

PHONOLOGICAL and
MORPHOLOGICAL
AWARENESS with SWI

AGENDA

01

DEFINING PHONOLOGY AND MORPHOLOGY

02

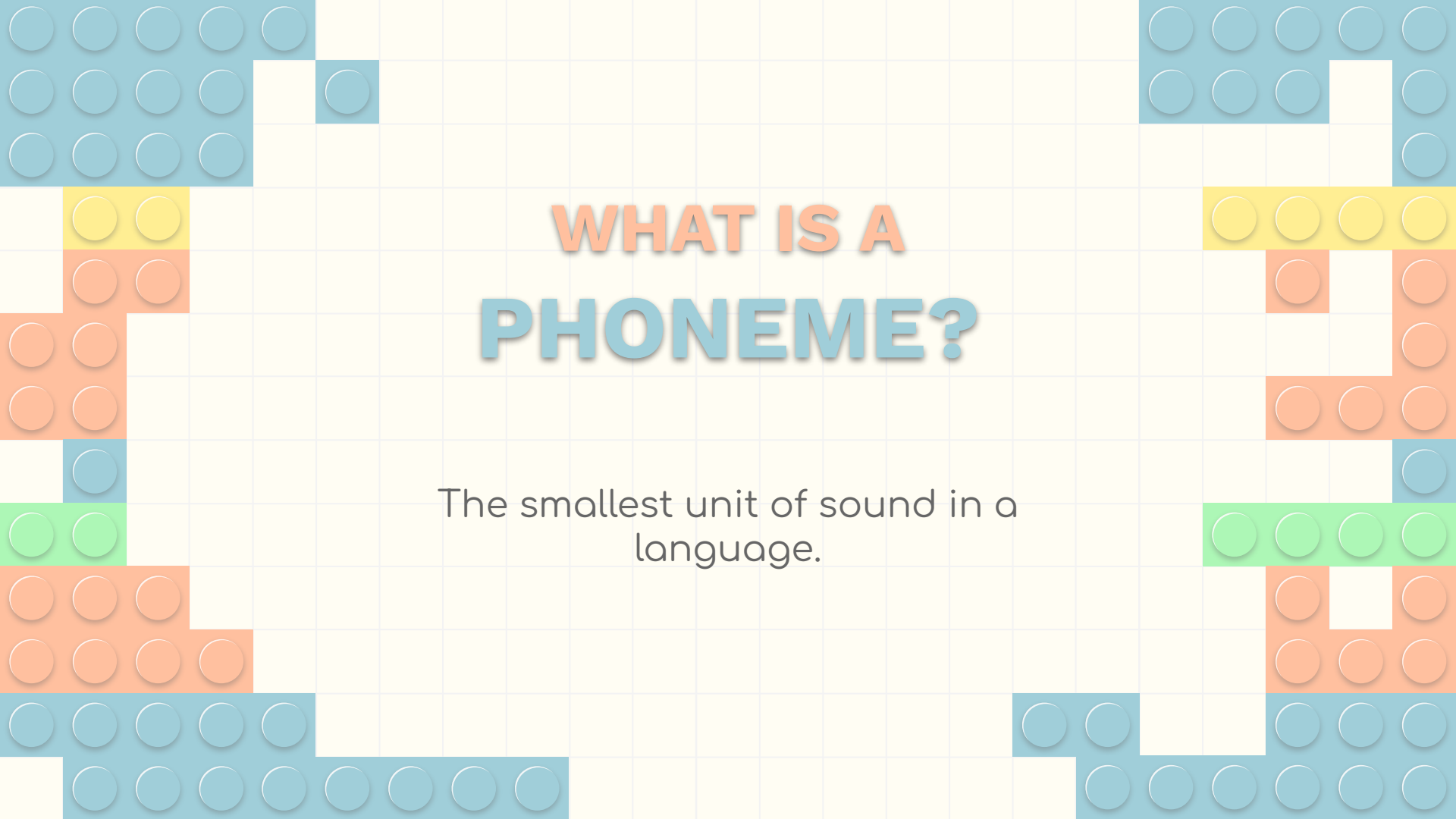
CURRICULAR CONNECTIONS

03

**USING SWI TO TEACH MORPHOLOGICAL
AWARENESS**

04

SAMPLE LESSONS



WHAT IS A PHONEME?

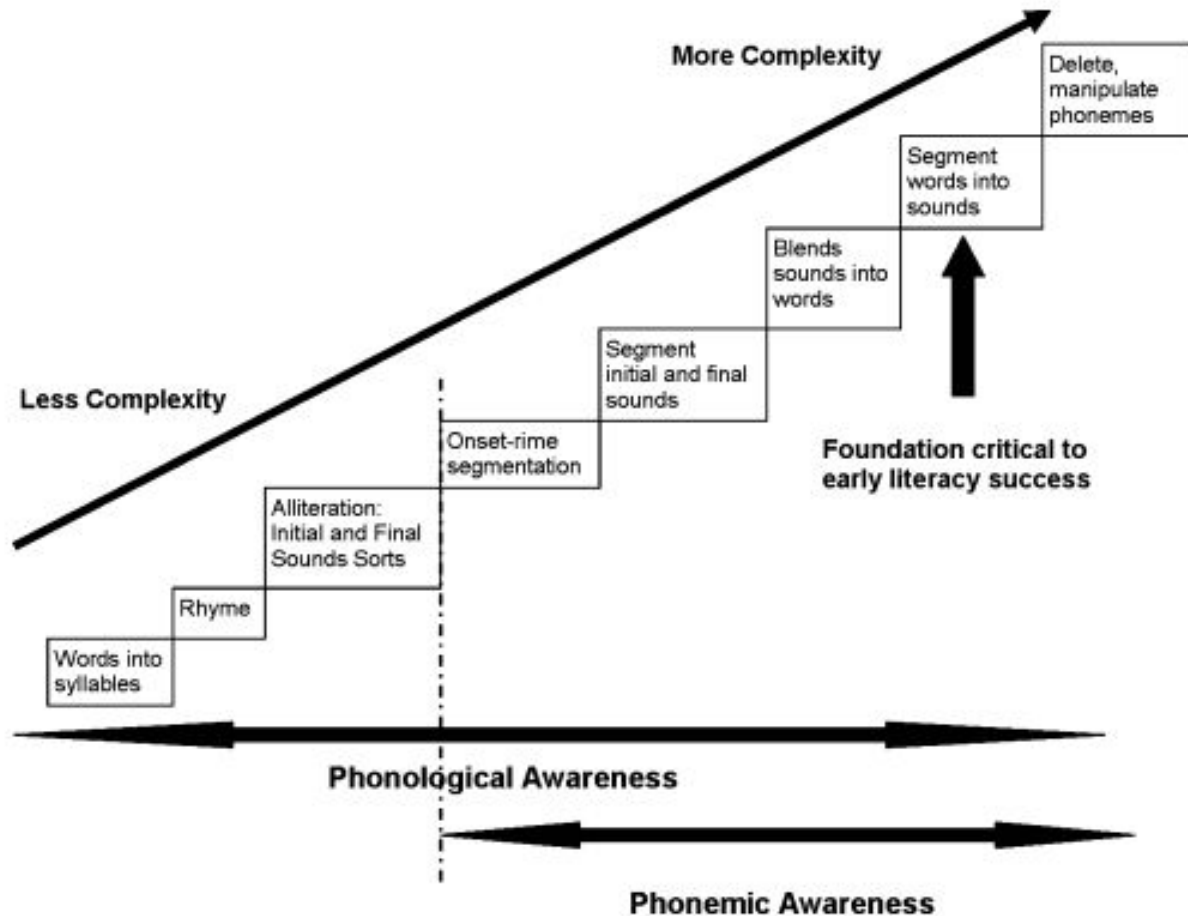
The smallest unit of sound in a
language.

The background features a light gray grid with various colored blocks (blue, yellow, orange, green) placed at the corners and along the sides. Each block has a circular pattern, resembling a LEGO brick. The main text is centered on the grid.

WHAT IS PHONOLOGICAL AWARENESS?

Building an awareness of the
phonemes in a language.

Figure 1. Sequence of phonological awareness instruction and intervention.

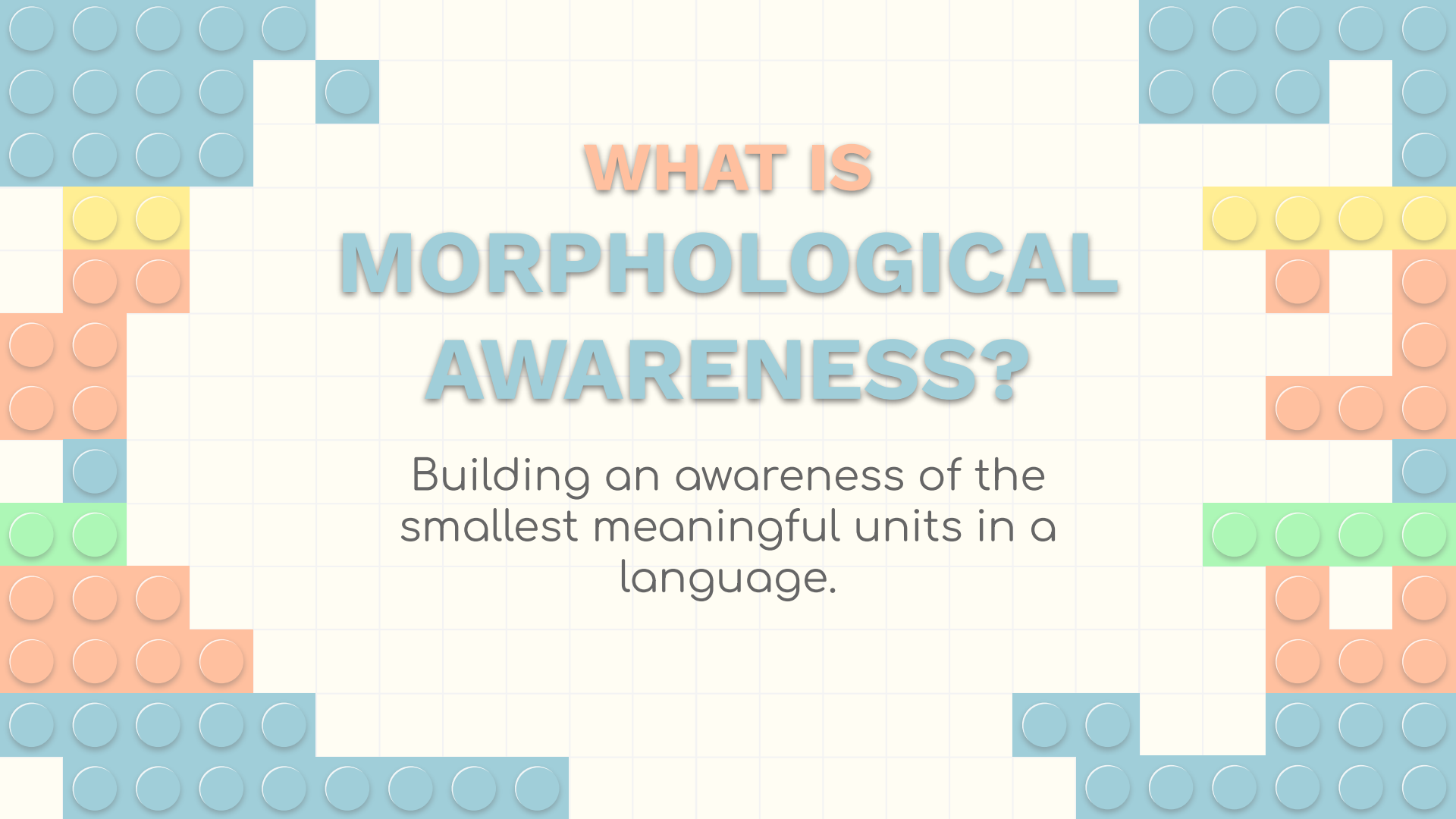




WHAT IS A MORPHEME?

The smallest unit of meaning in a language.

- **BASE:** <go>, <see>, <elephant>
- **AFFIX:** <re->, <im->, <-ed>, <-ing>
- **CONNECTING LETTERS:** <-o->



WHAT IS MORPHOLOGICAL AWARENESS?

Building an awareness of the smallest meaningful units in a language.

WHAT THE RESEARCH SAYS



“English is a morphophonemic system that evolved to jointly represent the units of meaning (morphemes) and phonology (phonemes).” Bowers and Bowers (2018)

English prioritizes the consistent spelling of morphemes over the consistent spelling of phonemes.



WHAT THE RESEARCH SAYS

Instruction in morphology has a positive effect on morphological awareness and phonological awareness.

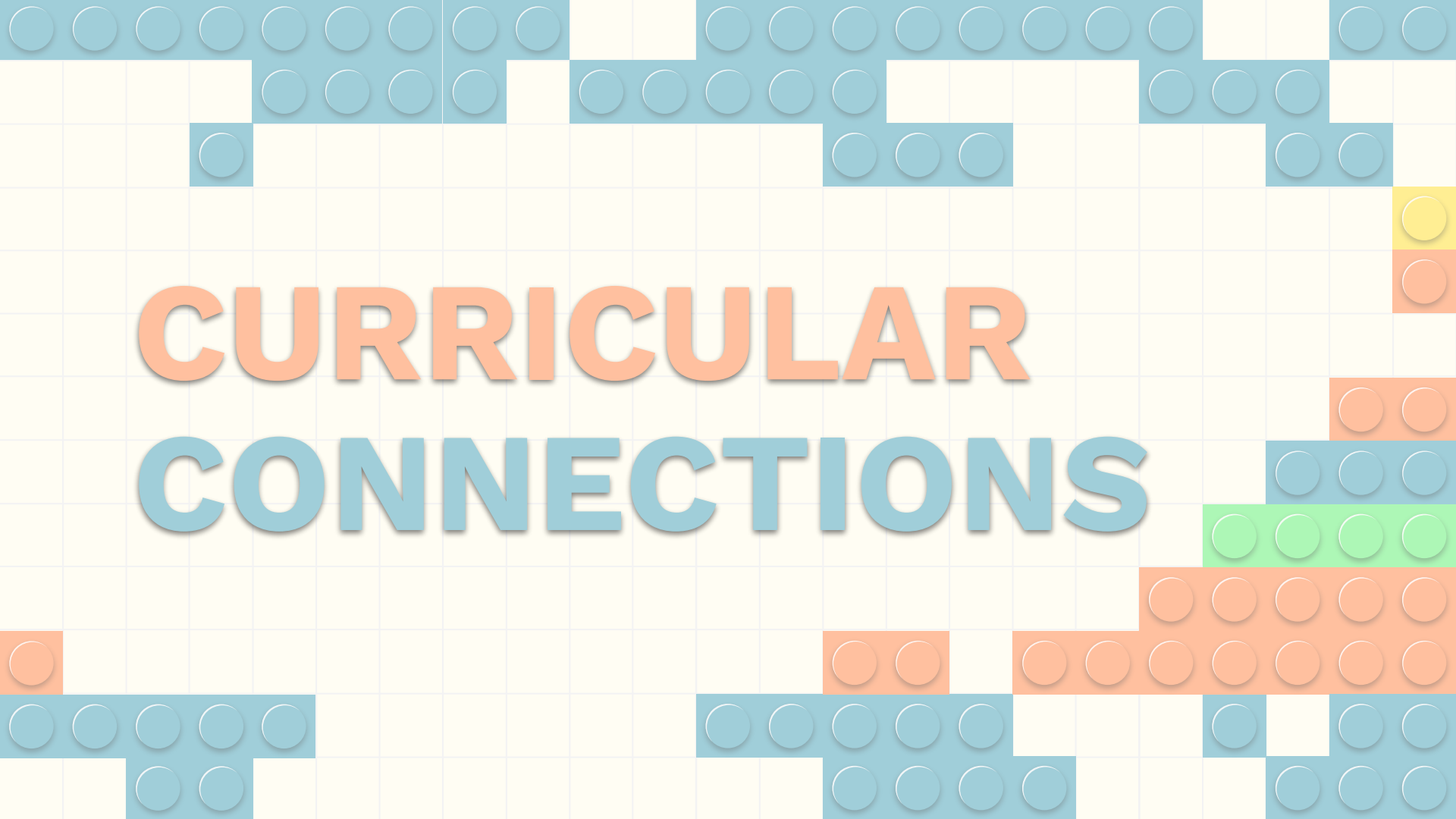
Outcome	Effect size	
	Goodwin & Ahn, 2010 Literacy difficulties	Goodwin & Ahn, 2013 All students
Phonological awareness	0.49	0.48
Morphological knowledge	0.40	0.44
Phonological recoding	0.54	
Decoding	0.23	0.59
Spelling	0.20	0.30
Vocabulary	0.40	0.34
Fluency	-0.28	-0.05
Reading comprehension	0.24	0.09

* Not analyzed

Decoding for children with literacy difficulties is the only phonological outcome that is lower than the morphological outcomes at $d = .23$

Outcomes with greatest effect sizes from morphological instruction are all *phonologically based*:
 $d = .49, .48, .54, .59$

Outcomes with next greatest effect sizes from *morphological instruction* are almost all *morphologically based*:
 $d = .40, .44$



CURRICULAR CONNECTIONS

Grade 1	Finding bases, compound words	<-s> or <-es>, <-ed>
Grade 2	Adding suffixes, tenses, compound words, meaning spelling connections	<-ing> or <-ed>, <-er> or <-est>
Grade 3	Analyze bases and affixes, compound words	<re->, <un->, <in->, <dis->, <non->, <mis->, <mal->, <sub->, <super-> <-ly>, <-er>, <-or>, <-ar>, <-ist>
Grade 4	Understanding morphology, predict meanings	<-y>, <-ish>, <-able> or <-ible>, <-ful> <-ant> <-ent>
Grade 5	Word Origins	<ous>, <ious>, <al>, <ial>, <ian>, <ic>, <ical>, <ment>, <ity>, <ant>, <ent>, <ance>, <ence>, <circu>, <per>, <trans>, <ad>, <sub>, <ob>, <com>, <ex>
Grade 6	Affixes changing the meaning of words, Greek and Latin Roots	<pro->, <com->, <con->, <en->, <oc-> <-en> and <-ize>

-ical

compound adjectival word-forming element, usually interchangeable with **-ic** but sometimes with specialized sense (such as **historic/historical, politic/political**), Middle English, from Late Latin *-icalis*, from Latin *-icus* + *-alis* (see **-al** (1)). Probably it was needed because the forms in *-ic* often took on a noun sense (for example **physic**). Forms in *-ical* tend to be attested earlier in English than their twins in *-ic*.

Related entries & more

-ial



adjectival word-forming element, variant of **-al** (1) with connective **-i-**. From Latin *-ialis*, in which the *-i-* originally was from the stem of the word being attached but later came to be felt as connective.

Related entries & more

Grade 5 Affixes

i + ous

i + al

i + an

<ous>, ~~<ious>~~, <al>, ~~<ial>~~, <ian>, <ic>, **ic + al** ~~<ical>~~, <ment>, <ity>, <ant>, <ent>, <ance>, <ence>, <circu>, <per>, <trans>, <ad>, <sub>, <ob>, <com>, <ex>

Grade 5 Affixes

<-ous>, <-al>, <-an>, <-ic>, <-ment>,
<-ity>, <-ant>, <-ent>, <-ance>,
<-ence>, <circu->, <per->, <trans->,
<ad->, <sub->, <ob->, <com->, <ex->

Introduce connecting vowel letter <-i->.

Orthography

representing
sense and
meaning

1

morphology

structure and
sequencing
of meaning

2

etymology

signalling
interrelation
of meaning

3

phonology

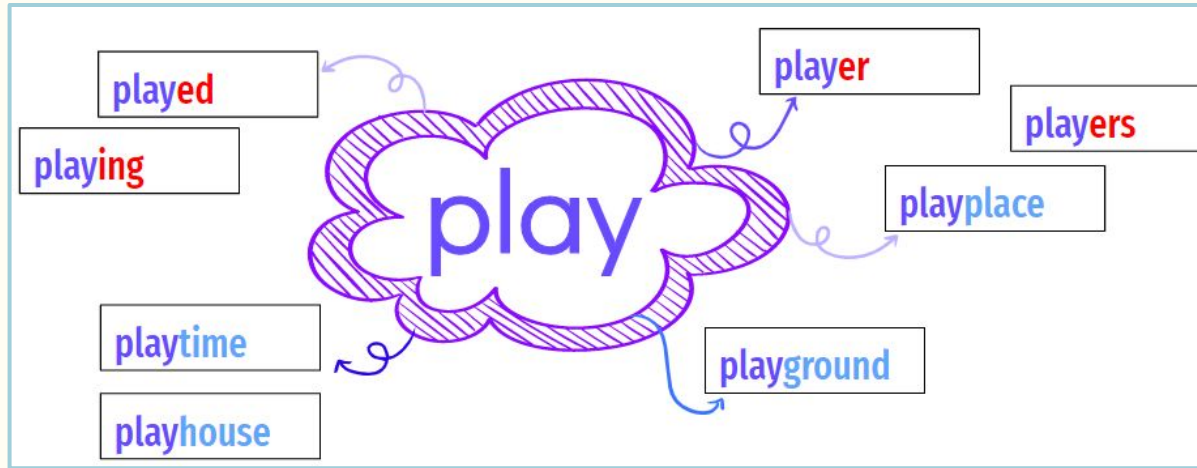
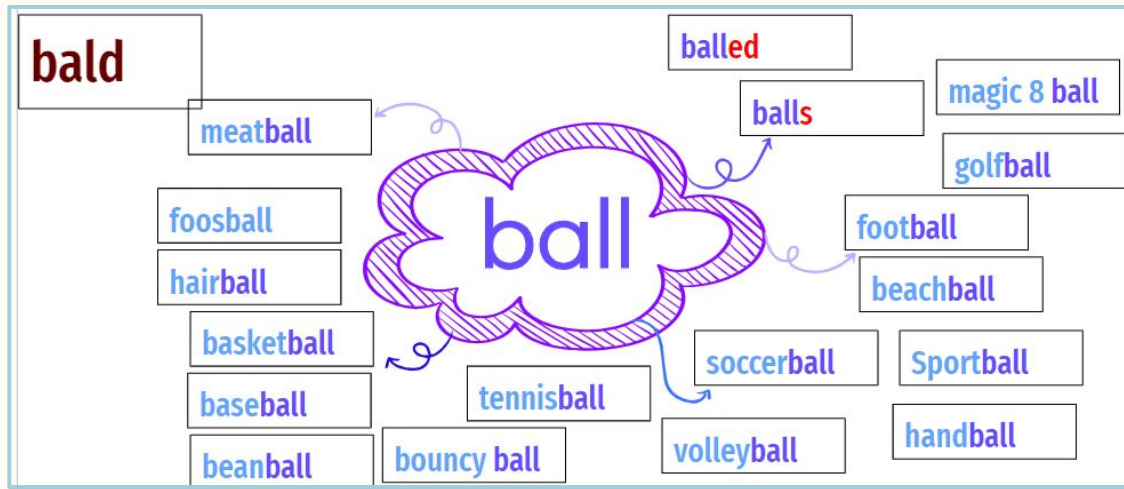
representing
pronunciation
of meaning

human thought made visible as text

USING
STRUCTURED
WORD INQUIRY
TO SUPPORT
MORPHOLOGICAL
AWARENESS

WHAT IS A WORD FAMILY?

A group of words that share a meaning and historical connection. They often also share a base.



bed

rhymes with
<bed>

in the same word
family as <bed>

shed

head

beds

red

bedbug

bunkbed

bedtime

said

bedding

bedhead

bread



WHEN DO WORDS IN A FAMILY NOT SHARE A BASE?

- Strong verbs
 - run : ran
 - sleep : slept
 - eat : ate

ran

Rhymes with "run"

- fun
- bun
- sun
- won

Same family as <run>

- running
- runner
- runs
- runny

Word Matrix:

Visual representation of the possible words that share a base in a word family.



sunk

Word Sums

Writing out the structure of a word to show its affixes and bases.

un + sink + able → unsinkable



plus signs
between
morphemes



rewrite
arrow

HAND SIGNALS

Image Credit: Peter Bowers

<replay>



prefix + **base**

<playmate>



base + base
(compound)

<playful>



base + suffix

These images show the everyday use of the fist to represent the base and two fingers to represent affixes at Nueva.

MORPHEME COLLECTION CHART

The chart is organized into several sections:

- prefixes**
 - as-
 - re-
 - un-
 - mis-
- Suffixes**
 - able
 - es
 - est
 - ing
 - ed
 - er
- Vowel**
 - ment
 - ness
 - ly
 - ful
 - he
 - less
 - s
- Consonant**
 - ment
 - ness
 - ly
 - ful
 - he
 - less
 - s
- BASES**
 - sign
 - go
 - pack
 - fo
 - hope
 - move

DON'T CLAP SYLLABLES, INSTEAD...

- Try a finger dropping technique
 - More discreet
- Reduces cognitive load by:
 - Keeping a count of syllables
 - Less noise distraction
- Easier to monitor student use
- Recommended by Peter Bowers



GRADE 1 SAMPLE LESSON

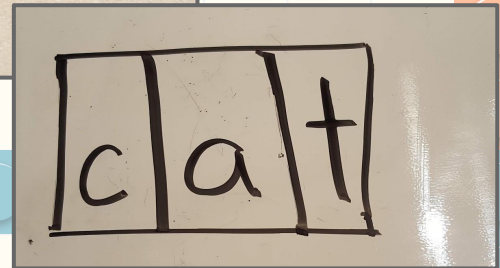
MYSTERY BOX

Target: <-s> or <-es>

1. Hide a mystery item in a box.
2. Give clues about what the item is.
3. Students guess the item
4. Spell the word together.



Segmenting

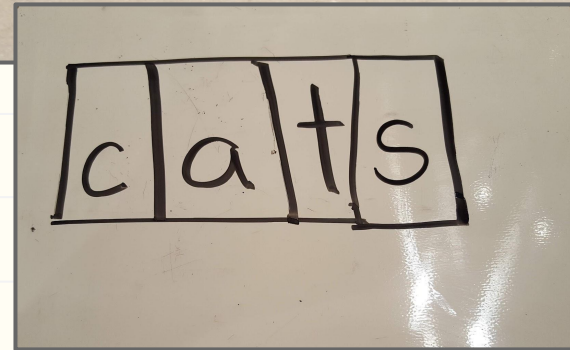
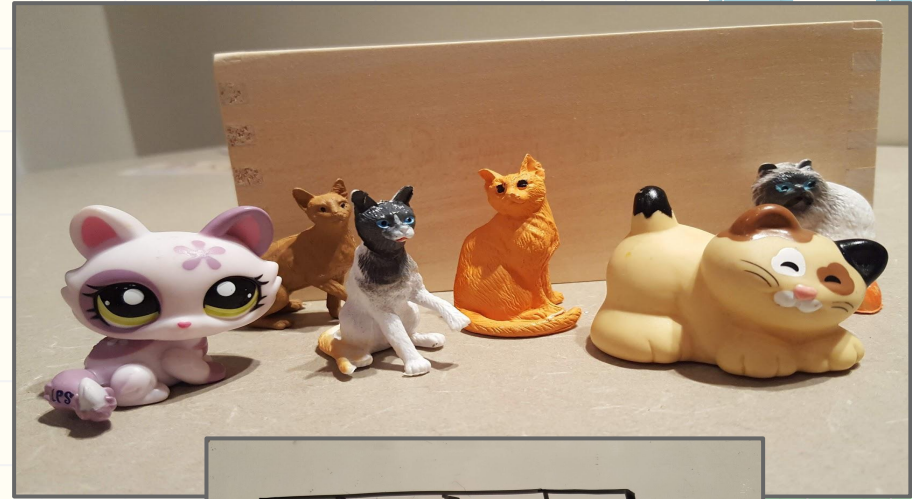


GRADE 1 SAMPLE LESSON

MYSTERY BOX

Target: <-s> or <-es>

5. "Surprise! I don't have just one cat, I have two!"
6. Add a suffix at the end of the word.
7. "Surprise! I don't have just two cats, I have #!"
8. Discuss how we only add one plural suffix.

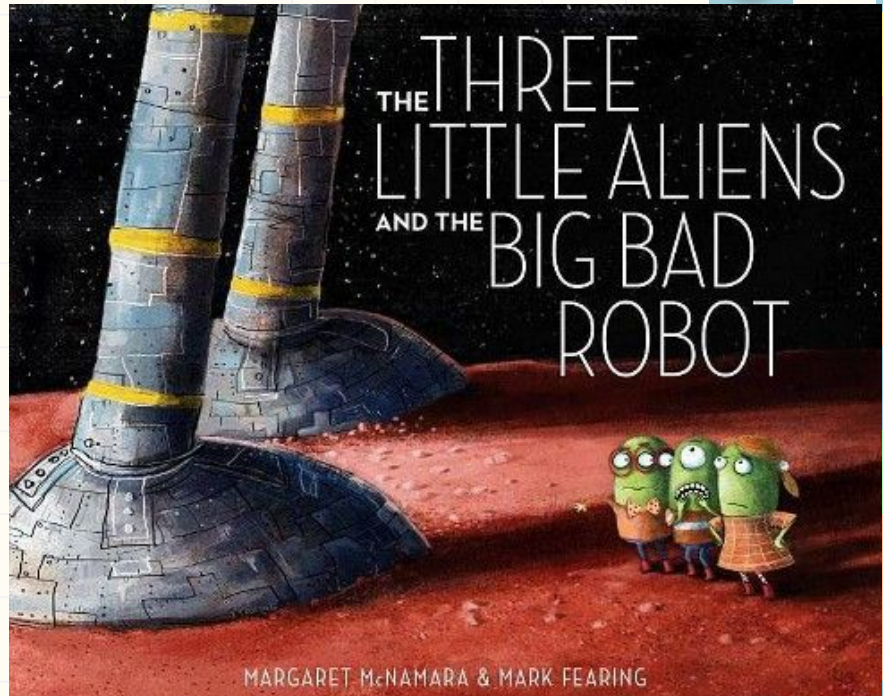


GRADE 2 SAMPLE LESSON

<-ed> SUFFIX SORT

Target:
understanding
pronunciation

1. Read a story.
2. Go back and find the words with an <-ed> ending.



GRADE 2 SAMPLE LESSON

<-ed> SUFFIX SORT

Target:
understanding
pronunciation

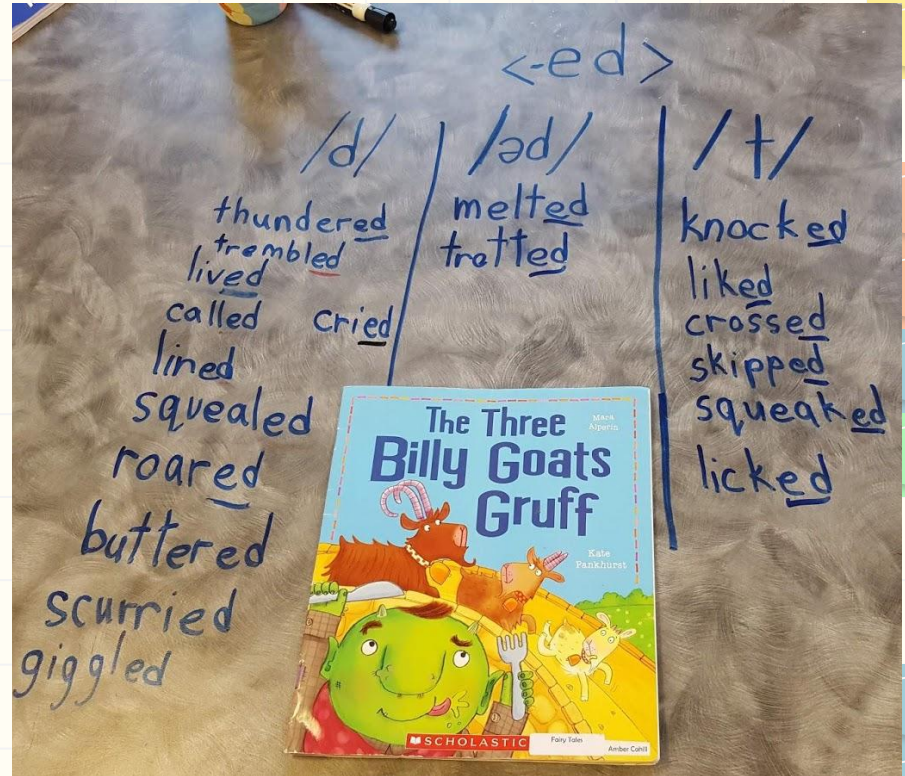
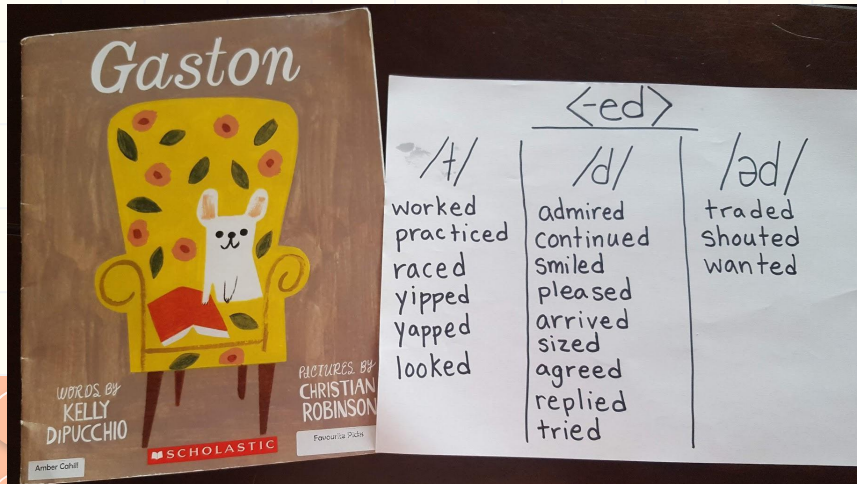
- Sort words ending in <-ed> by their pronunciation.
- Discuss anything the students notice.

/t/	/d/	/əd/
passed	called	crowded
sniffed	loomed	darted
finished	zoomed	spotted
beeped	moaned	needed
broinked		jetted
escaped		blasted
forced		waited
bashed		loaded
zapped		pounded

Syllables
Segmenting

GRADE 2 SAMPLE LESSON

<-ed> SUFFIX SORT



GRADE 3 SAMPLE LESSON

SAVE THE BUNNY

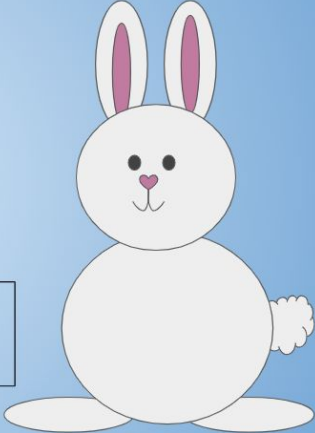
Target: using affixes to create new words

1. Provide students with a matrix and blank spaces to match how many letters are in your mystery word.
2. Students guess letters in the mystery word.

Try Again

Save the Bunny

proof	read <i>to read something</i>	able		
mis		ing		
re		s	er	s
un				



Below the matrix is a row of eight empty blue boxes for letter guessing.

GRADE 3 SAMPLE LESSON

SAVE THE BUNNY

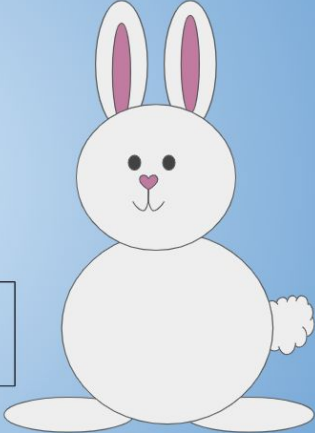
Target: using affixes to create new words

3. Correct guesses are marked in the mystery word space.
4. A piece of the bunny is deleted for each incorrect guess.

Try Again

Save the Bunny

ir	re	plac e	able
	dis mis un		es ed ing



Below the affix table is a row of eight empty blue boxes for a mystery word.

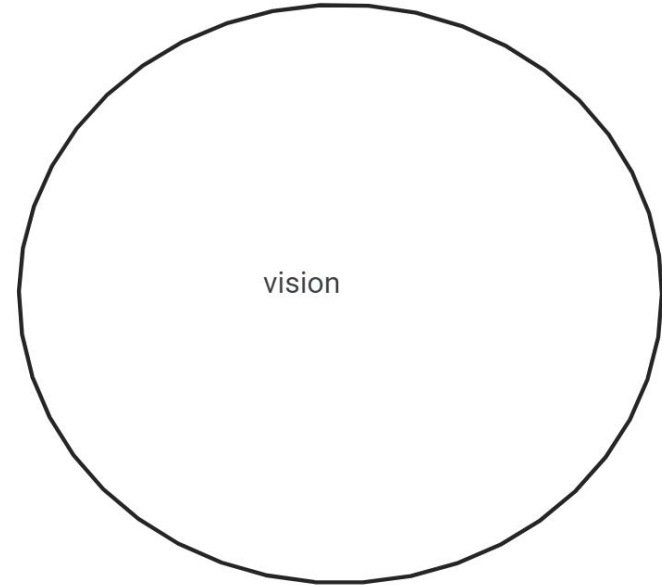
GRADE 4 SAMPLE LESSON

WORD SORT

Target: relate morphemes to meaning

1. Provide students with an envelope of word cutouts.
2. Students sort words in or out of the circle based on meaning and shared base.

eyes visual
 ability
invisible see
visible supervision
invisibly supervise
visibly supervisor
invisibility
visibility look
notice vacation
 visit



GRADE 4 SAMPLE LESSON

WORD SORT

Target: relate morphemes to meaning

3. Challenge students to try to create a word sum for some of the words in the circle.
4. Discuss how the base is not a word all by itself (bound base).

vis~~e~~ + ible → visible

vis~~e~~ + ion → vision

super + vise → supervise

in + vis~~e~~ + ibility → invisibility

GRADE 5 SAMPLE LESSON

WORD STUDY - FRAYER MODEL

Target: using the 4 questions to understand a word

1. Pick a word, and create a “Frayer Model” to answer the 4 questions of word study, as per next slide.

**Word Study Quadrants
“Frayer Model”**

<p>What does it mean?</p> <ul style="list-style-type: none">• Illustrations• Short sentence using the word• Written definition• What is it not?	<p>How is it built?</p> <ul style="list-style-type: none">• Base vs. Complex• Word sum• Hand signals
<p>What are its relatives?</p> <ul style="list-style-type: none">• Word web• Matrix• List of related words• Circle-square map	<p>What jobs are the letters doing?</p> <ul style="list-style-type: none">• Elkonin boxes• Grapheme choice• Affixes• Notice vowels vs. consonants

What does it mean?



How is it built?

trans + port + ~~ate~~ + ion →

beyond,
across

to carry

transportation

<transportation>

What are its relatives?

transport

transportation

transportable

transported

What jobs are the letters doing?

transportation

<t> pronounced as /ʃ/ when
followed by <-ion> suffix

<trans->

transparent

translucent

translatable

transfer

transfusion

transmitted

<port>

portable

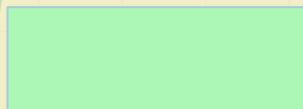
export

deport

compartment

important

porter



GRADE 6 SAMPLE LESSON

WORD DETECTIVES -SPELLING PATTERN HUNT

Target: working with assimilated prefixes

Assimilated Prefixes:

Prefixes that share a meaning and history, but have alternative spellings.

GRADE 6 SAMPLE LESSON

WORD DETECTIVES -SPELLING PATTERN HUNT

Target: working with assimilated prefixes

Potential word list from Grade 6 Science Curriculum:

contract
construction
conduct
connection
constant
contact
contribute

compression
compare
community
complex
components
computation

collaborate
collect

GRADE 6 SAMPLE LESSON

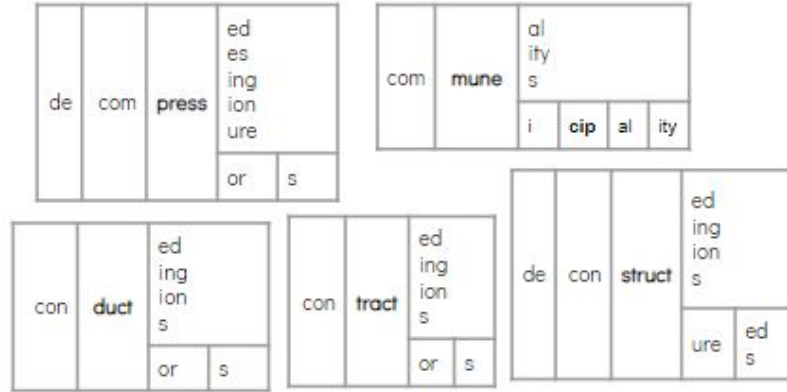
WORD DETECTIVES -SPELLING PATTERN HUNT

Target: working with assimilated prefixes

1. Provide students with a Word Detective Worksheet. Look for spelling patterns in the matrices provided.

Word Detective Spelling Pattern Hunt

Look at the word matrices. They all use a <com-> or a <con-> prefix. What do you notice about the bases that might give you a clue about when to use a <com-> or a <con-> prefix?



Hint: Read this list of words.

- contracted
- conducts
- construction
- compression
- community

Then try reading the list again, but trade the <com-> and <con-> prefixes in each word. What do you notice about how easy it is to pronounce these words?

GRADE 6 SAMPLE LESSON

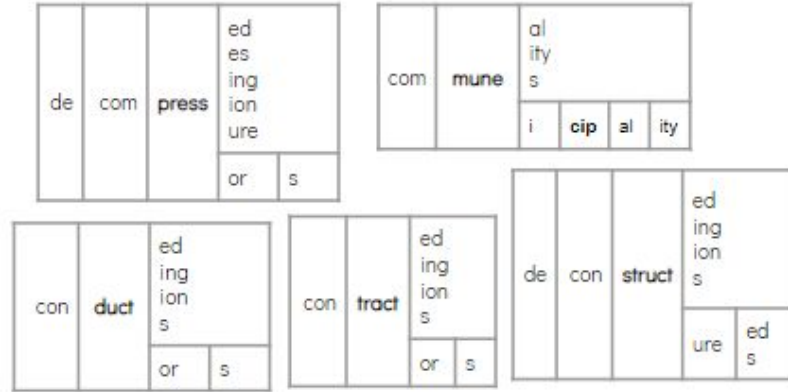
WORD DETECTIVES -SPELLING PATTERN HUNT

Target: working with assimilated prefixes

2. Make a class hypothesis of when to use <com-> vs. <con-> prefix.

Word Detective Spelling Pattern Hunt

Look at the word matrices. They all use a <com-> or a <con-> prefix. What do you notice about the bases that might give you a clue about when to use a <com-> or a <con-> prefix?



Hint: Read this list of words.

- contracted
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GRADE 6 SAMPLE LESSON

WORD DETECTIVES -SPELLING PATTERN HUNT

Teacher Answer Key

We use a <com-> prefix when the following base begins with closed-mouth position.

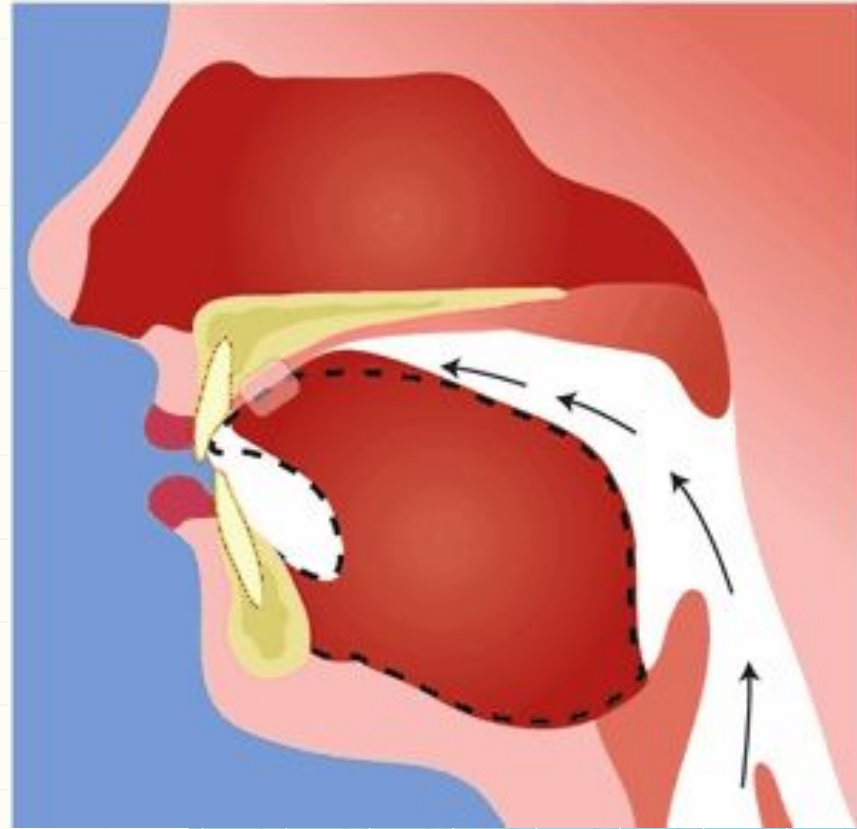


GRADE 6 SAMPLE LESSON

WORD DETECTIVES -SPELLING PATTERN HUNT

Teacher Answer Key

We use a <con-> prefix when the following base begins with a dental or alveolar mouth position.



<connect>

<compost>

<collaborate>

con-

word-forming element meaning "together, with," sometimes merely intensive; it is the form of **com-** used in Latin before consonants except *-b-*, *-p-*, *-l-*, *-m-*, or *-r-*. In native English formations (such as *costar*), **co-** tends to be used where Latin would use *con-*.

com-

word-forming element usually meaning "with, together," from Latin *com*, archaic form of classical Latin *cum* "together, together with, in combination," from PIE **kom-* "beside, near, by, with" (compare Old English *ge-*, German *ge-*). The prefix in Latin sometimes was used as an intensive.

Before vowels and aspirates, it is reduced to **co-**; before *-g-*, it is assimilated to *cog-* or *con-*; before *-l-*, assimilated to *col-*; before *-r-*, assimilated to *cor-*; before *-c-*, *-d-*, *-j-*, *-n-*, *-q-*, *-s-*, *-t-*, and *-v-*, it is assimilated to *con-*, which was so frequent that it often was used as the normal form.

Related entries & more

col-

assimilated form of **com-** "with, together" before stems beginning in *-l-*. In early Latin, *com-* was assimilated to these as *con-*, but *col-* later also was used. Latin words in *coll-* became *col-* in Old French and thus in early Middle English but were altered back to *coll-* with the revival of learning.

Related entries & more

RHYME WORK

- Compare how rhyming words are spelled.

The Snail and the Whale by Julia Donaldson

ale	ail
tale	tail
whale	wail
sale	sail
	snail

HOMOPHONES!

This is the tale of a tiny snail
And a great big, gray-blue humpback whale.



This is a rock as black as soot,
And this is a snail with an itchy foot.



The sea snail slithered all over the rock
And gazed at the sea and the ships in the dock.
And as she gazed, she sniffed and sighed.
“The sea is deep and the world is wide!
How I long to sail!”
Said the tiny snail.

PHONEME ISOLATION

- How many ways can you find of spelling /eɪ/?

The Snail and the Whale by Julia Donaldson

a_e	ai	ea	ay
tale whale gazed	sail snail	great	gray

PHONEME
GRAPHEME
CORRESPONDENCES

This is the tale of a tiny snail
And a great big, gray-blue humpback whale.



This is a rock as black as soot,
And this is a snail with an itchy foot.



The sea snail slithered all over the rock
And gazed at the sea and the ships in the dock.
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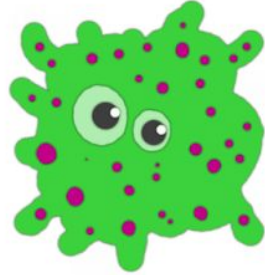
SEGMENTING PHONEMES

- When you are isolating sounds, make sure not to add extra “sounds”
 - buh - ike
 - /b/ - ike

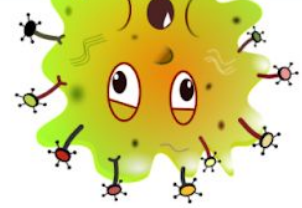
**this is easy with some phonemes, and extremely difficult with others, but worth being aware of.*

SEGMENTING PHONEMES

- Isolating initial sounds.
- Isolating final sounds.
- Some suffixes represent a single phoneme. Great practice for isolating final phonemes.

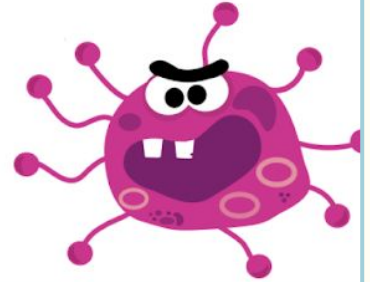


germ



germs

germy



SEGMENTING PHONEMES

- Grapheme comparison using venn diagrams

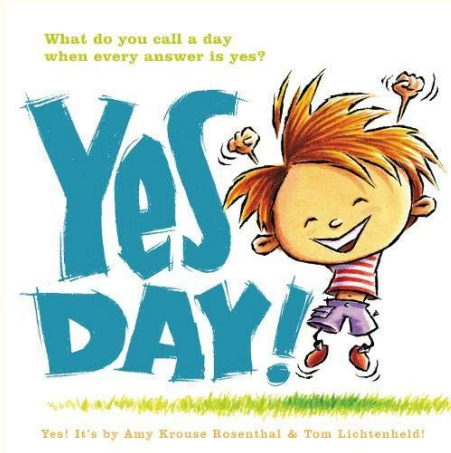


Lyn Anderson
lesson about
<cycle>

SEGMENTING PHONEMES

<y>

- Segment initial and final sounds
- Sort the jobs that the graphemes are doing as you segment



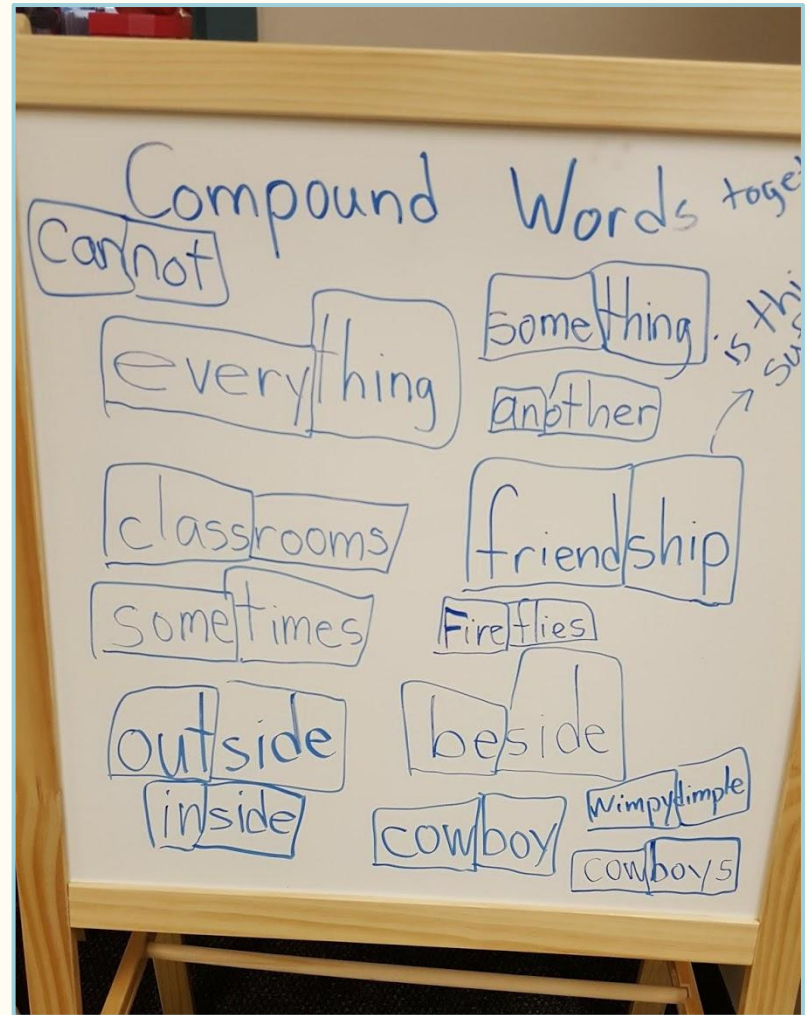
yes every my
year Amy by
you piggyback
your really

“today”, “say”, “stay” and “toy” also come up in this story. In these cases <y> is part of an <ay> or <oy> digraph.

BLENDING WORK

Compound words are:

- A good start to blending work
- Easy for students to notice and work with



SEGMENTATION WORK

- When segmenting by syllables, consider using morphological information to guide the lesson.

31

- Read or listen to the poem "*Nature Is Very Busy*".
- How many times can you find the <ing> suffix?

Nature Is Very Busy

Bees are buzzing, frogs are hopping,
Moles are digging. There's no stopping
Vines from climbing, grass from growing,
Birds from singing, winds from blowing,
Buds from blooming, crickets humming
Sunbeams dancing, raindrops drumming.
All the world is whirling, dizzy
Nature is very busy!

by Frances Gorman Risser

14

<https://www.readingrockets.org/blogs/shanahan-literacy/what-should-morphology-instruction-look>

The image is a screenshot of a video player. On the left side, there is a white overlay with text and a table. At the top of the overlay is a profile picture of a woman and the text "Kinder intro of matrix & Word Sum". Below this is a table with the word "wait" in the first cell and two empty cells. Underneath the table are three lines of text: "wait + ed → _____", "wait + s → _____", and "wait + ing → _____". On the right side of the video player, there is a video thumbnail showing a man sitting on a blue mat in a classroom, surrounded by children. The video player interface includes a play button, a progress bar, and various control icons. At the top right of the video player, there are buttons for "Watch later", "Share", and "Hang Up".

Kinder intro of matrix & Word Sum

wait		
------	--	--

wait + ed → _____

wait + s → _____

wait + ing → _____

Watch later Share Hang Up

SWI Helpful Websites

Helpful Tools:

Mini Matrix Maker:

<http://www.neilramsden.co.uk/spelling/matrix/>

Word Searcher:

<http://www.neilramsden.co.uk/spelling/searcher/>

Etymology: <http://www.etymonline.com/>

Real Spelling Toolbox:

<https://www.tbox2.online/>

Websites and Blogs:

Word Works:

<http://www.wordworkskingston.com/WordWorks/Home.html>

Linguist Educator Exchange:

<https://linguisteducatorexchange.com/>

Rebecca Loveless:

<http://rebeccaloveless.com/blog/>

Beyond the Word:

<http://wordsinbogor.blogspot.ca/>

Word Torque: <https://wordtorque.com/>

Level Up: <http://leveluped.com/blog/>



Please feel free to contact me by email if you would like to ask more questions about how SWI fits into phonological awareness activities.

amber.cahill@gmail.com

Check out my Instagram account

www.instagram.com/swiclassroom/



