Historical Layers of English

English is a layer-cake language (see *Figure 2.1*). Not only is it organized to represent sounds, syllables, and morphemes, but its spellings are derived from several languages that were amalgamated over hundreds of years due to political and social changes in Great Britain.

The base language of modern English is Anglo-Saxon, the Germanic tongue of the tribesmen who populated the British Isles before 1066. One of the first written and most enduring works of literature from that period was the epic poem *Beowulf*, recently translated by Heaney (2000). In the *Beowulf* excerpt (see *Figure 2.2* on page 18), we can recognize words such as **all** (*eallum*), **stood** (*stod*), and **house** (*husa*).

After the invasion by the Norman French armies and William the Conqueror in 1066, the language of the Norman French invaders (itself evolved from Latin, the language of ancient Rome) was imposed on British natives for almost 400 years. The French nobility and the ruling elite spoke and wrote French and Latin in the courts; the uneducated spoke Old English (Anglo-Saxon). Old French and Old English were gradually amalgamated, however, and evolved into Middle English by the early 14th century. An excerpt from Chaucer's *The Canterbury Tales* (see *Figure 2.2*), which was written in Middle English, has many recognizable words, although the spellings have changed: **full** (*ful*), **well** (*wel*), **her** (*hir*), **French** (*Frenssh*), **spoke** (*spak*), **school** (*scole*), and **unknown** (*unknowe*).

As printed material became more common in the 1500s, scholars who were trained in the classics brought thousands of Latin- and Greek-based words into English. In addition, they argued for consistent spelling, as there were no norms at the time. By the time Christopher Marlowe wrote *Dr. Faustus* in 1592 (see excerpt in *Figure 2.2*), modern English had arrived. With the growth of scientific disciplines and the need to name many discoveries, scholars also coined new terms from Greek morphemes—a convention that is still respected today when scientific discoveries are made. Greek morphemes are meaningful parts that can be combined more freely than Latin prefixes, roots, and suffixes.

Words from each historical layer of English have typical properties or features. These features, along with examples of words derived from each base language, are summarized in *Table 2.1* on the next page.

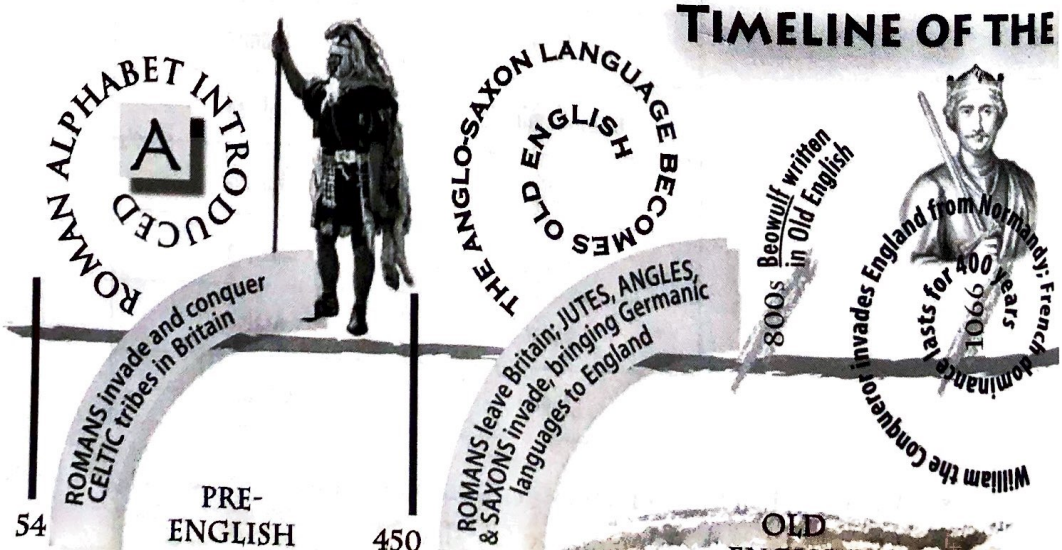
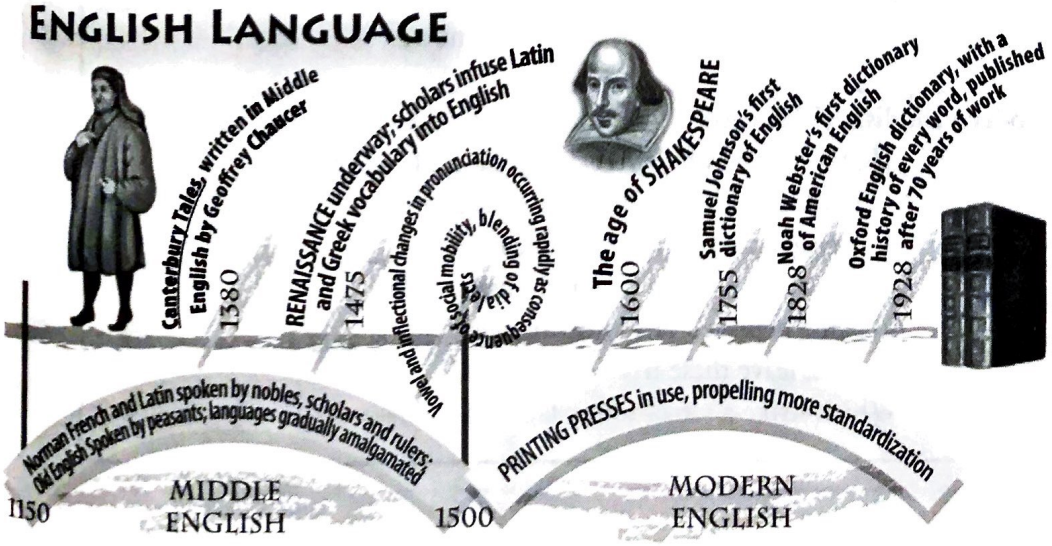


Figure 2.1. The Evolution of English

Table 2.1 Characteristics of English Words According to Language of Origin

Language of Origin	Features of Words	Word Examples
Anglo-Saxon (Old English)	• Short, one-syllable words, sometimes compounded • Use of vowel teams, silent letters, digraphs, diphthongs in spelling • Words for common, everyday things • Irregular spellings	sky, earth, moon, sun, water, sheep, dog, horse, cow, hen, head, arm, finger, toe, heart, shoe, shirt, pants, socks, coat, brother, father, mother, sister, hate, love, think, want, touch, does, were, been, would, do
Norman French	• **ou** for /ū/ • Soft **c** and **g** when followed by **e**, **i**, **y** • Special endings such as **-ine**, **-ette**, **-elle**, **-ique** • Words for food and fashion, abstract social ideals, relationships	amuse, cousin, cuisine, country, peace, triage, rouge, baguette, novice, justice, soup, coupon, nouvelle, boutique
Latin/Romance	• Multisyllabic words with prefixes, roots, suffixes • Content words found in text of social sciences, traditional physical sciences, and literature	firmament, terrestrial, solar, stellar, aquarium, mammal, equine, pacify, mandible, extremity, locomotion, paternal, maternity, designate, hostility, amorous, contemplate, delectable, deception, reject, refer
Greek	• Spellings **ph** for /f/, **ch** for /k/, and **y** for /ĭ/ • Constructed from combining forms, similar to English compounds • Philosophical, mathematical and scientific terminology	hypnosis, agnostic, neuropsychology, decathalon, catatonic, agoraphobia, chlorophyll, physiognomy



Words	1st Sound	2nd Sound	3rd Sound	4th Sound	5th Sound
4. **fresh**	f	r	e	sh	
5. **sting**	s	t	i	ng	
6. **croak**	c	r	oa	k	
7. **know**	kn	ow			
8. **shell**	sh	e	ll		
9. **stream**	s	t	r	ea	m
10. **through**	th	r	ough		

A Grapheme Is Not Just a Letter

The warm-up exercise asked you to put the letter or letters in each box that stands for a phoneme. The 26 alphabet letters that we inherited from the Romans are not sufficient for representing the 44 speech sounds of English! The **orthography**, or spelling system, of English does not represent phonemes in a straightforward, 1:1 manner, with one letter for each sound. We could spell English words in that way, but we would need a phonetic alphabet to do so, wherein a unique symbol is used for each sound in the language system.

A **grapheme** is a *letter* or *letter combination* that corresponds to or represents a phoneme. A grapheme is a functional spelling unit that can be mapped to an individual speech sound. Because English has fewer letters than speech sounds, letters tend to hold several jobs. The inventors of our modern English writing system overworked certain favorite letters, particularly **e**. They also used **y** for one consonant (**yellow**), three vowels (**gym**), and in several vowel teams (**day**, **key**, **boy**, **buy**).

An English grapheme may have as many as four letters. The combination **eigh** in **eight** is a grapheme; so is **igh** in **sight** and **ough** in **though**. The vowel in **cake** is spelled with the grapheme **a_e**, a letter combination that works together to represent a long vowel. The **-dge** combination at the end of **fudge** is also a grapheme that represents the phoneme /j/ at the ends of certain words.

Types of Consonant Graphemes

Consonant graphemes represent consonant phonemes. *Table 3.1* documents several categories of consonant graphemes.

Table 3.1. Types of Consonant Graphemes With Definitions

Type of Grapheme	Definition	Examples
Single letters	A single consonant letter that represents a single consonant phoneme.	b, d, f, g, h, j, k, l, m, n, p, r, s, t, v, w, y, z
Doublets	A double letter that represents one phoneme.	ff, ll, ss, zz
Digraphs	A two(di)-letter combination that stands for one phoneme; no letter acts alone to represent the sound.	th, sh, ch, wh ph, ng (**sing**) gh (**cough**) (**-ck** is a guest in this category)
Trigraphs	A three(tri)-letter combination that stands for one phoneme; no letter acts alone to represent the sound.	-tch -dge
Consonants in blends	A blend contains two or three graphemes because the consonant sounds are separate and identifiable. A blend is not "one sound."	s-c-r (**scrape**) th-r (**thrush**) c-l (**clean**) f-t (**sift**) l-k (**milk**) s-t (**most**) and many more
Silent-letter combinations	One or more letters that do not represent the phoneme are combined with a letter that does represent the phoneme. Most of these are from Anglo-Saxon or Greek.	kn (**knock**), wr (**wrestle**), gn (**gnarl**), ps (**psychology**), rh (**rhythm**), -lm (**palm**), -lk (**folk**), -mn (**hymn**), -st (**listen**)

(continued)

Type of Grapheme	Definition	Examples
Odd letter **x**	The letter **x** is the only letter that stands for two phonemes (/k/ and /s/) and occasionally /g/ and /z/.	**box, exit** **exact, exist**
Combination **qu**	These two letters, always together, stand for two sounds: /k/ and /w/. They do not stand for "one sound."	**quickly**

Blends are not "one sound," even though fast blending of these sounds is a goal in reading instruction. Consonant blends have two or three consonant phonemes before or after a vowel in a syllable. Sometimes digraphs are used within blends. The word **shrink** has a beginning blend that contains a digraph (**shr**) and an ending blend (**nk**). Learning word spellings and meanings depends on accurate processing of each individual sound in a blend. Words such as **flesh**, **fresh**, and **flush** are not to be confused! Nor are **tap** and **trap**, or **tenant** and **tenet**.

Many phonemes have more than one spelling or grapheme representation. Some of those spellings are very common; others are quite unusual. Common spellings (graphemes) for each of the consonant phonemes are listed in *Table 3.2*.

Table 3.2. Inventory of Consonant Graphemes

Phoneme	Word Examples	Graphemes for Spelling*
/p/	pat, spa, stomp	p
/b/	but, brought, stubble	b
/m/	milk, bomb, autumn	m, mb, mn
/t/	tent, putt, missed	t, tt, ed
/d/	desk, dress, summed	d, ed
/n/	neck, know, gnaw	n, kn, gn
/k/	cot, kettle, deck, chorus, talk, unique, quit	k, c, ck, ch, lk, que, qu
/g/	get, ghost	g, gh
/ng/	rang, dank	ng, n
/f/	staff, asphalt, rough, half	f, ff, ph, gh, lf

Phoneme	Word Examples	Graphemes for Spelling*
/v/	very, give	v, ve
/s/	suit, pass, scent, psycho	s, ss, sc, ps
/z/	zen, fuzz, rise, his, xerox	z, zz, se, s, x
/th/	thing, bath, ether	th
/th/	that, seethe, weather	th
/sh/	shawl, pressure, sugar, chagrin, conscious, spatial, mission, special	sh, ss, s, ch, sc, ti, si, ci
/zh/	measure, seizure, vision, rouge	s, z, si, -ge
/ch/	cheese, sketch, (furniture)	ch, tch, (tu)
/j/	judge, page	j, dge, ge
/l/	lice, pill, bubble	l, ll, le
/r/	rat, wrist	r, wr
/y/	your, europe, unique, onion	y, (u, eu), i
/w/	want, question	w, (q)u
/wh/	whale	wh
/h/	harm, whose	h, wh

* Graphemes are spellings for individual phonemes. The graphemes in this word list are among the most common spellings, but the list does not include all possible graphemes for a given consonant phoneme. Most graphemes are more than one letter.

Some consonant graphemes are more common than others. *Table 3.3* on the next page shows the frequency of consonant spellings in each consonant phoneme.

Table 3.3. Frequency of Graphemes for Consonant Phonemes in English
(Hanna, Hanna, Hodges, & Rudorf, 1966; Fry, 2004)

Phoneme	Grapheme (word example)	% of Use*
/p/	**p** (pin)	96
	pp (happen)	4
/b/	**b** (big)	97
/t/	**t** (top)	97
/d/	**d** (do)	98
/k/	**c** (car)	73
	k (kit)	13
	ck (sick)	6
	ch (choir)	3
/g/	**g** (girl)	88
	gg (egg)	5
	x (exit)	3
/m/	**m** (mad)	94
	mm (dimmer)	4
/n/	**n** (no)	97
	kn (know)	<1
/ng/	**ng** (sing)	59
	n (monkey)	41
/f/	**f** (fox)	78
	ph (phone)	12
	ff (stuff)	9
/v/	**v** (very)	99.5
	-ve (have)	--
/th/	**th** (bath)	100
/<u>th</u>/	**th** (the)	100
/s/	**s** (say)	73
	c (cereal)	17
	ss (toss)	7
/z/	**s** (was)	64
	z (zero)	23
	es (flies)	4
	x (xylophone)	4

Phoneme	Grapheme (word example)	% of Use*
/sh/	**ti** (action)	53
	sh (shy)	26
	ci (special)	5
	ssi (fission)	3
/zh/	**si** (incision)	49
	s (pleasure)	33
	g (garage)	15
/ch/	**ch** (chair)	55
	t (feature)	31
	tch (catch)	11
/j/	**ge** (age)	66
	j (jet)	22
	dge (edge)	5
	d (soldier)	3
/y/	**i** (onion)	55
	y (yes)	44
/wh/	**wh** (white)	100
/w/	**w** (way)	92
	u (suede)	7.5
/h/	**h** (hot)	98
/l/	**l** (leg)	91
	ll (tell)	9
/r/	**r** (run)	97
/k/+/s/	**x** (six)	90
	cs (topics)	10
/k/+/w/	**qu** (quit)	97

* Not all graphemes are included; thus, some totals do not equal 100%.

Exercise 3.1 Identify Types of Consonant Graphemes

- Which word in each pair has a digraph? (Circle the word.)
  cough—ought **through—Thomas** **shepherd—Gephardt**
- Which word in each pair has a consonant blend? (Circle the word.)
  comb—camp **rink—wrong** **dolt—doubt**
- Underline the consonant blends and box the digraphs in these words:
  grapheme **through** **slough**
- What is the base word for each of these words?

  autumnal _____ **hymnal** _____

  signal _____ **bombardier** _____

  Of each pair, which word has silent letters? (Circle the word.)

Types of Vowel Graphemes

Vowel graphemes (see *Table 3.4*) may contain as many as four letters, as in **weigh** (/w/ /ā/). Syllable types, which are covered later in this module, will be organized around vowel spellings. (The term *vowel digraph* is not used because the prefix **di-** means "two," and vowel graphemes sometimes have three and four letters.)

Table 3.4. Types of Vowel Graphemes With Definitions

Grapheme Type	Definition	Example
Single letters	A single vowel letter that stands for a vowel sound.	(short vowels) cap, hit, gem, clod, muss (long vowels) me, no, music
Vowel teams	A combination of two, three, or four letters that stand for a vowel sound.	(short vowels) head, hook (long vowels) boat, sigh, weigh (diphthongs) toil, bout

(continued)

Grapheme Type	Definition	Example
*Vowel-**r** combinations*	A vowel, followed by the letter **r**, that works in combination with /r/ to make a unique vowel sound.	car, sport, her, burn, first
*Vowel-consonant-**e*** (VC**e**)	A common pattern for spelling a long vowel sound.	gate, mete, rude, hope, five

The most common spellings for each vowel are listed by example in the Vowel Phonemes Chart (see *Figure 3.1*, next page) first introduced in Module 2. Most vowels have several spellings; the long vowels have more spellings and are less predictable than the short vowels. That is why most reading programs begin with short vowel (closed) syllables.

Teaching Tip

The vowels that young students most often confuse are close to each other in articulation (e.g., **cut, cot, caught; fill, fell, fail; boot, bought, boat**). Introduce vowel spellings in an order that emphasizes wide contrasts (e.g., /ĭ/ and /ŏ/) *before* close contrasts, such as /ĭ/ and /ĕ/.

Consonant Spelling Patterns

Consider how the sound /f/ is spelled in these words:

fun **half** **puff** **cough** **graph** **phone**

Some consonant sounds are spelled with the same letter or letter combination almost all the time; they are highly predictable (see Chapter 3, *Table 3.2* and *Table 3.3*). But instead of having just one grapheme for each phoneme, English often uses several letters or letter combinations in predictable ways, depending on where the phoneme is placed (i.e., the beginning, middle, or end of a syllable) or what other sounds come before or after it. For example, in the words above:

- we use single letter **f** for /f/ when the sound begins a word, but we never use **ff** or **gh** for /f/ at the beginning of a word;
- double **f** occurs only right after a stressed short vowel sound; and
- the digraph **ph** can be used in any position as long as the word is of Greek origin.

Many more consonant phonemes have more than one spelling depending on the position of the phoneme in a word or sounds that come before or after the target phoneme. For example, the speech sound /k/ can be spelled **c**, **k**, **-ck**, and **ch**; words of Greek origin, like **character**, use **ch** for /k/.

Exercise 4.1 Word Sort: Spelling Patterns for /k/

- Sort the words in this table by the spellings for the phoneme /k/: **c**, **k**, and **ck**.

coat	kettle	Kyle
kayak	clear	sneak
knack	hook	koala
circus	cent	cuddle
cycle	deck	kangaroo
kitchen	cover	flock
pick	flak	squawk
nice	cyclone	stuck
catch	kind	

Exercise 4.3 Word Sort—Spelling Patterns for /ch/

- Sort the words in this table by the spelling of the last sound.

ch
~~after~~ consenant
or long vowel

munch	latch	gulch
smooch	bench	wretch
such	pitch	belch
screech	much	launch
botch	rich	couch
winch	match	branch
welch	starch	filch
clutch	which	fetch

1. When do we use **-tch** for /ch/?

~~after consenant~~, ~~or~~ short ~~long~~ vowel

2. When do we use **-ch** for /ch/?

after consenant, or long vowel and double vowel

3. There are four exception words to the **-ch** spelling rule in this table. Did you find them?

N

Table 4.1 explains other "choice" patterns in which spellings for phonemes depend on the position of a phoneme in a word and, in some instances, language of origin.

Table 4.1. Additional Consonant Phoneme-Grapheme Generalizations

/n/ — **kn-, gn-**	These silent-letter spellings occur only at the beginnings of words of Anglo-Saxon origin (**knight, gnat**).
/g/ — **gh-, -gue**	A limited set of English words that refer to **ghostly, ghastly,** and **ghoulish** things begins with **gh**. The grapheme **-gue** closes off French-derived words such as **intrigue, fatigue,** and **league**.
/kw/ — **qu**	This is the only two-letter spelling that stands for two unique speech sounds (/kw/). The letter **q** is always followed by **u** in English (**quick, question**). Words from other languages, such as Arabic, may use plain **q** for /k/ in English translation (**Iraq**).
/j/ — **-dge, -ge**	No word in English is allowed to end in a plain **j** letter. At the ends of syllables, after accented short vowels, **-dge** is used for /j/ (**dodge, fudge, sledge**). After long vowels, diphthongs, unaccented vowels (schwa), or other consonants, **-ge** is used (**wage, scrooge, village**).

Vowel Spelling Patterns

Word sorting is also a good technique for teaching vowel spelling patterns. Many vowel spellings are determined by the place of the vowel sound in a word. For example, /oi/ is spelled two ways: **oy** is used at the ends of syllables and **oi** is used when the sound is at the beginning or middle of a syllable. The spellings of vowels according to their position in the word are listed in *Table 4.2* on the next page.

Weak knowledge of vowel correspondences is typical of third and fourth graders who make decoding and spelling errors.

Six Syllable Types

Six written syllable-spelling conventions are used in English spelling. These were regularized by Samuel Webster to justify his 1806 dictionary's division of syllables. The conventions are useful to teach because they help students remember when to double letters in spelling and how to pronounce the vowels in new words. The conventions also help teachers organize decoding and spelling instruction. (A summary of the six syllable types is illustrated in *Table 5.1* on page 54.)

Warm-Up: Why Double?

- Read this fascinating tale. As you read, underline words in which there are two or more consonants between the first and second syllables.

> Thunker's pet cats, Pete and Kate, enjoyed dining on dinner. They were fated to fatness. The pet Pete, who was cuter than Kate, was a cutter cat with sharp claws and teeth, scary scars, and one jagged ear.
>
> Pete was ripping up ripening apples and biting bitter strips of striped bug bits as he stared into the starry night. The cat Kate was not as scared or scarred. Kate liked licking slimy slops that slopped from a bucket, sitting at a site that sloped and caused the slop to slide. Kate liked sitting at the site where the slops slid.
>
> **—Created by Bruce Rosow (Moats & Rosow, 2003)**

What do you notice about the vowel sounds that come before the doubled consonants?

Why Teach Syllables?

① because It helps us to distinguish similar words

② to remember spelling

Without a strategy for chunking longer words into manageable parts, students may look at a longer word and simply resort to guessing what it is—or altogether skipping it. Familiarity with syllable-spelling conventions helps readers know whether a vowel is long, short, a diphthong, **r**-controlled, or whether endings have been added. Familiarity with syllable patterns helps students to read longer words accurately and fluently and to solve spelling problems—although knowledge of syllables alone is not sufficient for being a good speller.

Spoken and Written Syllables Are Different

Say these word pairs aloud and listen to where the syllable breaks occur:

bridle – riddle **table – tatter** **even – ever**

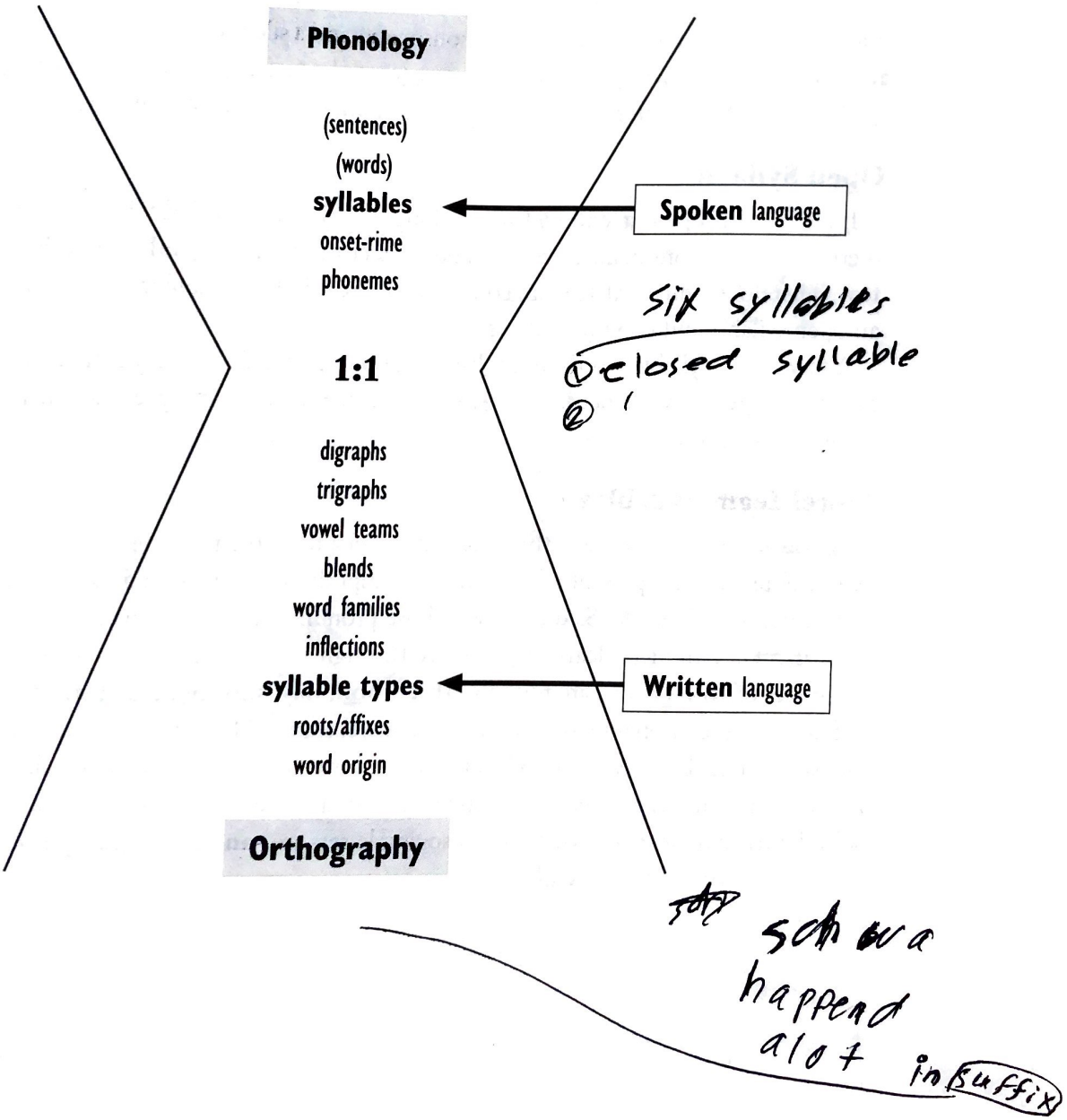
Spoken syllables are organized around a vowel sound. Each word above has two syllables. The jaw drops open when a vowel in a syllable is spoken. Syllables can be counted by putting your hand under your chin and feeling the number of times the jaw drops for a vowel sound.

Spoken syllable divisions often do not coincide with or give the rationale for the conventions of *written* syllables. In the first word pair above, you may naturally divide the spoken syllables of **bridle** between **bri** and **dle** and the spoken syllables of **riddle** between **ri** and **ddle**. Nevertheless, the syllable **rid** is "closed" because it has a short vowel; therefore,

it must end with consonant. The first syllable **bri** is "open," because the syllable ends with a long vowel sound. The result of the syllable-combining process leaves a double **d** in **riddle** (a closed syllable plus consonant-**le**) but not in **bridle** (open syllable plus consonant-**le**). These spelling conventions are among many that were invented to help readers decide how to pronounce and spell a printed word.

The hourglass (*Figure 5.1*) illustrates the chronology or sequence in which students learn about both spoken and written syllables. Segmenting and blending spoken syllables is an early phonological awareness skill; reading syllable patterns is a more advanced decoding skill, reliant on student mastery of phoneme awareness and phoneme-grapheme correspondences.

Figure 5.1. Hourglass Depiction of the Relationship Between Awareness in Oral Language and Written Syllable Decoding
(Contributed by Carol Tolman, and used with permission.)



Closed Syllables

The closed syllable is the most common spelling unit in English; it accounts for just under 50 percent of the syllables in running text. When the vowel of a syllable is short, the syllable will be closed off by one or more consonants. Therefore, if a closed syllable is connected to another syllable that begins with a consonant, two consonant letters will come between the syllables (**com-mon**, **but-ter**).

Two or more consonant letters often follow short vowels in closed syllables (**dodge**, **stretch**, **back**, **stuff**, **doll**, **mess**, **jazz**). This is a spelling convention; the extra letters do not represent extra sounds. Each of these example words has only one consonant phoneme at the end of the word. The letters give the short vowel extra protection against the unwanted influence of vowel suffixes (**back<u>ing</u>**; **stuff<u>ed</u>**; **mess<u>y</u>**).

Vowel-Consonant-e (VCe) Syllables

Also known as "magic **e**" syllable patterns, VC**e** syllables contain long vowels spelled with a single letter, followed by a single consonant, and a silent **e**. Examples of VC**e** syllables are found in **w<u>a</u>ke**, **wh<u>a</u>le**, **wh<u>i</u>le**, **y<u>o</u>ke**, **y<u>o</u>re**, **r<u>u</u>de**, and **h<u>a</u>re**. Every long vowel can be spelled with a VC**e** pattern, although spelling "long **e**" with VC**e** is unusual.

Open Syllables

If a syllable is open, it will end with a long vowel sound spelled with one vowel letter; there will be no consonant to close it and protect the vowel (**<u>to</u>-tal**, **<u>ri</u>-val**, **<u>bi</u>-ble**, **<u>mo</u>-tor**). Therefore, when syllables are combined, there will be no doubled consonant between an open syllable and one that follows.

A few single-syllable words in English are also open syllables. They include **me**, **she**, **he** and **no**, **so**, **go**. In Romance languages—especially Spanish, Portuguese, and Italian—open syllables predominate.

Vowel Team Syllables

A vowel team may be two, three, or four letters; thus, the term *vowel digraph* is not used. A vowel team can represent a long, short, or diphthong vowel sound. Vowel teams occur most often in old Anglo-Saxon words whose pronunciations have changed over hundreds of years. They must be learned gradually through word sorting and systematic practice. Examples of vowel teams are found in **th<u>ie</u>f**, **b<u>oi</u>l**, **h<u>ay</u>**, **s<u>ui</u>t**, **b<u>oa</u>t**, and **str<u>aw</u>**.

Sometimes, consonant letters are used in vowel teams. The letter **y** is found in **ey**, **ay**, **oy**, and **uy**, and the letter **w** is found in **ew**, **aw**, and **ow**. It is not accurate to say that "**w** can be a vowel," because the letter is working as part of a vowel team to represent a single vowel sound. Other vowel teams that use consonant letters are **-augh**, **-ough**, **-igh**, and the silent **-al** spelling for /aw/, as in **walk**.

Vowel-r Syllables

We have chosen the term "vowel-**r**" over "**r**-controlled" because the sequence of letters in this type of syllable is a vowel followed by **r** (**er**, **ir**, **ur**, **ar**, **or**). Vowel-**r** syllables are numerous, variable, and difficult for students to master; they require continuous review. The /r/ phoneme is elusive for students whose phonological awareness is underdeveloped. Examples of vowel-**r** syllables are found in **perform**, **ardor**, **mirror**, **further**, **worth**, and **wart**.

Consonant-le (C-le) Syllables

Also known as the *stable final syllable*, C-**le** combinations are found only at the ends of words. If a C-**le** syllable is combined with an open syllable—as in **cable**, **bugle**, or **title**—there is no doubled consonant. If one is combined with a closed syllable—as in **dabble**, **topple**, or **little**—a double consonant results.

Not every consonant is found in a C-**le** syllable. These are the ones that are used in English:

-ble (bubble)	**-fle** (rifle)	**-stle** (whistle)	**-cle** (cycle)
-gle (bugle)	**-tle** (whittle)	**-ckle** (trickle)	**-kle** (tinkle)
-zle (puzzle)	**-dle** (riddle)	**-ple** (quadruple)	

Simple and Complex Syllables

Closed, open, vowel team, vowel-**r**, and VC**e** syllables can be either simple or complex. A **complex syllable** is any syllable containing a *consonant cluster* (i.e., a sequence of two or three consonant phonemes) spelled with a *consonant blend* before and/or after the vowel. **Simple syllables** have no consonant clusters.

Simple	Complex
late	plate
sack	stack
rick	shrink
tee	tree
bide	blind

Complex syllables are more difficult for students than simple syllables. Introduce complex syllables after students can handle simple syllables.

Table 5.1. Summary of Six Types of Syllables in English Orthography

Syllable Type	Examples	Definition
Closed	**dap**-ple **hos**-tel **bev**-er-age	A syllable with a short vowel, spelled with a single vowel letter ending in one or more consonants.
Vowel-Consonant-**e** (VCe)	com-**pete** des-**pite**	A syllable with a long vowel, spelled with one vowel + one consonant + silent **e**.
Open	**pro**-gram **ta**-ble **re**-cent	A syllable that ends with a long vowel sound, spelled with a single vowel letter.
Vowel Team (including diphthongs)	**aw**-ful **train**-er con-**geal** **spoil**-age	Syllables with long or short vowel spellings that use two to four letters to spell the vowel. Diphthongs **ou/ow** and **oi/oy** are included in this category.
Vowel-**r** (r-controlled)	in-**jur**-i-ous con-**sort** **char**-ter	A syllable with **er**, **ir**, **or**, **ar**, or **ur**. Vowel pronunciation often changes before /r/.
Consonant-**le** (C-**le**)	drib-**ble** bea-**gle** lit-**tle**	An unaccented final syllable that contains a consonant before /l/, followed by a silent **e**.
Leftovers: Odd and Schwa syllables	dam-**age** act-**ive** na-**tion**	Usually final, unaccented syllables with odd spellings.

Exercise 5.2 Musical Syllables

- Your instructor will distribute these syllables on index cards:

boe	lin	tor	pro	flute	gan	gle	chor	o	duce	tle	horn
bone	vi	us	ket	di	cym	bu	or	rec	trom	bal	drum
board	pet	harp	key	trum	ist	lead	er	mu	sic		

- Move into groups, and sort the syllables under the column headings in this table.

Closed	VCe	Open	Vowel Team	Vowel-r	C-le

- Now, with a partner, combine the syllables into 17 terms that relate to music or musical performance.

Principles of Syllable Division for Reading Longer Words

Students need a strategy for decoding longer words to avoid wild guessing or over-reliance on context. The basic principles in *Table 5.2* are quite reliable. If possible, work with letter cards, letter tiles, and/or syllable boards to experiment with these principles.

Table 5.2. Three Useful Principles for Chunking Longer Words Into Syllables

1. VC-CV: Two consonants between two vowels	When syllables have two adjacent consonants between them, we divide between the consonants. The first syllable will be closed (with a short vowel).	**sub-let** **nap-kin** **pen-ny** **win-some**
2. V-CV and VC-V: One consonant between two vowels	a. First, try dividing *before* the consonant. This makes the first syllable open and the vowel long. (This strategy will work 75 percent of the time with VCV syllable division.) b. If the word is not recognized, try dividing *after* the consonant. This makes the first syllable closed and the vowel short. (This strategy will work 25 percent of the time with VCV syllable division.)	**e-ven** **ra-bies** **de-cent** **ev-er** **rab-id** **dec-ade** **riv-er**
3. Consonant blends	Consonant blends usually stick together. Do not separate digraphs when using the first two principles for decoding.	**e-ther** **spec-trum** **se-quin**

Basic Procedure for Reading Big Words

The following sample teaching strategies for reading big words can be found in programs such as *REWARDS* (Archer, Gleason, & Vachon, 2005). These routines should be posted, practiced, and applied consistently until students internalize them and develop fluency with longer words.

1. Locate and draw a line under each vowel grapheme in the word—but not final silent **e**. (Vowel teams are one vowel sound.) If necessary, mark the vowel and consonant sequences with "v" or "c" under the letters in the word.
2. Box any familiar word ending (suffix), such as **-ing**, **-ed**, or **-ful**.
3. Circle any familiar beginning word part (prefix), such as **re-**, **un-**, or **mis-**.
4. Use knowledge of syllables to decode the vowel sounds. Draw a scoop under each syllable with a pencil, blending the sounds left to right.
5. Say the whole word and see if it makes sense. Flex the accent; try saying the word different ways if it doesn't sound right.
6. Check the context for clarification. Ask if you don't know the word.

Exercise 5.3 Using Syllable Division Principles

- The words below (excerpts from Kacirk, 2000) are obsolete English words. They once had meaning but are no longer in use.
- Consult the three major syllable division rules in *Table 5.2* (previous page). How would these obsolete words be divided and pronounced if syllable division rules were followed?

Word	Meaning
wuzzle	To mingle
yeepsen	A double handful
yesterfang	That which was caught the previous day
zythepsary	A brew house
urtication	The act of whipping a palsied limb with nettles
twychild	A man or woman in extreme old age
tulipomania	A reckless mania for purchasing tulip bulbs
sithcundonan	The oldest inhabitant

1. wuzzle _____
2. yeepsen _____
3. yesterfang _____
4. zythepsary _____
5. urtication _____
6. twychild _____
7. tulipomania _____
8. sithcundonan _____

Some Accent Guidelines

Accent is another word for the stress or vocal emphasis placed on one or more syllables in a multisyllabic word. The dictionary marks stressed syllables with an accent. (Stressed syllables never have a schwa vowel sound.) Longer words may have a primary and secondary stress pattern (e.g., **lon**-gi-**TU**-din-al). Stressed syllables can be detected with this trick:

- Pretend you are calling your dog (or your child) from a distance of 20 yards or more.
- Which syllable do you call out the loudest and longest? That is the stressed syllable!

Stressed syllables are often the easiest to spell because the vowel sounds keep their identity and consonants are more clearly enunciated. *Unstressed* syllables often "reduce" their vowel sound to a schwa. Schwa vowels do not have a clear identity and, therefore, are more difficult to spell. Knowing syllable patterns and the meaningful parts of words can help resolve spelling problems with unaccented syllables.

The accent or stress pattern sometimes indicates the part of speech of a word (e.g., **con-flict** [n] vs. **con-flict** [v]). Accent patterns tend to follow these five principles:

1. Accent the first word of an Anglo-Saxon compound:
   doghouse, catfish, birdfeeder
2. Accent the root in a Latin-based word:
   provision, indictment, versatile
3. Accent the syllable before **-tion**:
   creation, conversation, superstition
4. Place the accent two syllables *before* the last syllable with the suffixes **-ate, -age,** or **-ity**:
   infuriate, verbiage, insularity
5. Accent the first syllable to make a noun, and accent the second syllable to make a verb:
   conduct – conduct **object – object** **contract – contract**

Exercise 5.4 Multiple Choice

1. How many syllables are in each of these words? (Every syllable has a sounded vowel.)

   establishment _____ character _____ immediately _____

   half-baked _____ difference _____

2. Every syllable must have:

   ☐ stress ☐ at least one consonant ☐ a vowel sound ☐ a letter combination

3. An example of a closed syllable is:

   ☐ fear ☐ dawn ☐ up ☐ roast

4. A complex syllable, with a consonant blend, is:

   ☐ knock ☐ straight ☐ thought ☐ error

5. In each row across, select the word that is incorrectly syllabicated:

   ☐ com–et ☐ thirst–y ☐ fur–ni–ture ☐ u–ni–verse

   ☐ un–met ☐ mis–lead–ing ☐ not–hing ☐ no–where

   ☐ po–et–ic ☐ sa–ble ☐ i–dyl–lic ☐ en–ough

6. Which word has two open syllables?

   ☐ redo ☐ ahead ☐ release ☐ serene

7. All of the following words have a vowel-**r** pronounced like /er/ in **bird**, except:

   ☐ worthy ☐ invert ☐ occurring ☐ mournful

8. Syllable-division principles help novice readers "see" the chunks of words and guide correct pronunciation. Which group of words would be a good example for teaching the division of syllables joined with a vowel-consonant-vowel (VCV) pattern that indicates a long vowel in the first syllable?

   ☐ table, noodle, trifle, beagle ☐ rigid, dragon, comet, lemon

   ☐ humid, robot, trident, meter ☐ crayon, snowing, lawyer, preyed

Exercise 5.5 Combine Syllables

1. Combine these syllables, and construct as many words from them as you can.

vel	ma	tor	ous	chap	-ple	mite	ter
cen	tu	lade	pew	cro	-ble	ri	mar

2. Divide these words into syllables by scooping under each syllable with a pen or pencil. Then, classify each syllable by listing it in the correct column of the table below.

shepherd	brightness	teacher	phoneme	expensive	accent
bridle	dimple	comet	capsule	unnerve	ordain

Closed	VCe	Open	Vowel Team	Vowel-r	C-le	Other

Question 11 (4 points)

Discuss 4 of the 5 principles of English orthography **and** the impact they have on spelling.