


WEBINAR

95 Percent Group

Discovering How the English Spelling System Works: An introduction to Spellography

How do graphemes represent phonemes in English orthography?



Louisa Moats, EdD
Co-Author of Spellography and LETRS®


Bruce Rosow, EdD
Co-Author of Spellography

Let's get started

- Please use the Chat feature to ask questions and watch for digital handouts and informative links
- If you experience technical difficulties, such as sound or video issues, please log off and come back to the webinar
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Our Foundational Principles



We believe that ALL children deserve a chance to learn to read.

Our purpose is to unlock the power of literacy for every child.

We build on science to empower teachers—supplying the knowledge, resources, and support they need to transform developing readers.

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Trusted and Proven Literacy Solutions Made by Educators, for Educators



We have a teacher-centric approach,
which honors and amplifies a teacher's impact.



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One95™ Literacy Ecosystem

The One95 Literacy Ecosystem™ is a cohesive suite of resources that aligns to our mission and standards of excellence. Instruction in all solutions is aligned across tiers of instruction to maximize outcomes for students. Flagship products in each tier include the following.



Trusted, proven in-person and asynchronous professional learning courses and coaching models in the science of reading to create progress for your students.



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	Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grades 6-8	
CURVE	95 Phonics Core Program								
	95 Pocket PA								
ASSESSMENT	95 PA Screener for Intervention								
	95 Phonics Screener for Intervention								
INTERVENTION	95 Phonemic Awareness Intervention Resource								
	95 Phonics Lesson Library								
	95 RAP- Tier 3 Intervention Solution								
								Spellography	




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SPELLOGRAPHY

Louisa Moats, EdD and Bruce Rosow, EdD



Discovering How the English Spelling System Works:
An introduction to Spellography

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Four Sessions on Language and Spelling

PART 1
What does phonology have to do with learning to spell?

PART 2 | Tuesday, April 23
How do graphemes represent phonemes in English orthography?

PART 3 | Tuesday, May 21
How does spelling represent meaning in English?


PART 4 | Tuesday, June 11
What do grammar and syntax have to do with spelling?



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How We Read and Spell Words

—by building connections (neural pathways in the brain) between areas specialized for sound (phonology), print (orthography), meaning, and the use of words in sentence context.



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    graph LR
      CP[Context Processor] <--> MP[Meaning Processor]
      MP --> SS[Speech Sounds phonology]
      MP --> WS[Written Symbols orthography]
      SS <--> WS
  
```

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REMINER PHONOLOGY AND SPELLING

“...phonology, although important for all aspects of literacy learning, is even more critical in learning to spell than in learning to read. Orthographic knowledge is laid over a phonological foundation. If that phonological foundation is weak, orthographic skills cannot develop sufficiently to support good spelling and compensate for the underdeveloped phonological skills.”

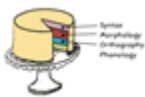

CASSAR, TREIMAN, MOATS, POLLO & KESSLER, 2005



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The Layers of Language Represented in Print

- Phonology: speech sounds
 - 44 consonant and vowel phonemes
 - Phoneme awareness
- Morphology and Etymology
 - Meaningful word parts and word origin
- Syntax: sentence structure
 - How “parts of speech” are reflected in spelling
- Orthography: the writing system
 - Graphemes, phoneme-grapheme matching
 - Patterns of letter use, rules for endings, syllable types

The “Layers of Language” in “Misspelled”

How many morphemes? **mis – spell – ed (3)**


How many syllables? **mis – spelled (2)**

How many graphemes? **m-i-ss-p-e-l-l-ed (7)**

How many phonemes? **/m/ /i/ /s/ /p/ /e/ /l/ /d/ (7)**

Why two s’s? **prefix + base word**

Why two l’s? **The “floss” pattern: Anglo-Saxon monosyllables ending in /f/, /s/, /l/.**



GRAPHEMES

Letters and Letter Combinations that Represent Phonemes


Examples:

/ɒ/	/v/	/er/	/v/	/ä/	/l/	/y/	/ü/
o	v	er	v	a	l	ue	

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How Regular are Phoneme-Grapheme Correspondences in English?

- About 50% of the most common 20,000 words in English can be spelled correctly with knowledge of phoneme-grapheme correspondences and the positions in which they are used
- Another 34% can be spelled with one error, usually on the vowel
- Another 10% can be spelled correctly if we consider word origin and word meaning in explaining the spelling



(Hanna, Hanna, Hodges & Rudolf, 1966)

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Graphemes are Often More Than One Letter

Graphemes can be one, two, three, or four letters in English!

- 1 letter: 'a' as in strap
- 2 letters: 'ng' as in ring
- 3 letters: 'tch' as in ditch
- 4 letters: 'ough' as in through

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Key Concepts

- Graphemes can do different jobs in the spelling system (chameleon graphemes)
 - Examples: c = /s/, /k/ n = /n/, /ŋ/ g = /j/, /g/
- The position of a sound in the word often governs how it is spelled
 - Example: /j/ after a short vowel is spelled with -dge; if /j/ is preceded by a consonant or a long vowel, it will be spelled -ge (*plunge, huge, bulge*)



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Word Completion: J or G?

- __ot __oose
- __ut __ust
- __olf __inger
- __ust __ym
- __ist __udge
- __ungle __entle

Letters that follow soft g:
e, i, y
Letters that follow hard g:
a, o, u
"J" used before a, o, u



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Word Sorting: J or G

Hard g = /g/	Soft g = /j/	J = /j/
gut	gist	jot
got	ginger	jungle
golf	gym	judge
goose	gent	just
gust		jab

Exceptions like gift, get, and give can be blamed on the influence of the Vikings who invaded Britain in the 800's...



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Phoneme-Grapheme Matching for final /j/

fringe	f	r	i	n	ge	
fridge	f	r	i	dge		
grunge	g	r	u	n	ge	
grudge	g	r	u	dge		
indulge	i	n	d	u	l	ge
pledge	p	l	e	dge		

Word Sort for "ge" and "dge"

-dge	-lge	-nge	-ge
fridge	bulge	grunge	stage
pledge	indulge	plunge	stooge
fudge	bilge	singe	gouge
		flange	oblige
		fringe	



Dimensions of English Orthography

	Sound-Symbol (Phoneme-Grapheme)	Syllable Patterns	Morpheme Structure
Anglo-Saxon	Consonants single, digraphs, trigraphs, blends Vowels short, long; VCe, vowel team; vowel-r patterns	closed open VCe vowel-r vowel team consonant+le (oddlies)	compounds inflections base words suffixes high frequency words
Latin			prefixes roots suffixes
Greek	ph for /f/ (geph) ch for /k/ (chorus) y for /i/ (gym)		Combining forms plurals

Six Basic Written Syllable Types

- 1. Closed**
pet, sack, dodge
- 2. VCe**
slide, scare, cute
- 3. Open**
ri-pen, ba-by
- 4. Vowel Team**
teeth, paid, high
- 5. Vowel-r**
far, urge, stir, order
- 6. Consonant-le**
ap-ple, a-ble

Explaining Closed Syllables

Closed syllables attract and need consonant guards:

- block
- dodge
- botch
- spig
- scuff
- doll
- toss

Exercise: Complete each word:

- blo____ wru__
- whi__ twi__
- gra__ sha__
- sha__ bri__



Consonant Doubling

- A doubled consonant between two syllables indicates the first vowel is short (and is a closed syllable):
 - rab/bit bliz/zard sput/ter ves/sel
- Consonant doubling rule for suffix addition:
In a one-syllable word spelled with one vowel letter followed by one consonant letter, if the suffix begins with a vowel, double the final consonant before adding the suffix.
 - step, stepping trap, strapper spot, spotted

THE DOUBLING RULE

Steps in Instruction

1) Find the one-one-one words:

cob cost fist fit steep
sit sift strap hoot pot
clamp clam claim prod pond

2) Find the suffixes that start with vowels:

ing ness er ful est
less ed ly y ish

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THE DOUBLING RULE

Application

- wag + ed _____
- fret + ing _____
- spend + er _____
- skid + ing _____

- wait + er _____
- drip + less _____
- smash + ed _____

Speed Read:

bit bitten bitter bitterly
got gotten rotten forgotten
lug lugged logging clogging
scrap scrapped strapping strapless
mad madden madder maddest
slip slipped slipping slippery
trap trapped strapped strapping

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Fun Read

Jim was mopping the kitchen floor one night while moping about how his car engine tapped and hopped like it had hiccups. Gripping the mop handle, Jim griped about wrapping the wires with duct tape to tame the tapping and, he hoped, halt the hopping, but the car didn't care. This made Jim mad, and he grimly glared at the grime, and moped, mopped, and mumbled until we told him to stop moping and just hitch Albert to a wagon. Jim hee-hawed and sold the car for junk.

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Three Long Vowel Syllable Types

1. Closed
pet, cats, dodge

2. VCe
slide, scare, cute

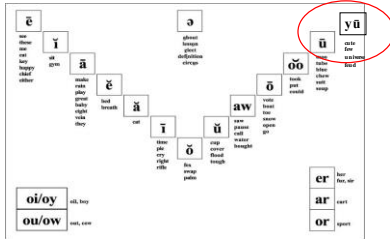
3. Open
ri-pen, ba-by

4. Vowel Team
teeth, paid, high

5. Vowel-r
far, urge, stir, never

6. Consonant-le
ap-ple, a-ble

Long Vowel Spellings: Open, VCe, or V-Team



Steps in Teaching /ū/ and /y//ū/

Sort the words by sound:

humor	rumor
cute	suit
cubic	rubric
fuse	choose
few	chew
butane	routine

Sorting /ū/ by Position

Position of /ū/ in the word		
Inside a syllable or word that ends in a consonant	End of an open syllable inside a word	Final sound at end of a word
flute prune soup group droop cartoon juice suit	tuna superb scuba	untrue blue renew mildew



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Sorting /y//ū/ by Position

Position of /y//ū/ in the word		
Inside a syllable or word that ends in a consonant	End of an open syllable inside a word	Final sound at end of a word
cute huge feud	puny bugle	cue argue rescue few view



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More Word Sorting, /ū/ and /y//ū/

Vowel teams *ue* and *ew* at the ends of words can spell both simple /ū/ and glided /y//ū/.

/ū/		/y//ū/	
ue	ew	ue	ew
true undue pursue	overflow withdrew cashew	argue revenue	nephew curfew



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The Story of Stew and Marylou

Stew was a moody and obtuse gnu in the zoo who chewed and drooled his way through life. Stew was sweet over an emu named Marylou. Stew thought that Marylou was cool.

One June, with the moon in the sky like a luminous balloon, Stew saw Marylou and started to croon like a buffoon. Stew was hoping Marylou would swoon over him, too.

Marylou knew a fool when she saw one. Wanting nothing to do with Stew, Marylou jumped over the bamboo fence, leaving Stew to brood in the gloom.



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Spellography Instructional Routines

A typical lesson progression:

- Explain the spelling concept
- Practice phoneme awareness
- Study the spelling pattern: Word completion, word sort, word build, word analysis, phoneme-grapheme matching
- Read lists of pattern-based words (repeated for fluency)
- Analyze the morphological structure of words
- Compose or complete sentences using a sentence frame
- Write words and sentences to dictation



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NEXT TIME

The Importance of Word Origin and Morphology in Understanding Spelling

- **The word's history (etymology) influences which graphemes are used to spell certain phonemes**
 - 'ch' for /ch/ in Anglo-Saxon based words (church, chew)
 - 'ch' for /sh/ in French-derived words (charade, chagrin, machine)
 - 'ch' for /k/ in Greek-derived words (character, chorus, scholar)
- 'ph' for /f/ in Greek-derived words (physics, sphere, phoneme)



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The Richness of English

Anglo-Saxon	Latin	Greek
see, eye	visualize, perceive	ophthalmology
small	minute	microscopic
illness	affliction	pathology
book	literary, library	bibliography
top	elevated, superior	acme, epitome
water	aquatic, aquifer	hydro, hydrate
earth	terrestrial	geology, cosmos
hear, ear	audio, aural	phonetics, phone

Join us for the Next Session on May 21st

4-PART WEBINAR SERIES | 6:30 PM CT

Discovering How the English Spelling System Works: An introduction to Spellography

May 21 | How does spelling represent meaning in English?

June 11 | What do syntax and grammar have to do with spelling?


On-Demand | What does phonology have to do with learning to spell?

On-Demand | How do graphemes represent phonemes in English orthography?

FEATURING

Louisa Moats, EdD
Co-Author of Spellography and LETRS®

Bruce Rosow, EdD
Co-Author of Spellography



Save the Date: Thursday, May 2

Webinar | Thursday, May 2 | 6:30 PM CT

The Magic of Morphemes: Adding morphology to instruction to build reading proficiency.



Deb Glasser, EdD
Lecturer Emerita and Co-Editor of
Reading Research and the IR Book



Laura Stewart
Chief Academic Officer
Winthrop School




DEBARR
MORPHEME MAGIC

Save the Date: Thursday, May 16

WEBINAR | THURSDAY, MAY 16 | 6:30 PM CT

Science of Reading 2.0: From knowledge to implementation

Laura Stewart
Chief Academic Officer
95 Partner Group



Science of Reading 2.0
implementation guide



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