

Phoneme Cards

Teaching Resource



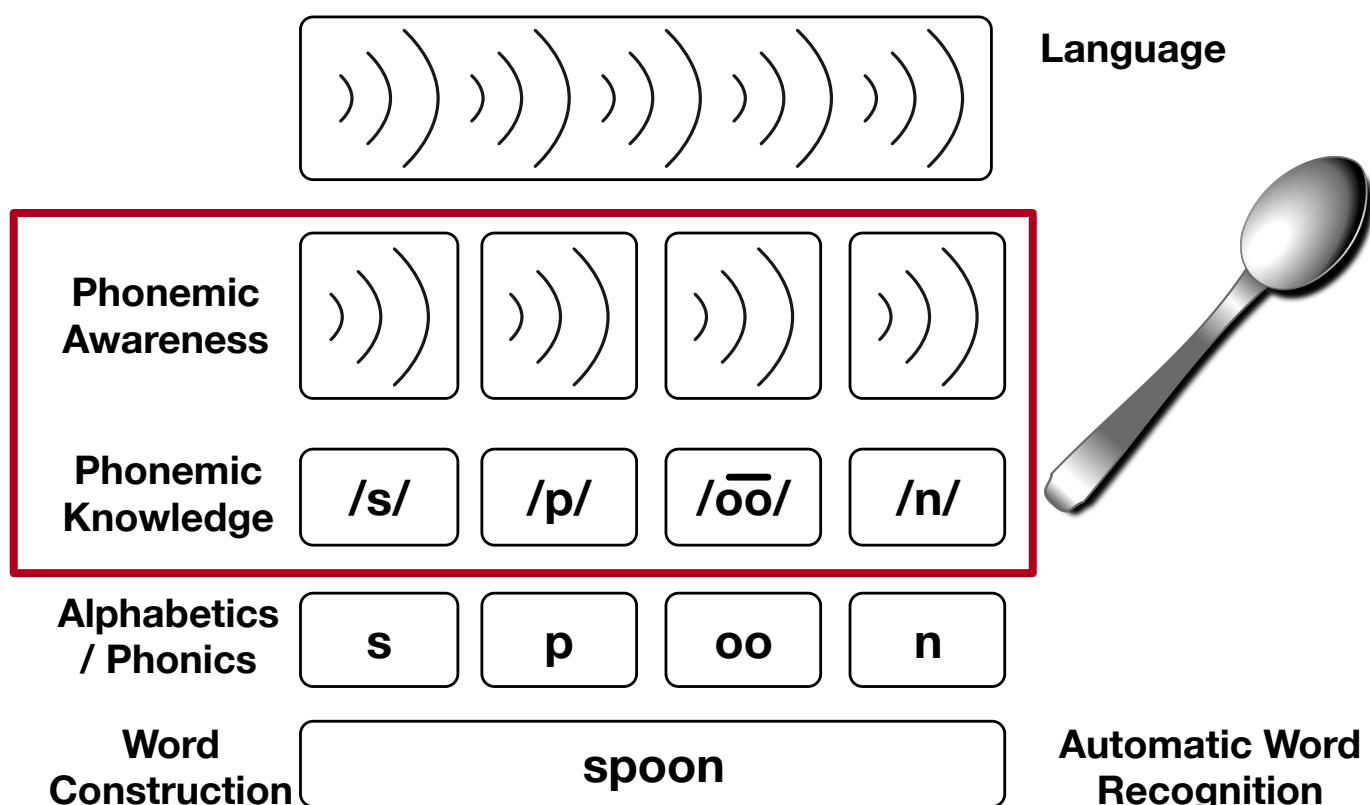
Introduction



{To prepare for literacy} spoken words had to be treated as consisting of component parts, which could then be represented by a much smaller number of graphical symbols. The would-be architects of writing systems had to develop something that we now consider an ordinary, teachable aspect of learning to read: phonological awareness. (Seidenberg, 2017, p. 63)

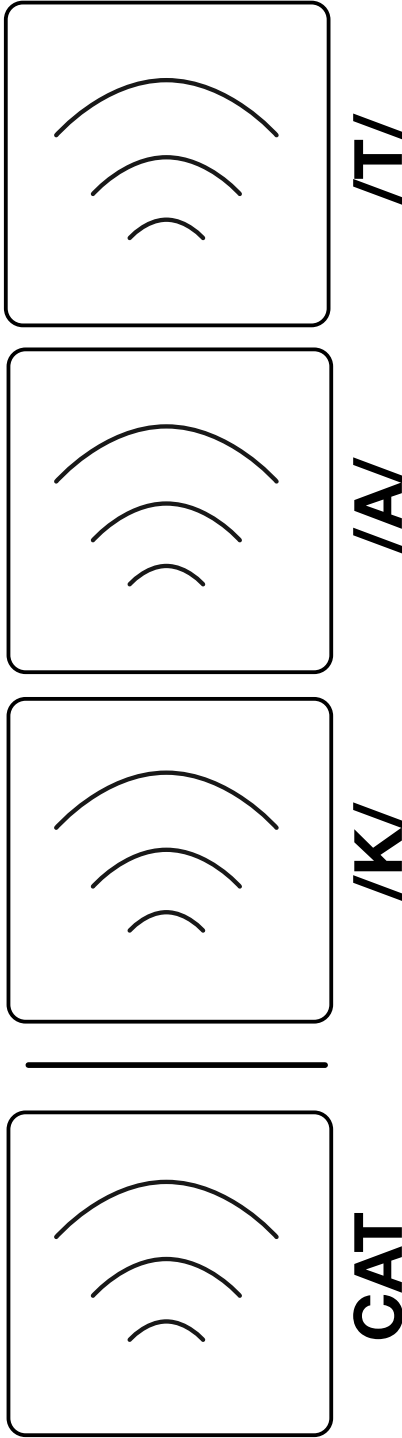
We take it as obvious that speech consists of units such as words, syllables, and phonemes, but these units are phonological abstractions that had to be discovered. Writing in the phonological way of thinking coevolved over a long period. (Seidenberg, 2017, p. 49)

Seidenberg, M. (2017). *Language at the speed of sight: how we read, why so many can't, and what can be done about it*. New York: Basic Books.



The Crux of Phonemic Awareness

To be able to detect the sounds within words, and hold this in working memory long enough as to begin matching sounds to graphemes.



The Seven Steps to Phonemic Awareness Are

- Listening
- Detecting rhyme
- Isolating words in sentences
- Awareness of syllables
- Detecting initial and final sounds
- Isolating individual phonemes
- Introducing letters and spelling

Please note: phonemic knowledge is the exact knowledge of the 45 possible phonemes (give or take one to two). In addition, the development of oral language skills, including vocabulary skills is an inherent precursor.

PA MILESTONES (Ages when 80-90% of typical students achieved a phonological skill. <http://www.readingrockets.org/article/development-phonological-skills>)

- Awareness of rhyme emerges = 24 - 30 mths
- Ability to produce rhyme emerges = 30 - 36 mths
- Rote imitation and enjoyment of rhyme and alliteration = 4 yrs old
- Rhyme recognition, odd word out = 5 yrs old
- Recognition of phonemic changes in words = 5 yrs old
- Clapping, counting syllables = 5 yrs old
- Ability to segment words into phonemes begins = 5 - 7 yrs old
- Noticing & remembering separate phonemes in a series = 5.5 yrs old
- Blending onset and rime = 5.5 yrs old
- Producing a rhyme = 5.5 yrs old
- Matching initial sounds; isolating an initial sound = 5.5 yrs old
- Compound word deletion = 6 yrs old
- Syllable deletion = 6 yrs old
- Blending of two and three phonemes = 6 yrs old
- Segment words w/ 2-3 phonemes (no blends) = 6 yrs old
- Segment words w/ 3-4 phonemes (w/ blends) = 6.5 yrs old
- Substitute phoneme in words (no blends) = 6.5 yrs old
- Sound deletion (initial and final positions) = 7 yrs old
- Sound deletion (initial position, include blends) = 8 yrs old
- Sound deletion (medial & final blend positions) = 9 yrs old

Refer to Vocabulary/Language Development for a child's development of familiar words which will be available for analysis.



Phoneme Map

/b/ (97% of time spelled w/ "b") bed, bubble, Bhutan except: bt in button is /v/ mb in numb is /m/	/ch/ (55% of time spelled w/ "ch") chair, catch, future -ch is used only after a single vowel that is not /s/ or /z/ except: ch in cheer is /ʃ/ ch in chord is /k/	/d/ (98% of time spelled w/ "d") dog, daddy, moved except: -ed in jumped is /t/	/f/ (76% of time spelled w/ "f") food, stuff, phone, cat, laugh -gh is often silent in vowel contexts like laugh, though, laugh or tough	/g/ (88% of time spelled w/ "g") game, giggle, phone, guide G softens to /j/ when followed by E, I or Y. Otherwise, G says /g/	/h/ (86% of time spelled w/ "h") hot, whole the letter "h" is often silent in such a phonogram as "gh" or is part of another phonogram like "th" or when "wh" makes the /hw/ sound.	/j/ (88% of time spelled w/ "j") jar, giraffe, cage, lodge G softens to /j/ when followed by E, I or Y. Otherwise, G says /g/	/k/ (73% of time spelled w/ "c") cake, kite, back, cat, chord, cheque C softens to /s/ when followed by E, I or Y. Otherwise, C says /k/ -ck is used only after a single vowel that says its short sound	/m/ (94% of time spelled w/ "m") man, summer, autumn, comb
/n/ (97% of time spelled w/ "n") no, funny, knot, pneumonia, mnemonic	/ng/ (41% of time spelled w/ "ng") sing, singing, think	/p/ (96% of time spelled w/ "p") pie, happy "p" appears as a silent letter in the relatively rare phonograms "pt", "pr" and "pr"	/kw/ (100% of time spelled w/ "qu") quick except: -que in cheque is /k/	/r/ (97% of time spelled w/ "r") run, hurry, rhyme, write	/s/ (73% of time spelled w/ "s") sun, messy, house, science, psychiatric, ceiling, nice C softens to /z/ when followed by E, I or Y. Otherwise, C says /k/	/sh/ (26% of time spelled w/ "sh") shoe, chef, sugar, conscience, pension, nation, physician, mission, seizure, bag, regime, déjà-vu	/th/ (100% of time spelled w/ "th") the, this, through, thumb except: th in thyme is /t/	
/v/ (89.5% spelled w/ "v" or "ve") van, have of - (irregular)	/w/ (92% of time spelled w/ "w") water, whale "w" is a silent in the word "write"	/hw/ (100% of time spelled w/ "wh") while except: wh in whole is /v/ wh in whale is /w/	/wəl/ one, won, wonderful In "one" the /w/ sound is not represented by a letter, making this an irregular phoneme	/ks/+ /sh/ anxious, luxury	/y/ (42% of time spelled w/ "y") yellow, onion "y" often serves a vowel and makes the short /i/, long /i:/ and long /a:/ sounds.	/z/ (23% of time spelled w/ "z") zoo, fuzzy, snooze, is, choose, xylophone	/e/ (91% of time spelled w/ "e") bed, need, bread, said (irregular)	
/oy/ (62% of time spelled w/ "oi") boy, soil	/aw/ father, walk, fraud, on, fought the /w/ sound is quite similar to the /short o/ sound in dog	/er/ (40% of time spelled w/ "er") father, learn, dollar, girl, work, turn, syrup	/or/ for, more, soar, four	/ar/ (68% of time spelled w/ "ar") car, heart	/air/ chair, fare, heir, aerial, error	ū (69% of time spelled w/ "u") pupil, tune, few, beauty a vowel says its name (long form) at the end of a syllable as in pupil. the /long u/ sound is quite similar to the /long oo/ sound in soon or do	/ow/ (56% of time spelled w/ "ou") cow, out, ouch	schwa -ə (i) not really a single sound. It is more like an /i/ or /e/ or /a/ breathy sound. pencil
				/o/ (73% of time spelled w/ "o") veto, most, bone, boat, toe, soul grow, though, bureau a vowel says its name (long form) at the end of a syllable as in veto.	ū (86% of time spelled w/ "u") bug, touch	oo (31% of time spelled w/ "oo") cook, put, would, woman	schwa -ə (e) not really a single sound. It is more like an /i/ or /e/ or /a/ breathy sound. jacket	
				/ks/ (100% of time spelled w/ "x") fox except: -x in xylophone is /z/	ū (86% of time spelled w/ "u") bug, touch	oo (31% of time spelled w/ "oo") cook, put, would, woman	schwa -ə (a, o, u) (24% of time spelled w/ "a") not really a single sound. It is more like an /i/ or /e/ or /a/ breathy sound. alone, gullion, circus	
				/ks/ (100% of time spelled w/ "x") fox except: -x in xylophone is /z/	ū (86% of time spelled w/ "u") bug, touch	oo (31% of time spelled w/ "oo") cook, put, would, woman	schwa -ə (e) not really a single sound. It is more like an /i/ or /e/ or /a/ breathy sound. jacket	



Consonant Patterns

Phoneme	Most likely grapheme	%
/th/	“th” (nb: voiced & unvoiced forms)	100%
/hw/	“wh” as in while (must discriminate from /w/)	100%
/ks/	“x” (but “x” can also make the /z/ sound)	100%
/kw/	“q” (but “qu” make the /k/ sound rarely)	100%
/v/	“v” (except in “of” when the “f” makes the /v/ sound)	99.5%
/d/	“d” (must discriminate from /b/)	98%
/h/	“h” (but the letter appears in many phonics patterns)	98%
/b/	“b” (must discriminate from /d/ and /p/)	97%
/n/	“n” (must discriminate from /m/ and /ng/)	97%
/r/	“r” (common words make the /r/ with “wr” or “rh”)	97%
/t/	“t” (even though the “t” can make the “ch” sound)	97%
/p/	“p” (must discriminate from /d/ and /b/)	96%

Phoneme	Most likely grapheme	%
/m/	“m” (must discriminate from /n/ and /ng/)	94%
/w/	“w” (must discriminate from /hw/)	92%
/l/	“l” (but also spelled will “ll”)	91%
/g/	“g” (but also spelled will “gh” and “g” also make /j/ sound)	88%
/f/	“f” (but also spelled will “gh” and “ph”)	78%
/k/	“c” (but the “c” also makes the /s/ sound)	73%
/s/	“s” (but /s/ is made by “c” 17% of the time)	73%
/j/	“g” (even though the letter “j” is /j/ 100% of the time)	66%
/z/	“s” (even though the /z/ sound is associated with “z”)	64%
/ng/	“ng” (even though “n” is /ng/ in “think”)	59%
/y/	“i” (which is probably the biggest surprise on the list)	55%
/ch/	“ch” (even though “t” can also make the /ch/ sound)	55%
/sh/	“ti” (is most common, though “sh” is quickest association)	53%
/zh/	“si” (even though represented in other ways)	49%



Vowel Patterns

Phoneme	Most likely grapheme	%
/short a/	“a” (as in cat ... with regular CVC pattern predictability)	96%
/short e/	“e” (as in pen ... with regular CVC pattern predictability)	91%
/aw/	“a” (as in father ... with more diversity than short vowels)	89%
/short u/	“u” (as in dug ... with regular CVC pattern predictability)	86%
/short o/	“o” (as in dog ... with regular CVC pattern predictability)	79%
/long o/	“o” (long vowels could be spelled with more diversity)	73%
/long e/	“e” (long vowels could be spelled with more diversity)	70%
/long u/	“u” (long vowels could be spelled with more diversity)	69%
/short i/	“i” (the /short i/ can also be spelled with “y” as in “myth”)	66%
/oi/	“oi” as in “boil” with “oy” as in “boy” making another 32%	62%
/ow/	“ou” as in “loud” with “ow” as in “cow” making 29%	56%
/short oo/	“u” as in “put” as well as “oo” in look at 31%	54%

Phoneme	Most likely grapheme	%
/long a/	“a” (and a_e at 35% as in “cake”)	45%
/long oo/	“oo” as in boot, represented by u, o, ou, u_e, ew, ue	38%
/long i/	“i_e” as in fire and “i” as in find, also by ie, y, igh	37%
schwa	equally represented by the vowels a, e, i, o, u	—%
/er/	<i>not stated in research study</i>	—%
/ar/	<i>not stated in research study</i>	—%
/air/	<i>not stated in research study</i>	—%
/ear/	<i>not stated in research study</i>	—%
/yur/	<i>not stated in research study</i>	—%

The percentages provided are based on the number of times each sound-spelling appeared in the 17,000 most frequently used words (Hanna et al., 1966). These included multisyllabic words.

Hanna, P. R., R. E. Hodges, J. L. Hanna, and E. H. Rudolph. 1966. Phoneme-Grapheme Correspondences as Cues to Spelling Improvement. Washington, DC: U.S. Office of Education.



Phoneme-Grapheme Map

Facts
26 letters
21 consonants
5 (or 6) vowels
45 phonemes

73 basic phonograms
23 other common phonograms
6 common syllable types

Six Most Common Syllable Patterns

Closed	This syllable ends with a consonant and contains a single following, often in its short form
Open	This syllable type ends with a vowel and the vowel is often long
Silent e or vowel consonant e (Ice)	This syllable has a silent e at the end which often signals that the vowel will be long
Vowel team or vowel pair	This syllable type contains two vowels that make one sound.
R-controlled vowel	This syllable contains a vowel with the letter r, and the vowel is neither short nor long.
Consonant + le	This syllable always appears at the end of words and the consonant always goes with the -le

Word recognition is key, involving:
- phonological
- orthographic
- morphological
- etymological
- knowledge ...

... along with one's remissed words (or lexical store)

Alphabet (uppercase & lowercase)

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Sample Prefixes

dis	mono	un	inter
tele	viv	seq	soph
tele	viv	seq	soph

Sample Bases

base	enth	enc	ed	fid
base	enth	enc	ed	fid

Sample Suffixes

ing	s
-tion	-ness
-ly	-ive

Word recognition is key, involving:
- phonological
- orthographic
- morphological
- etymological
- knowledge ...

... along with one's remissed words (or lexical store)

/b/	/ch/	/d/	/l/	/f/	/g/	/h/	/j/	/k/	/l/	/m/	/n/	/ng/	/p/	/kw/	/r/	/s/	/sv/	/t/	/th/	/v/	/w/	/wh/	/y/	/ks/	/z/	/z/	/y/	/e/	/ee/	/ea/	/ie/	/igh/	/oi/	/oy/	/er/	/or/	/ar/	/air/	/ur/	/schwa/
b	ch	d	f	g	h	j	k	l	m	n	ng	p	qu	r	s	sh	t	th	v	w	wh	x	y	z	z	y	e	ee	ea	ie	igh	oi	oy	er	or	ar	air	ur		

Chall's Stages
End Stage 0: understands 1000s words (heard); reads few, if any.
End Stage 1: understands up to 4000 words (heard); can read about 60-8000 words (heard); can read about 3000 words (heard); can read about 3000 words (heard).

Morphology & Inflectional Endings
Over time, learners identify meaningful patterns within words. These are referred to as **morphemes**, which are linguistic units like the plural suffix, "s" or "es", prefixes like "re" or "pre", Latin roots such as "space" meaning "see", and grammatical suffixes like "ment". They also learn the rules that govern how to add suffixes to base words: "when do I drop the 'e'?" or "when does the y turn to i?" or "when do I double the final consonant?"

Final Word
We must remember that the code is a means to an end, and not an end in and of itself. And whilst it is true that a skilled reader can use the features of a word (e.g. its Latin root or grammatical suffix) to decipher the meaning/use of that word, this occurs much later in the learner's development.

So the code is what we use to make ourselves understood in print as long as the reader recognises words and language and conversations and what I want to say and what I write, and what I am to know and what I read. We must remember that a child's written skills may be up to three years behind their oral skills, as the child learns to coordinate the demands of the written code as a vehicle for spoken thoughts. (Chall 1969)

We line up letters, words, spaces and punctuation on a page, and, collectively, something is said and "we hope - at times faintly - that it will be understood. - And the words slide into the slots ordained by syntax, and glitter as with atmospheric dust with those impurities which we call meaning." (Bluges, 1988, *Endeavor Outside*). And with each scaffolded utterance, we learn something more about language, the world and how/why we say what we say (e.g. the natural history of our conversations). And, at times, we need a bit of help to see it, whether that is help to literally decode/decipher/recognise our words or help to extract their meaning.

Often, when I have had a picture well framed or hung if I in the right surroundings, I have caught myself feeling as proud as if I had painted the picture myself. (Wittgenstein, Culture & Value)

Sentences only make sense within the context of sentences (onward to grammar and grammatical facts)

Emergent (Print Concept): focus is on phonemic awareness and on alphabet (letter name) knowledge

Letter Name Alphabet: [shrt] a, m, t, s, [shrt] i, f, d, r, [shrt] o, g, h, [shrt] u, c, b, n, k, v, [shrt] e, w, j, p, y, q, u, z, sh, ch, th, wh, ck, consonant blends (e.g. st, pl, bl, gl, sl) Within Word Stage: a-e, ai, ay, ei, ey, ea, ie, e-e, i-e, i-gh, y-o-e, oa, ow, u-e, oo, ew, vowel+r, oi, oy, au, au, ow, kn, w, gn, sh, th, squ, spl, tch, dge, ge, homophones

Syllables & Affixes Stage: adding inflectional endings, multisyllabic words, homographs & homophones

Sequence of Phonics/Spelling Instruction

Emergent (Print Concept): focus is on phonemic awareness and on alphabet (letter name) knowledge

Letter Name Alphabet: [shrt] a, m, t, s, [shrt] i, f, d, r, [shrt] o, g, h, [shrt] u, c, b, n, k, v, [shrt] e, w, j, p, y, q, u, z, sh, ch, th, wh, ck, consonant blends (e.g. st, pl, bl, gl, sl) Within Word Stage: a-e, ai, ay, ei, ey, ea, ie, e-e, i-e, i-gh, y-o-e, oa, ow, u-e, oo, ew, vowel+r, oi, oy, au, au, ow, kn, w, gn, sh, th, squ, spl, tch, dge, ge, homophones

Syllables & Affixes Stage: adding inflectional endings, multisyllabic words, homographs & homophones

Examples Words - Sequence of Phonics

Emergent (Print Concept): sorting pictures of words into letter sound, rhyme categories

Letter Name Alphabet: hat, bug, fresh, much, pass, class, sad, job, blob, grab, sick, trick, rang, swing, Within Word Stage: next, road, knock, rozen, coal, whose, throw, roast, cause, pause, paw, taught, shawl, Within Word Stage: chief, white, theme, athlete, pilgrim, mushroom, nervous, service, receive, reign, Derivational Stage: uneasy, insincere, unfasten, manipulate

Stages of Spelling Development (Version #1)

- Pre-speller - birth to 4
- Spell it like it sounds - 4 - 7 years old
- Spell it by pattern - 7 - 9 years old
- Spell it by rule - 9 - 11 years old
- Coordinating multiple strategies - 10 - 13 years old
- Spell it from knowledge - 13 years and older
- Introducing letters & spellings.

Stages of Spelling Development (Bear, et al, 2014)

Letter Name-Alphabet (Semi-Phonetic) Spelling = 4 - 7 yrs old
Within-Word Pattern (Transitional) Spelling = 7 - 9 yrs old
Syllables and Affixes (Independent) Spelling = 9 - 11 yrs old
Derivational Relations (Advanced) Spelling = 11 - 14 yrs old

Example Spelling Rules

C softens to /s/ when followed by E, l, or Y;
G softens to /j/ when followed by E, l, or Y;
When a one-syllable word ends in a single vowel Y, it says the /long i/ sound;
Y says the /long e/ sound only at the end of a multi-syllable base words.

Source: *Uncovering the Logic of English* by Denise Eide (2011)



The Alphabetic Code

the interface between oral and print language

<https://youtu.be/dA4nt3rxTYM>

<http://bit.ly/2-Sounds-Letters>

Sound-Letter Correspondences

Exploring phoneme-to-grapheme relationships



Analysing Spoken Words

An activity that helps learners develop their awareness of the sound patterns within familiar words (a.k.a. phonological awareness) ... and which uses this awareness as one of the foundations for understanding the logic of the alphabetic principle.

<https://youtu.be/8DVPbK0HSyY>



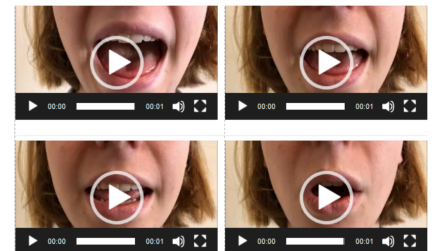
The Key Sounds of English
44 phonemes and 4 blends
<https://youtu.be/xiqUVnXExTQ>



The Standard Sounds of English
Including pronunciation guides
<https://youtu.be/JZ5Wl7SWo64>

	Lips	Lips/Teeth	Tongue between Teeth	Tongue behind Teeth	Roof of Mouth	Back of Mouth	Throat
Stop	p b			t d	k g		
Nasal	m			n	ŋ		
Fricative		f v	θ ð	s z	ʃ ʒ		h
Affricate					tʃ dʒ		
Glide	w				ɹ		
Liquid				l	r		

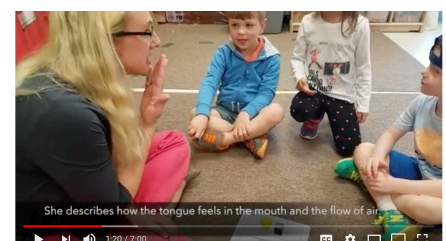
Phonemes are sounds AND articulatory gestures
<https://www.spelfabet.com.au/2018/05/phonemes-are-sounds-and-articulatory-gestures/>



Becoming a Sound Scientist
Exploring how sounds are produced
<https://youtu.be/p8d1eEhH8NI>



Phonemic Awareness in the ELLI Classroom
Using Elkonin Boxes as a Scaffold
<https://youtu.be/PpHiXXyPzm4>



Consonant Phonemes



Phonemes Tiles: Consonants

³
/b/

³
/ch/

³
/d/

⁵
/f/

⁴
/g/

²
/h/

⁴
/j/

⁵
/k/

³
/l/

⁴
/m/

⁶
/n/

²
/ng/

²
/p/

¹
/kw/

⁴
/r/

⁷
/s/

¹⁴
/sh/

⁷
/zh/

⁶
/t/

¹
/th/

³
/v/

²
/w/

¹
/hw/

²
/wə/

¹
/ks/

²
/y/

⁶
/z/



3

/b/

(97% of time spelled w/ "b")

bed
bubbly
Bhutan

except

bt in **doubt** is /t/
mb in **numb** is /m/

3

/ch/

(55% of time spelled w/ "ch")

chair, catch
future

-tch is used only after a single
vowel that does not say its
name

except

ch in **chef** is /sh/
ch in **chord** is /k/

3

/d/

(98% of time spelled w "d")

dog
daddy
moved

except

-ed in **jumped** is /t/

5

/f/

(78% of time spelled w "f")

food, stuff
phone, calf
laugh

-gh is often silent in vowel
constructs like eigh, augh,
ough, except for occasions
like laugh or tough

4

/g/

(88% of time spelled w/ "g")

game
giggle
ghost
guide

G softens to /j/ when followed
by E, I or Y. Otherwise, G
says /g/

2

/h/

(98% of time spelled w/ "h")

hot
whole

the letter "h" is often silent in
such a phonogram as "gh" or
is part of another phonogram
like "th" or when "wh" makes
the /hw/ sound.

4

/j/

(88% of time spelled w/ "g")

jar
giraffe
cage
fudge

G softens to /j/ when followed
by E, I or Y. Otherwise, G
says /g/

5

/k/

(73% of time spelled w/ "c")

cake, kite, back, cat
chord, cheque

C softens to /s/ when
followed by E, I or Y.
Otherwise, C says /k/
-ck is used only after a single
vowel that says its
short sound

3

/l/

(91% of time spelled w/ "l")

lion
fall
little

except
lf in **calf** is /f/

4
/m/

(94% of time spelled w/ "m")

man
summer
autumn
comb

6
/n/

(97% of time spelled w/ "n")

no
funny
knot
gnat
pneumonia
mnemonic

2
/ng/

(41% of time spelled w/ "n")

sing
singing
think

2
/p/

(96% of time spelled w/ "p")

pie
happy

1
/kw/

(100% of time spelled w/ "qu")

quick

except
-que in che**que** is /k/

4
/r/

(97% of time spelled w/ "r")

run
hurry
rhyme
write

7
/s/

(73% of time spelled w/ "s")

sun, messy
house, science
psychiatry, ceiling
nice

C softens to /s/ when followed by E, I or Y. Otherwise, C says /k/

14
/sh/

(26% of time spelled w/ "sh")

shoe, chef
sugar, conscience, pension,
fashion, pressure, mission,
nation, physician, appreciate,
initiate, schnitzel, fascism

7
/zh/

(49% of time spelled w/ "si")

confusion, fusion, casual
visual, beige
regime, deja - vu
equation, seizure

6
/t/

(97% of time spelled w/ "t")

tree
little
jump**ed**
p**ter**odactyl
doub**t**
th**ym**e
excep**t**
-ed in mov**ed** is /d/

1
/th/

(100% of time spelled w/ "th")

the
th**is**
th**at**
th**umb**

excep**t**
th in th**ym**e is /t/

3
/v/

(99.5% spelled w/ "v" or "ve")

van
have

of - (irregular)

2
/w/

(92% of time spelled w/ "w")

water
whale

"w" is a silent in the word
"write"

1
/hw/

(100% of time spelled w/ "wh")

while

excep**t**
wh in **wh**ole is /h/
wh in **wh**ale is /w/

2
/wə/

one
once
won
wonderful

In "one" the /w/ sound is not
represented by a letter,
making hits an irregular
phoneme

1
/ks/

(100% of time spelled w/ "x")

fox

excep**t**
x in **xy**lophone is /z/

2
/ks/+

/sh/

(rare)

an**x**ious
lux**u**ry

2
/y/

(42% of time spelled w/ "y")

yellow
onion

"y" often serves a vowel and
makes the short i, long i, long e
and long a sounds.

/z/

(23% of time spelled w/ "z")

zoo
fuzzy
snooze
is
choose
xylophone

Vowel Phonemes



Phonemes Tiles: Vowels

⁴
/ă/

⁹
/ā/

⁴
/ē/

¹⁰
/ē/

²
/i/

⁸
/i/

¹
/ō/

⁷
/ō/

²
/ū/

³
/ū/

⁴
/oo/

⁹
/oo/

³
/ow/

²
/oy/

⁷
/aw/

⁷
/er/

⁴
/or/

²
/ar/

³
/yur/

⁵
/air/

³
/ear/

⁵
/ə/



4**
ä

(96% of time spelled w/ "a")

cat
laugh
aesthetic (rare)
plaid (rare)

except
ai is normally /long a/ as in
paid

9
ā

(45% of time spelled w/ "a")

paper, ape
rain, straight
day, steak, eight
vein, they

a vowel says its name (long
form) at the end of a syllable
as in paper.

4
ē

(91% of time spelled w/ "e")

bed
bread
friend
said (irregular)

10
ē

(70% of time spelled w/ "e")

tree, she
meat, eve, receive, key
variation, petite
chief, funny

a vowel says its name (long
form) at the end of a syllable
as in she.

2
i

(66% of time spelled w/ "i")

sit
myth

8
ī

(37% of time spelled w/ "i_e")

bite, bicycle
pie, high
feisty, height
buy, my

a vowel says its name (long
form) at the end of a syllable
as in she.

1
o

the short o sound is quite
similar to the /aw/ sound in
law or father

7
ō

(73% of time spelled w/ "o")

veto, most
bone, boat
toe, soul
grow, though, bureau

a vowel says its name (long
form) at the end of a syllable
as in veto.

2
ū

(86% of time spelled w/ "u")

bug
touch

3
ū

(69% of time spelled w/ "u")

pupil, **tune**, **few**, beauty

a vowel says its name (long form) at the end of a syllable as in pupil.

the /long u/ sound is quite similar to the /long oo / sound in **soon** or **do**

4
oo

(31% of time spelled w/ "oo")

cook
put
would
woman

9
oo

(38% of time spelled w/ "oo")

soon, do
blue, soup
through, super
flute, suit, new

the /long oo/ sound is quite similar to the /long u/ sound in **few** or **tune**

3
/ow/

(56% of time spelled w/ "ou")

cow
out
drought

2
/oy/

(62% of time spelled w/ "oi")

boy
soil

7
/er/

(40% of time spelled w/ "er")

father
learn
dollar
girl
work
turn
syrup

4
/or/

for
more
soar
four

2
/ar/

(89% of time spelled w/ "ar")

car
heart

5
/air/

chair
fare
hair
aerial
tear
error

³
/ear/

fear
peer
tier

³
schwa ə
(a, o, u)

(24% of time spelled w/ "a")

not really a single sound. It is more like an /uh/ or /eh/ breathy sound.

alone
gallop
circus

⁷
/aw/

father
law
walk
fraud
fraught
on
fought

the /aw/ sound is quite similar to the /short o/ sound in **dog**

¹
schwa ə
(e)

not really a single sound. It is more like an /uh/ or /eh/ breathy sound.

jacket

¹
schwa ə
(i)

not really a single sound. It is more like an /uh/ or /eh/ breathy sound.

pencil

³
/yur/

cure
your
(you're)
Uranus

The phoneme could be /long u/ + /r/, but there seems to be a unique /y/ and controlled-r blend.

Record Keeping



Record Keeping

Teacher(s):

Learner(s):

Ages:

Date	Phonemes Explored	Words Explored	How/Where Explored?	Comment on Learning

At the end of the cycle, the following sounds (phonemes) have been explored and mastered:

/b/	/ch/	/d/	/f/	/g/	/h/	/j/	/k/	/l/	/m/	/n/	/p/	/kw/	/r/	/s/	/sh/	/zh/	/t/	/th/	/v/	/w/	/hw/
/wɛ/	/ks/	/y/	/z/	/ă/	/ā/	/ě/	/ē/	/ĭ/	/ī/	/ŏ/	/ō/	/ŭ/	/ū/	/ö/	/ō/	/ow/	/oy/	/aw/	/ar/	/er/	/or/
/air/	/ear/	/yur/	/e/	Further Comments:																	



Blank Tiles



