

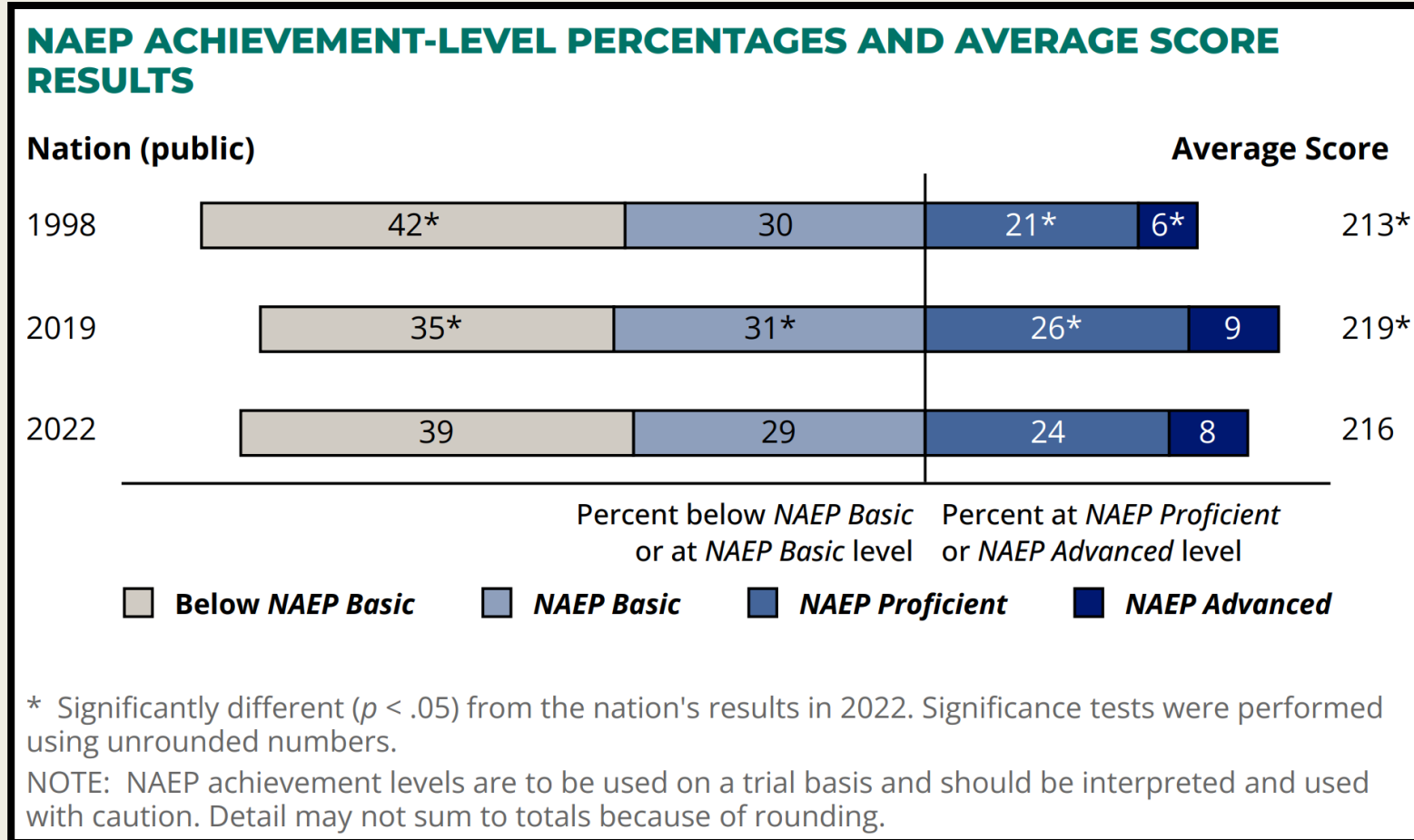


PHONEMIC AWARENESS

What it is and Why it Matters



4th Grade Reading Scores



National Assessment of Educational Progress (NAEP), 2022

What Does *Below Basic* Mean?

“Many students who perform below the NAEP Basic level on the fourth-grade NAEP Reading assessment have poor oral reading fluency and foundational skills.”
White, Sabatini, and White (2021)

39%

Many students who scored below basic levels could not read the passage on the assessment





Reading Disability or Instructional Casualty?

“Researchers estimate 95 percent of all children can be taught to read by the end of first grade...future achievement is constrained only by students’ reasoning and listening comprehension abilities.”
(Moats, 2020)

Identify
and
Prevent
Reading
Difficulties

Identify
and
Remediate
Reading
Difficulties

Simple View Of Reading

Decoding

- Efficient word recognition that includes accurate AND automatic reading.

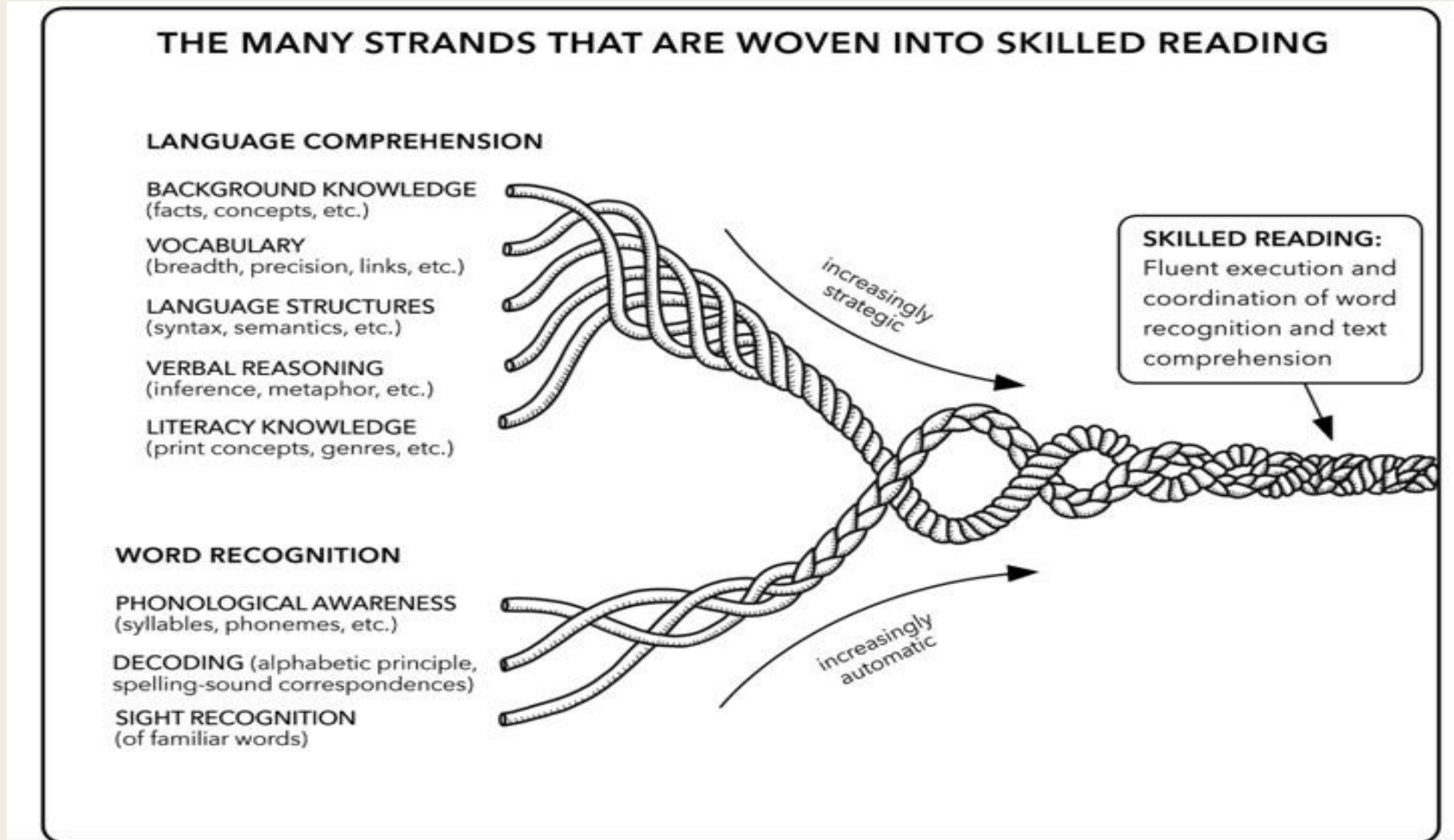
Language Comprehension

- The ability to derive meaning from spoken words
- Abilities encompass receptive vocabulary and comprehension of discourse

Reading Comprehension

- Occurs when word meaning is derived from print

Scarborough's Reading Rope



Brain Research

Dr. Dehaene explains how the brain processes letters and sound”

What does the brain need first in order to grasp the alphabet?

What conversion do children need to master before understanding what they are reading?

What do we need to do to teach children how to read?


■ https://www.youtube.com/watch?v=wIYZBi_07vk

First, students must learn how to speak to grasp the alphabet.


Letters or symbols on paper must be turned into sounds. With practice, students get faster and faster at this conversion.

Teachers train the brain to read by explicitly teaching the connection between letters and sounds; in other words, we must explicitly teach so that the circuits link directly from vision to spoken language.

Spoken and Written Language

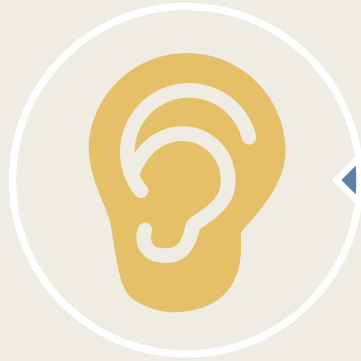


The brain is
“wired” for
speech
development



The brain is
not “wired”
for reading
and writing

Learning to Read and Write Requires Explicit Instruction



Noticing individual sounds
(phonemes)



Understanding alphabetic principle
(individual sounds are represented
by letters / letter patterns)

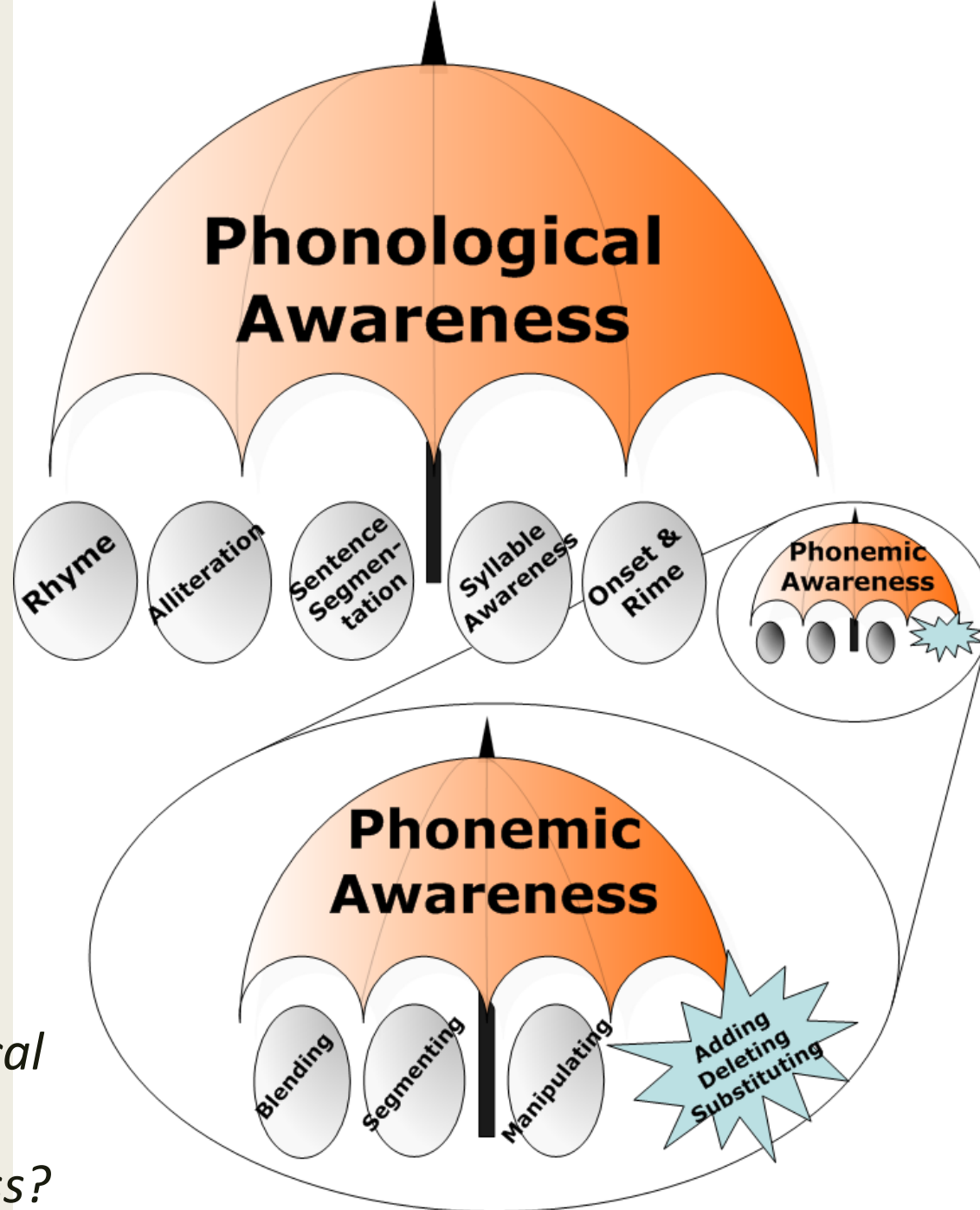
Phonological Awareness

The recognition that spoken words consist of sounds

Syllables

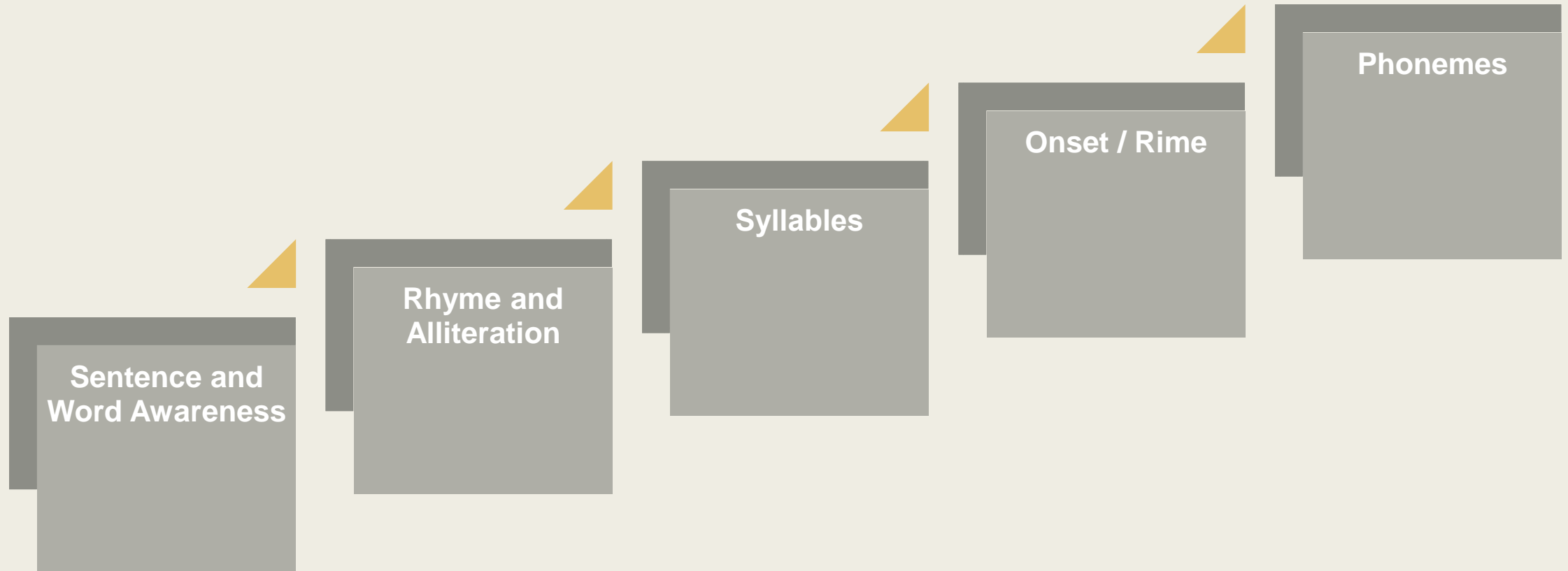
Onsets and rimes
(/k/ and /at/)

Phonemes
(/k/ and /a/ and /t/)



What is relationship between Phonological Awareness and Phonemic Awareness?

Sequence of Skill Development



How Many Phonemes?



26 Letters in the Alphabet

Phonemic Awareness Matters

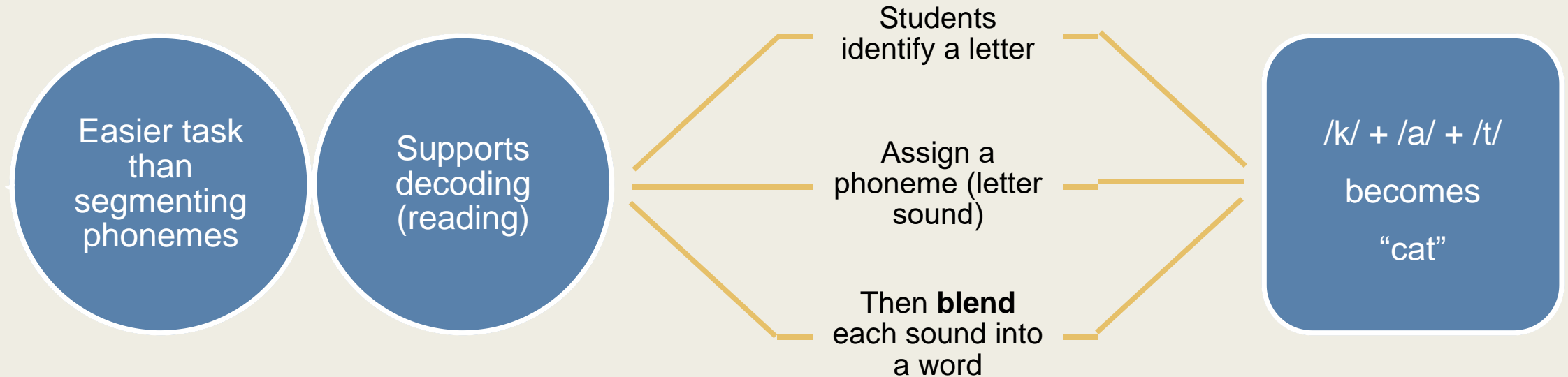
- When applying phonemes to letters, students require awareness of individual sounds



- Our brains ARE wired for language, but we do not speak by breaking apart phonemes



Blending Phonemes in Spoken Words



Continuants

Continuants

- Can be stretched without distortion

Examples of Continuants

- All vowel phonemes
- /s/ /m/ /f/ /sh/ /v/ /z/ /n/
/th/

Stops

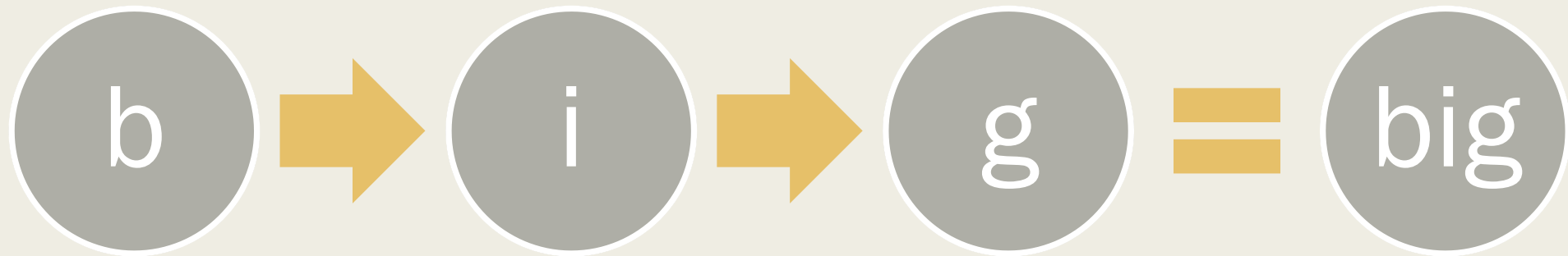
Stops

- Briefly close off the airflow
- In instruction, start with phonemes that stretch before introducing stops

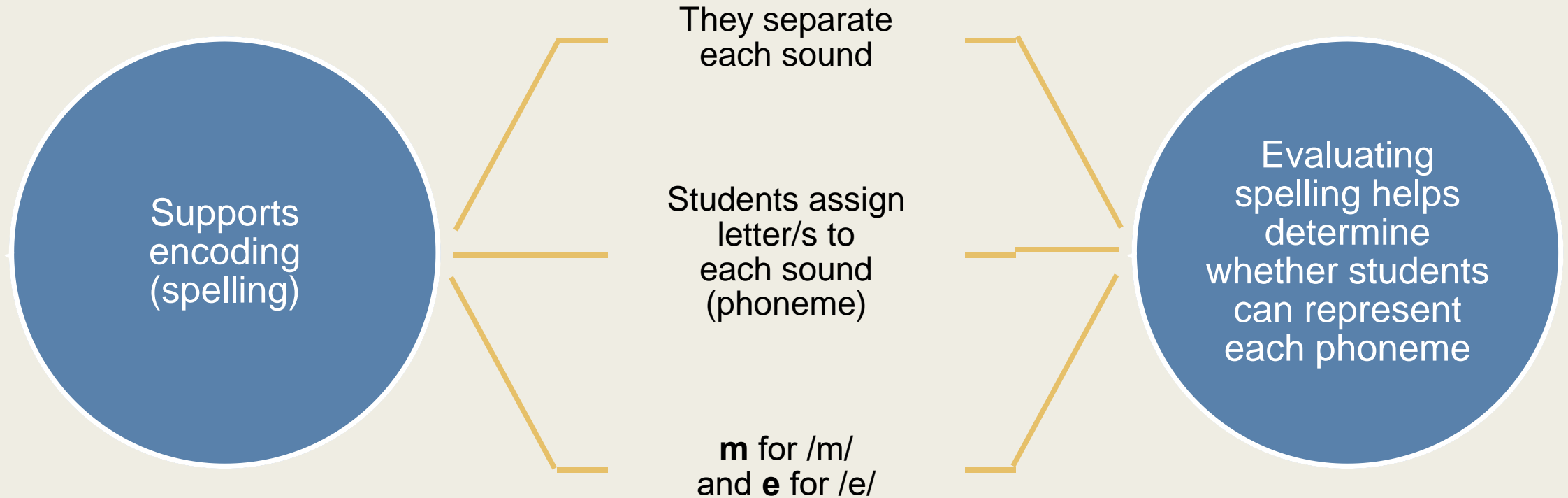
Examples of stops:

- /b/ /d/ /p/ /t/ /g/ /k/ /ch/

Blending with Continuants and Stops



Segment Phonemes in Spoken Words



Counting Phonemes

Reminders

R-controlled vowels

- /ar/ /er/ /or/
- “far” = /f/ + /ar/

Consonant digraphs


- /sh/ /ch/ /th/
- “ship” = /sh/ + /i/ + /p/

Consonant blends


- 2 or more phonemes
- /s/ /t/ as in stop
- “crash” = /k/ + /r/ + /a/ + /sh/
- “strap” = /s/ + /t/ + /r/ + /a/ + /p/

Challenges

Phonemes are difficult to detect –
we do not speak by breaking words into
phonemes



Late development of phonemic awareness may
cause problems in both reading and spelling



Students require
explicit instruction of individual phonemes



Challenge

Fleeting Sounds

(see Scanlon et al., 2017)

Takes less than a second to say a sound

Some sounds stretch

- /m/ /s/ /f/
- All vowel phonemes
- Others

Some sounds are stops and airflow stops

- /b/ /k/ /p/
- Other consonant phonemes
- When saying /p/, it can be followed by /uh/

Challenge

Coarticulation (see Scanlon et al., 2017)

Phonemes are hard to separate

Sometimes there is no clear break and they blend

- This blending is coarticulation

Examples | Student spells:

- sed for sled
- set for sent
- sic for stick
- pas**met** for base**ment** (9th grader's spelling)

Challenge

Voicing Confusions

(see Scanlon et al., 2017)

The SAME mouth position is used for some phonemes

BUT some sounds can be voiced (voice box on) or unvoiced (voice box off)

Examples | Student spells:

- **v**an for **f**an
- **p**asment for **b**asement
(9th grader's spelling)

Consonant Phonemes

Produced in different parts of the mouth (front, middle, or back)

- **Place of articulation:** location in the mouth engaged to direct air flow (lips, teeth, roof of mouth, or tongue)

Sounds May **Stop** or **Continue**

- **Stop Sounds:** Airflow is obstructed / voiced or unvoiced
 - /b/ /p/ /d/ /t/ /g/ /k/
- **Continuant Sounds:** Can be stretched
 - /m/ /s/ /f/

Try producing these sounds

- /p/ /b/ /m/ /f/ /th/ /t/ /s/
- /sh/ /j/
- /k/ /g/

Unvoiced and Voiced Consonants

Unvoiced	Voiced
/p/	/b/
/t/	/d/
/k/	/g/
/f/	/v/
/ch/	/j/
/s/	/z/
/th/	/th/
/sh/	/zh/

Voicing Confusions

Voicing Confusion

- The mouth position when saying some phonemes remains the same but the sounds are voiced **OR** unvoiced

Common Spelling Confusions

- stob for stop = /b/ for /p/
- fid for fit = /d/ for /t/

Liquids

Liquids

- Tend to roll around in the mouth depending on the other sounds around them
- They alter the vowel sound that comes before or becomes part of the vowel

Common Spelling Confusions

- bol for ball
- tigr for tiger

Nasals

Nasals

- Phonemes produced by air through the nasal cavity
- All nasals are voiced and continuous

Try these Sounds

- /m/ /n/ /ng/
- You cannot produce these sounds correctly if you hold your nose as you try them!

Common Spelling Confusions

- set for sent / lup for lump / bak for bank / rag for rang

Fricatives

Fricatives

- Produce friction when their sound is made
- They are continuous sounds
- They can be voiced or unvoiced

Voiced and Unvoiced Fricatives

- Voiced fricatives = “tickly,” while unvoiced fricatives = “hissy”
- There are eight fricatives sounds in four voiced/unvoiced pairs:

Voiced /v/ /z/ /zh/ /th/ (ex. this)

Unvoiced /f/ /s/ /sh/ /th/ (ex. thistle) /h/

Affricates

Affricates

- A combination between a stop sound and a fricative
- Friction is created, but the air is stopped before sound is released
- There is one voiced/unvoiced pair of affricates: /ch/ and /j/

Common Spelling Confusions

- The phonemes /t/ and /d/, when followed by /r/ or /y/, can be produced more like an affricate:
 - jrem for dream
 - chry for try

Glides

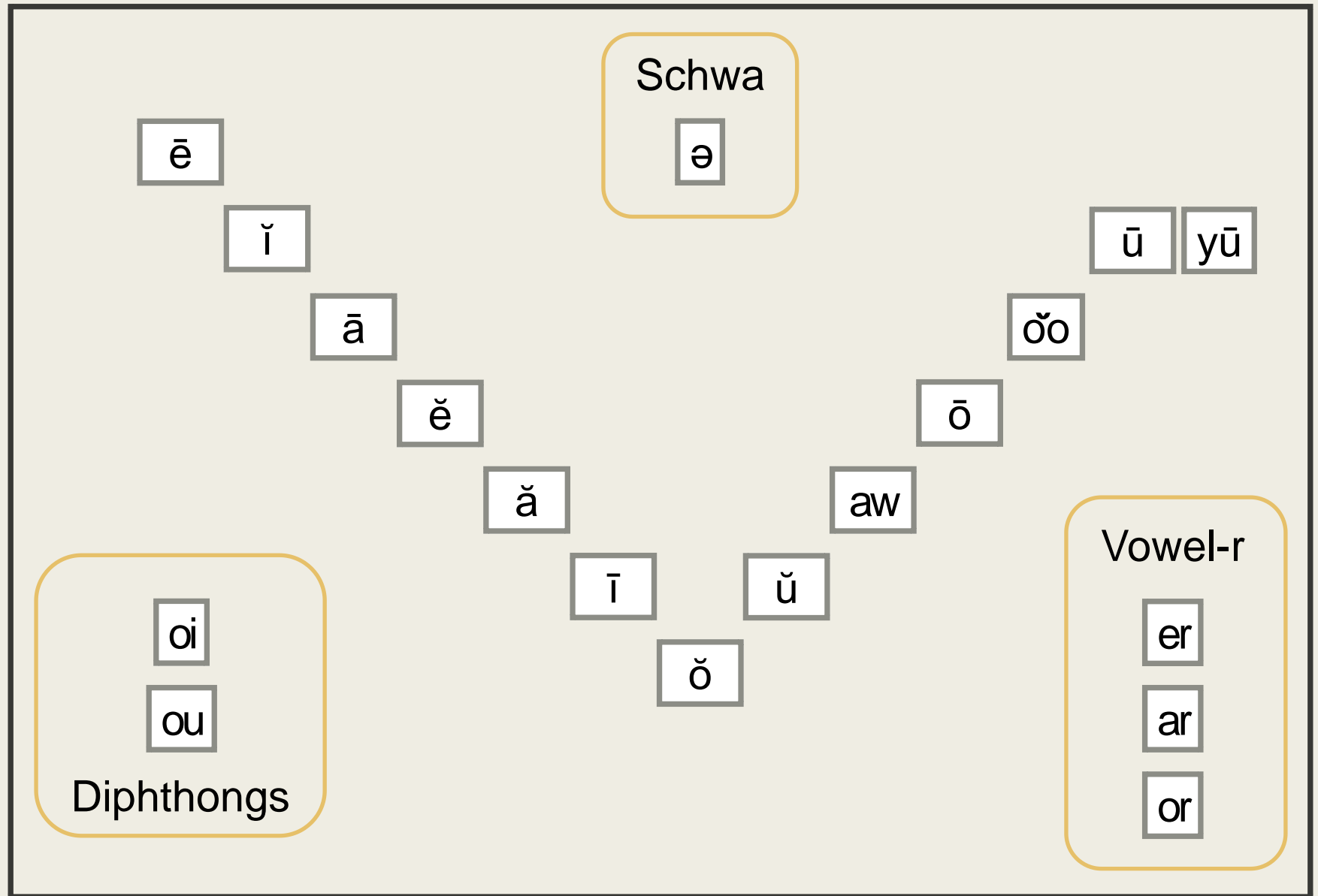
Glides

- Consonant with vowel-like qualities
- Occur right before a vowel and 'glide' right into it!
- /w/ /wh/ /y/

Common Spelling Confusions

- wile for while
- wen for when
- craon for crayon

Vowel Phoneme Chart



Vowel Phonemes

Vowel phonemes are classified by the way they are produced in contrast to consonant phonemes:

- Open (the mouth is open and unobstructed)
- Vowel sounds are continuants
- Vowel sounds are all voiced

Short Vowel Phonemes

Similar
Sounds

/a/

• bat

/e/

• bet

/i/

• bit

/o/

• bot

/u/

• but

Long Vowel Phonemes

There are various graphemes (letter/s) that represent long vowels

- /ā/
- /ē/
- /ī/
- /ō/
- /ū/

Examples of Long Vowel Patterns

- The various orthographic patterns of the same sound must be learned
- Examples of various /ā/ patterns: bay; bake; bait; baby

Diphthongs

Diphthongs

- There are two distinct mouth placements:
 - ow = open to rounded
 - oi = rounded to smile

Examples of Diphthongs

- oi/oy = in toil or toy
- ow/ou = in owl or out

r-Controlled Vowels

Examples of r-Controlled Vowels

- /ar/ in hard
- /er/ in herd, bird, hurt (same sound)
- /or/ in form

Common Spelling Confusions

- The /er/ sound is spelled /ir/ and /ur/

Schwa

Schwa

- Can sound like short /u/ or short /i/
- Is found in a syllable that is unstressed

Examples of Schwa

- Say the word “apartment”
 - The first sound is not pronounced as /a/; it is /u/
- Other examples: balloon; above; contain

Students Who Are Learning English

- Some phonemes may not be present in native language.
 - Instruction must have meaning – with familiar words and sounds
 - Students must know the English words to understand phonemes
- Phonemes in first language may conflict with English phonemes.
 - English and Spanish share 19 phonemes – 5 vowels and 14 consonants (see handout)
 - Spanish-speaking children may read and write ch when sh should be used - these two combinations produce the same phoneme

For Our Next Meeting!

- Collect writing samples or administer a spelling assessment (spelling words that are not practiced.)
- Excellent review of Phonemic Awareness:
 - <https://www.youtube.com/watch?v=TLsCodzmJ6U>
- Watch this video of all the English phonemes:
 - <https://www.youtube.com/watch?v=wBuA589kfMg>

Next Time!

- We will review, have time for Q & A, and then look at assessments
- Then we will discuss practical instructional approaches to address the specific needs of all students!