

Place your hand on your vocal chords as you say each pair. How are the sounds the same? How are the sounds different? Do you feel your voice box (vocal chords) vibrate or "buzz" on one sound in the pair and not another?

Each of these pairs is made in the same *place* in the mouth and in the same *manner* or *way*. The sounds /p/ and /b/ are both bilabial (both lips) stop sounds. A stop sound is produced when air is blocked and then released to make the sound. The only thing that makes /p/ and /b/ different is that /b/ is voiced (vocal chords buzz or make a noise) and /p/ is unvoiced (vocal chords are silent).

How Does This Affect Teaching?

Because these pairs of sounds are so very similar, it is best *not* to teach them adjacently. For example, don't teach *Kk* and *Gg* in the same week or *Tt* and *Dd* in adjacent weeks. It might be easy for children to confuse these sounds because they make the sounds the same way in their mouths. For instance, for both /t/ and /d/, children start with their tongue against their teeth (place) and then push a breath of air out (manner) to make each sound. The only difference between these two sounds is that for /g / there is voicing (the vocal chords vibrate or buzz). Understanding these similarities is also helpful in interpreting children's spelling approximations. For example, it makes sense for a child to confuse the /k/ and /g/ sounds in spelling *go-kart* as *ko-grt*.

Single Consonants

Consonant sounds are made by closing off or partially constricting the flow of air through the vocal tract. When we make consonant sounds we tend to close our mouths, and when we make vowel sounds we open our mouths.

There are consonants graphemes (letters) that duplicate sounds already represented by other letters. These letters do not represent a unique sound. The letter *Cc* does not represent a unique sound, but represents the /s/ sound or the /k/ sound. The *Cc* will represent the /k/ or "hard sound" when followed by a *u*, *o*, or *a* and will represented the "soft sound" when followed by the *e*, *i*, or *y*. Another example of letters that do not represent unique phonemes are *Xx* and *Qq*. The letter *Xx* represents a consonant blend /ks/ or the sound /z/. The letter *Qq* is almost always accompanied by *u* and represents mostly the blend /kw/ but sometimes represents /k/. What's important to remember is that each letter does not have *its own sound*. So watch out when teaching *Cc*, *Xx*, or *Qq*.

The single consonant sounds are taught in the Letter Lessons unit in Chapter 4, which for most children should take place in kindergarten or prekindergarten. Both the name of the letter and common phoneme are taught. Letters like *Xx* and *Qq* are taught with the blended sound associated with the grapheme. Both the hard and soft *c* and *g* are taught as shown in Figure 1.4.

FIGURE 1.4

Single Consonant Sounds:
Sounds made by partially or fully restricting sound as it moves through the vocal tract
(Content taught in Letter Lessons unit.)

	Phonemes/ Speech Sounds	Letters	Graphemes/ Common Spellings (Letter Lessons)	Graphemes/Some Less Common Spellings (Most not taught in Letter Lessons and First Words)		Notes
1	/b/[1]	Bb	***b***ag			
2	/k/	Cc Kk	***c***at ***k***ite	ck ro***ck***	ch ***ch***ord	
3	/d/	Dd	***d***ad			
4	/f/	Ff	***f***un	ph ***ph***one	gh rou***gh***	
5	/g/	Gg	***g***ift	gu ***gu***ess	gh ***gh***ost	

continues

1 The slash marks around a letter are used to denote the phoneme or sound represented by the letter. These marks are actually the tool of linguistics and speech pathologists, and they are often used to record sounds using the International Phonetic Alphabet, a system with unique symbols for each English phoneme. That system is not used here because it is complex and unknown to most educators.

Single Consonant Sounds:
Sounds made by partially or fully restricting sound as it moves through the vocal tract
(Content taught in Letter Lessons unit.)

	Phonemes/ Speech Sounds	Letters	Graphemes/ Common Spellings (Letter Lessons)	Graphemes/Some Less Common Spellings (Most not taught in Letter Lessons and First Words)		Notes
6	/h/	Hh	***h***at			
7	/j/ /g/	Jj Gg	***j***oy ***g***iraffe	***g***em ca***g******e***		The letter *g* typically makes a /j/ sound after *e*, *i*, or *y* (e.g., *gem*, *gym*, *lodge*).
8	/l/	Ll	***l***eg			
9	/m/	Mm	***m***an			
10	/n/	Nn	***n***et	kn ***kn***ot	gn ***gn***ome	
11	/p/	Pp	***p***at			
12	/r/	Rr	***r***ob	wr ***wr***ing		
13	/s/	Ss Cc	***s***un	c ***c***ent ni***c***e		The letter *c* typically makes the /s/ when followed by *i*, *e*, or *y*.
14	/t/	Tt	***t***old			
15	/v/	Vv	***v***et			
16	/w/	Ww	***w***ork			
17	/y/	Yy	***y***ell			
18	/z/	Zz	***z***oo	rat***s*** wa***s***	x e***x***am	

Note: Not every letter in the English alphabet represents a unique sound (*Cc*, *Xx*, *Qu*). Also see chapter notes.

The first eighteen sounds shown are generally represented by a single consonant grapheme or letter, and generally single consonants are fairly predictable. That is, if you read a word with a single consonant, especially at the beginning of the word, it will make a predictable sound.

Consonant Digraphs

The consonant digraph sounds in Figure 1.5 include seven unique phonemes that are represented by combinations of consonant letters. A consonant digraph is two consonant letters that produce a new or unique speech sound. The most common consonant digraphs are *sh*, *ch*, and *th*. When these letters are adjacent to each other, they usually represent unique sounds. The *th* digraph has a voiced sound as in *th*at, in which the voice box or vocal cord "buzzes." It also has an unvoiced sound as in *th*in, in which the voice box does not buzz. (See the box "Some Consonant Sounds Can Be Similar," p. 6.) The voiced and unvoiced versions do not represent meaningful differences in English. The digraph subunit in the First Words unit is called Two for One because two letters are representing one sound.

FIGURE 1.5

	Phonemes/ Speech Sounds	Graphemes/ Common Spellings	Notes
19	/sh/	sh ***sh***ip	
20	/hw/	wh ***wh***y?	The /hw/ sound is spelled with the *wh* and has a slight breath before the /w/ sound. This is a unique sound, but it is difficult to distinguish from /w/.
21	/ch/	ch ***ch***ip	
22	/th/ (voiced)	th ***th***ose o***th***er	The "voiced" *th* sound will produce a "buzz" or a sound in the throat, as in *this*, *that*, or ga*th*er.
23	/th/ (unvoiced)	th ***th***ick	The "unvoiced" *th* sound will not produce a "buzz" or sound in the throat, as in *th*in or *th*ought. The voiced and unvoiced *th* are different phonemes / speech sounds, but they both are spelled the same way. Note: Although there are two sounds for /th/, voiced and unvoiced, these are not typically differentiated in *instruction*. Both voiced and unvoiced /th/ are taught together. This distinction does not differentiate meanings in words.

continues

	Phonemes/ Speech Sounds	Graphemes/ Common Spellings	Notes
24	/ng/	ng bri***ng***	Generally this sound, which is made in the back of the mouth, occurs in *-ing* words.
25	/zh/	s mea***s***ure z a***z***ure	This sound is almost always in the middle of words.

Consonant Blend or Digraph? Keeping These Two Terms Straight

I have found that people confuse the terms *blend* and *digraph*. Most often, they use the term *blend* when they are really talking about a digraph like *sh*. Remember, a blend (or consonant cluster) is a combination of consonant letters *in which each sound can still be heard.* In the word *grin*, both the /g/ and /r/ sounds can be heard. A digraph is a combination in which two letters represent one sound. In consonant digraphs, a different sound results from the combination of letters. In the digraph *sh*, you do not hear /s/ or /h/ but hear a new sound. (Note: It is important to use the term *consonant* before *digraph* because there are also vowel digraphs.) The easiest way to keep these words straight is to remember that the word *blend* has two consonant blends in it and the word *digraph* has a digraph, *ph*. See Figure 1.5. (Note that this *ph* digraph is used to spell the /f/ sound, but it is nonetheless a digraph.)

Consonant Blends/Clusters

Consonant blends or clusters are groups of consonants pronounced quickly with each consonant retaining its own sound. Most consonant blends have two consonants, like *gr*, but some have three, like *scr*, and some combine a blend with a digraph, like *thr*. The most common consonant blends found at the beginning of words are those with *l*, *r*, or *s*. Teach these in groups. Once students can hear the sounds in words with these blends, they can spell them. Some blends at the end of words are more subtle and more difficult to hear. For example, whenever an /n/ or /m/ sound is also followed by a consonant, it is hard to hear (e.g., *lump, bend*). Other ending blends like *-st* (e.g., *best*) are a bit more clear. With the more challenging ending blends, additional time and patience will be needed. See Figure 1.6. (Note: The list of ending blends in Figure 1.6 is not comprehensive. All are not included here. Other less common blends can be taught after the Beyond First Words unit.)

FIGURE 1.6

Consonant Blends or Consonant Clusters: Two or more adjacent consonants pronounced together within a syllable in which each consonant retains its separate sound. (Content taught in First Words unit.)

Beginning Sound Blends: Blends at the beginning of words.		
	Most Common	**Less Common**
r-blends consonant + *r*	tr-, gr-, br-, cr-, dr-, fr-, pr- ***tr***ip, ***gr***ab, ***br***ing, ***cr***ib, ***dr***ip, ***fr***og, ***pr***od	
s-blends *s* + consonant	sp-, st-, sw-, sk- ***sp***ot, ***st***op, ***sw***at, ***sk***ip	sc-, sm-, sn- ***sc***oot, ***sm***ell, ***sn***ap
l-blends consonant + *l*	bl-, cl-, pl-, gl-, fl-, sl- ***bl***eed, ***cl***ip, ***pl***ant, ***gl***ue, ***fl***ip, ***sl***ap	
Others		tw- ***tw***ist
Three Consonants	str- ***str***ing	spr-, scr-, spl- ***spr***ig, ***scr***ape, ***spl***it
Digraph Blend digraph + consonant	thr-, shr- ***thr***ill, ***shr***ink	
Ending Sound Blends: Blends at the end of words.		
n = blends *n* + consonant	-nd, -nt, -nk be***nd***, spe***nt***, ri***nk***	It is very difficult to hear the /n/ or /m/ sound when followed by another consonant. These are challenging. Teach slowly with repetition.
m = blends *m* + consonant	-mp ju***mp***	
t = blends consonant + *t*	-st, -ft mu***st***, le***ft***	
l = blends *l* + consonant	-ld, -lk, -lp, -lf mo***ld***, mi***lk***, he***lp***, e***lf***	

Source: Most common beginning blends are from Groff (1971).

Vowel Sounds: Short, Long, Diphthongs, "Other," and *R*-Controlled

Vowel sounds are made by opening the vocal tract. They are said to be the "song" of language, and, indeed, without vowels we would all go around clenching our jaws and spitting on each other. Just try to say, "This is happy" without saying the vowel sounds. All words have vowel sounds and most have vowel graphemes (e.g., *fry* does not have a vowel letter but has the /i/ sound). The twenty vowel categories offered here are useful for teaching reading, but they may not be the exact categories that linguists or speech pathologists use. Often linguists and speech pathologists include more categories and subdivide groups more than we do in literacy education. Linguists are interested in accurately representing all features of the language, not teaching people how to read. Speech specialists are focused on helping students *articulate* sounds, so they give more attention to describing how the sound is made. Vowels are organized into five categories: short vowels, long vowels, diphthongs, "other vowels," and *r*-controlled vowel sounds.

The words *short* and *long* make it seem as though the distinction between these sounds is how long you say them, but actually this is a misconception (Odden 2011). A long vowel sound and a short vowel sound are completely different. Long vowel sounds are the names of the letters. For example, the long *a* is /ay/ as in *day*. Long vowels are commonly denoted with a straight line, called a macron, over the vowel (e.g., ā). The short vowel sounds are the not the names. It would be the /a/ as in *cat*, often denoted with a breve over the vowel (e.g., ă). One distinction between short and long vowel sounds is that long vowel sounds are "tense." If you say the sounds /ay/, /ee/, /ie/, /oa/, and /ue/, you can feel that your tongue and the muscles in your jaw are tight or tense. If you say /a/, /e/, /i/, /o/, and /u/, you can feel that you are more relaxed or loose. Short vowel sounds are very consistent in single-syllable words. Usually when you have a single vowel in a word that ends in a consonant, the vowel is "short." Often this pattern is called a c-v-c pattern, which stands for consonant-vowel-consonant. Short vowels usually occur in words that end in a consonant. These are called "closed" syllables because the vowel sound is "closed" off by a consonant, as in *mat* and *top*. In contrast, an "open" syllable ends with a vowel sound, as in *go* and *bee*. Often short vowels are taught in what are called *rimes*, *phonograms*, or *word families* because at the very early stages of reading first words, it is easier to add a consonant sound to this unit than to fully sound out an entire word (e.g., c*at*, b*at*, s*at*, m*at*). See Figure 1.7. Linguistically the term *phonogram* means a sound written down, but in education people use this term to mean *rime* or *word family*.

Long vowel *sounds* have the most variety of *spellings*. Learning long vowels takes a long time because since we have only five vowel graphemes, we have to double up or combine letters to represent the different long vowel sounds. So, in order to represent the long *a* sound, the two vowels *ai* are written adjacently. The difficulty with long vowels is that each long vowel sound also has several variations. So long *a* can also be spelled with an *ay*. The long vowel sounds also employ the "silent" *e*, which marks a long vowel sound. The Sneaky Silent *e*, as it is called in the subunit in Beyond First Words, is pretty consistent. Figure 1.7 lists the most common spellings for each of the long vowel sounds and the less common patterns. In the Beyond First Words

unit in Chapter 6, the letter–sound patterns listed under "Most Common Graphemes/Spellings" are taught. Also, within that chapter are statistics from several studies that report how consistent these patterns are, so that you can know when you are teaching a pattern how likely that pattern is to occur again.

The sounds listed under "Diphthongs" in Figure 1.7 are /oi/ as in *noise* and /ou/ as in *shout.* These are generally called diphthongs because the sound changes quality in the middle of the sound. If you put your hands around your jaw as you say the sound, you can feel your mouth change. When children are trying to spell these, you can observe their confusion. If they try to write the word *oil*, for example, they might include up to three different vowel letters because they hear so many different sounds (e.g., *aeol*). (Note: Linguists use different definitions for diphthongs.)

"Other Vowels" in Figure 1.7 are sounds that are not short, long, or *r*-controlled. The sound /aw/ as in *law* is one of these. There are two sounds that the grapheme *oo* represents: the sound that is in *book* and the long *u* sound as in *boot.*

***R*-controlled vowels** are sounds that have a vowel sound along with an *r.* The *r* in these words can be called a "robber" because it steals the "vowelness" of a sound. In the Beyond First Words unit in Chapter 6, the *r*-controlled vowels are taught in a subunit called *R* the Robber. The first three *r*-controlled vowels are the least complicated: *or*, *ar*, and *er/ir/ur*. The /er/ sound is a little more difficult, as it has three different spellings: *ur*, *er*, and *ir* as in *hurt*, *her*, and *shirt.* The last two sounds combine an *r* with a vowel pattern (e.g., *ear*, *eer*).

FIGURE 1.7

Short Vowel Sounds: Sounds made with the vocal tract open in which the target sound is not the name of the letter. (Content taught in First Words unit.)

	Phonemes/ Speech Sounds	Graphemes/ Common Spellings	Less Common Graphemes/Spellings or Silent Letters			Notes
1	/a/	c*a*b				Most single vowels without an *r* in single-syllable words are short, especially if they are in a closed syllable. (Gates and Yale 2011).

continues

2	/e/	g***e***t	ea h***ea***d	ai s***ai***d		
3	/i/	f***i***t				
4	/o/	h***o***t	a w***a***sh, sw***a***p			
5	/u/	n***u***t				

Schwa: An unstressed vowel sound made in the middle of the mouth in which the target sound is /u/; found most often in multisyllabic words. (Not addressed in this book due to this book's focus on single-syllable word learning.)

6	/ə/	***a***bout, b***a***lloon tak***e***n penc***i***l ph***o***tography s***u***pply	There are countless spellings of the schwa sound, particularly in multisyllabic words.

Long Vowel Sounds: Sounds made with the vocal tract open in which the target sound is the name of the letter. (Content taught in Beyond First Words unit.)

	Phonemes/ Speech Sounds	Most Common Graphemes/Spellings			Less Common Graphemes/Spellings	
7	/a/	a-e b***a***k***e***	ai w***ai***t	ay d***ay***	ei ***ei***ght	
8	/e/	ee b***ee***t	ea m***ea***t		**y** bab***y***	e_e P***e******e*** th***e******s******e***
9	/i/	i-e l***i******e***	y fr***y***	igh n***igh***t	**ie** p***ie***	
10	/o/	o-e h***o******e***	oa b***oa***t	ow thr***ow***	o (with *-ld*) c***old***	

11	/u/	u-e fl***ute*** ***use***[1]	ew ***few***[1] gr***ew***	oo ***goo***se	ue bl***ue***	ui s***ui***t
	1 The sound in words like *few* and *use* have the sound /y/ at the beginning, making the sound /yoo/. For teaching purposes, the pure /u/ sound (e.g., *boot*, *grew*) and this sound are not differentiated.					
Diphthongs (Content taught in Beyond First Words unit.)						
	Phonemes/ Speech Sounds	Graphemes/ Common Spellings				
12	/oi/	oy t***oy***	oi n***oi***se			
13	/ow/	ow n***ow***	ou sh***ou***t			
Other Vowels						
14	/aw/	aw cl***aw***	au c***au***ght			
15	/oo/	oo b***oo***k t***oo***k				
***R*-Controlled Vowels: A vowel + *r* with a sound that is influenced heavily by the /r/ sound. (Content taught in Beyond First Words unit.)**						
16	/ar/	ar c***ar***				
17	/or/	or f***or***	ore ch***ore***	our t***our***		
18	/ir, er, ur/	ir f***ir***	er p***er***ch	ur b***ur***n		
19	/air/	are c***are***	air f***air***			
20	/eer/	ear d***ear***	eer st***eer***			

Glass Half Empty or Half Full? The Consistency Question in English

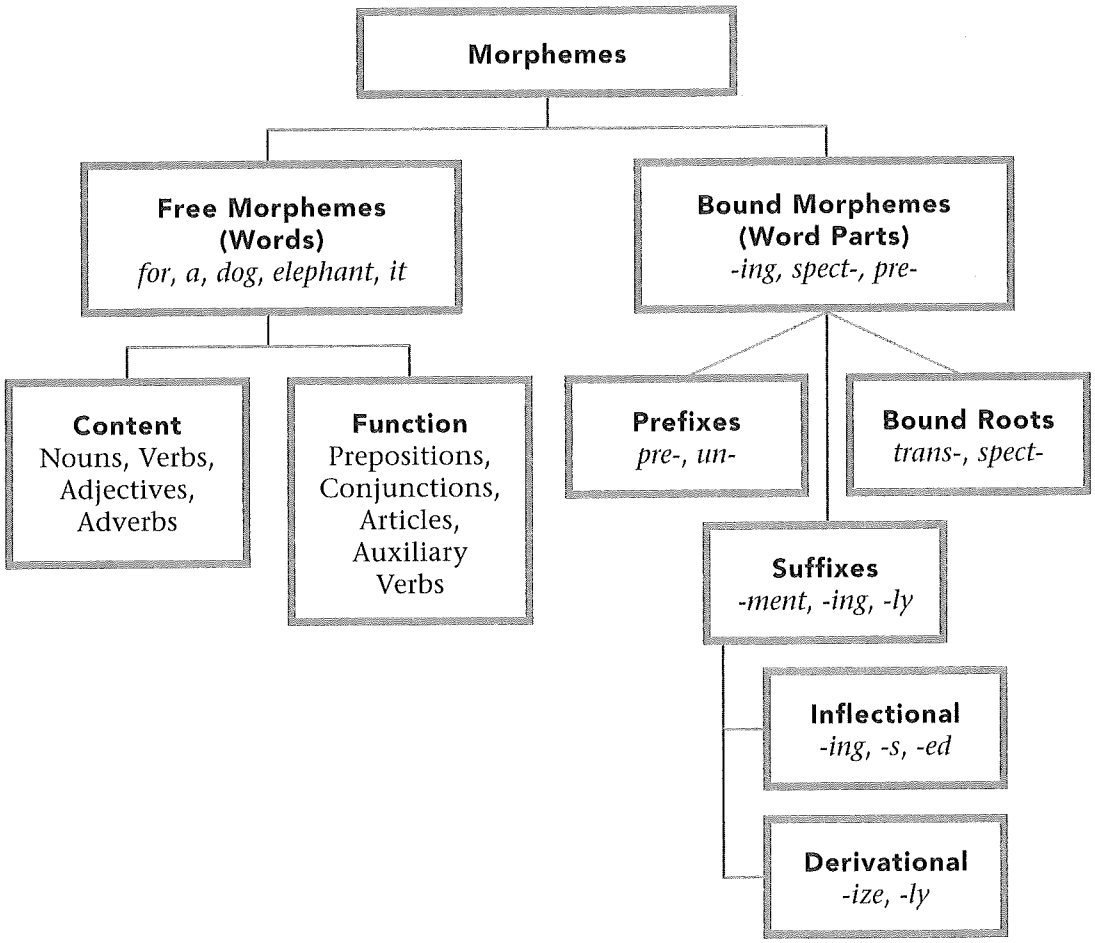
Many teachers, when given information about English, kind of throw their hands up and say, "Well, kids, you just have to memorize it 'cause it doesn't make sense!" That's not really helpful and not true. Really, we should ask, "Is English more consistent than it is inconsistent? Or vice versa? Should I teach as if there is something predictable or not?" The first thing to remember is that English is primarily an alphabetic language, meaning that the foundation of putting the language into a written form is based on using letters to represent phonemes. So we must teach the alphabetic principle and letter–sounds. Here are some facts. In terms of consistency, Moats (1995) found that 50 percent of English words are completely regular or consistent and another 37 percent are irregular at only one sound layer (e.g., *do, said*). Further, single consonants are pretty consistent, with most representing only one sound. If there is complexity, it is at the vowel level and usually for vowels that are not short and/or found in multisyllabic words. But even some of these are pretty consistent. (See Chapter 3, "Phonics 'Rules'?" box, p. 43.) For example, the *ee* pattern as in *bee* was consistent 90 percent of the time. So don't throw your hands up! The best way to teach children phonics is to start with the letter–sounds that are most consistent (e.g., single consonants, short vowels, and consonant digraphs) and then add on. There is also another level of representation that influences how we put speech into writing: "morphology." Often word parts are added to beginnings or endings that influence the meaning and the spelling (Bowers and Kirby 2010).

Smallest Unit of Meaning: Morphemes

This book focuses on reading and spelling single-syllable words, which in the early grades mostly involves learning phoneme–grapheme relationships. However, English is actually morphophonemic; letter–sounds do not fully drive the system. This information is relevant for more advanced readers.

A morpheme is the smallest unit of *meaning* in a language. Often a word can have multiple word parts that convey meaning, or multiple morphemes. Take, for example, the word *runner*. There are two morphemes in this word, the first part, *run*, and the second part, *er* (a person who *runs*). The first morpheme, *run*, is a free morpheme, a verb conveying a way of moving, and the second morpheme, *er*, is a bound morpheme that changes the verb to a noun and the meaning to "one who runs."

The first morphemic layer, words, is called **free morphemes**. These are units of meaning that can stand independently by themselves—words. There are two types of free morphemes: content words and function words. Content words are nouns, verbs, adjectives, and adverbs, and these words add meaning to sentences, paragraphs, and



passages. Function words are like the glue that holds those content words together, and they consist of prepositions, conjunctions, articles, and auxiliary verbs.

The group of morphemes that really affects teaching students to read words is called **bound morphemes**, which are word parts added to free morphemes to communicate some level of meaning. The *runner* example above illustrates this combination. There are three types of bound morphemes, prefixes, suffixes, and bound roots. Prefixes are word parts like *pre-*, *re-*, and *un-* that affect the meaning of a word through their addition (e.g., *preheat, rerun, unrepentant*). Bound roots are typically Greek or Latin word parts that must be combined with other morphemes, yet carry the main meaning in a word (e.g., ***spect**ator, in**spect**, **spect**acle*). Suffixes can be two types, inflectional and derivational. Inflections are parts that change tense or number, like *-ing, -ed,* and *-s*. Derivational morphemes change the part of speech (e.g., *-ment, -ly*). If you add *-ly* to the word *happy*, you make it into an adverb, *happily.*

In the United States, the discussions about phonics tend to focus almost exclusively on letter–sounds, but really our language is morphophonemic. After learning how to read and spell the patterns in single-syllable words (those addressed in this book)

students should have systematic instruction in meaningful word parts or morphemes as well (Kirby et al. 2012). In English multi-morphemic words outnumber single-morpheme words by a factor of four to one (Moats 1995), and although morphemic instruction becomes substantive in the upper-elementary grades, there are certain morphemic layers that are taught earlier. For example, adding inflections like *-s*, *-ing*, and *-ed* and learning about compound words happens in the primary grades.

If your mind is swimming after this chapter and you feel a bit overwhelmed, remember that this is a basic reference to return to when you are teaching. What is most important is that you come away with "file folders" or cognitive categories for types of sounds (e.g., single consonants, digraphs, consonant blends, short vowels, long vowels) and that you have an understanding of how these work.

Access to this information may actually prove more useful than you think. Let's say a parent challenges you and asks, "Why do you teach the consonant sounds first? Why don't you teach phonics rules?" You have information at your fingertips. I know you already know some of it, maybe all of it, but now the information is in one place, and you and I have the same understanding of terms and concepts. Let's get to work using this information to make children powerful, joyfully literate people!

For a downloadable glossary of terms, go to http://hein.pub/letterlessons-login.