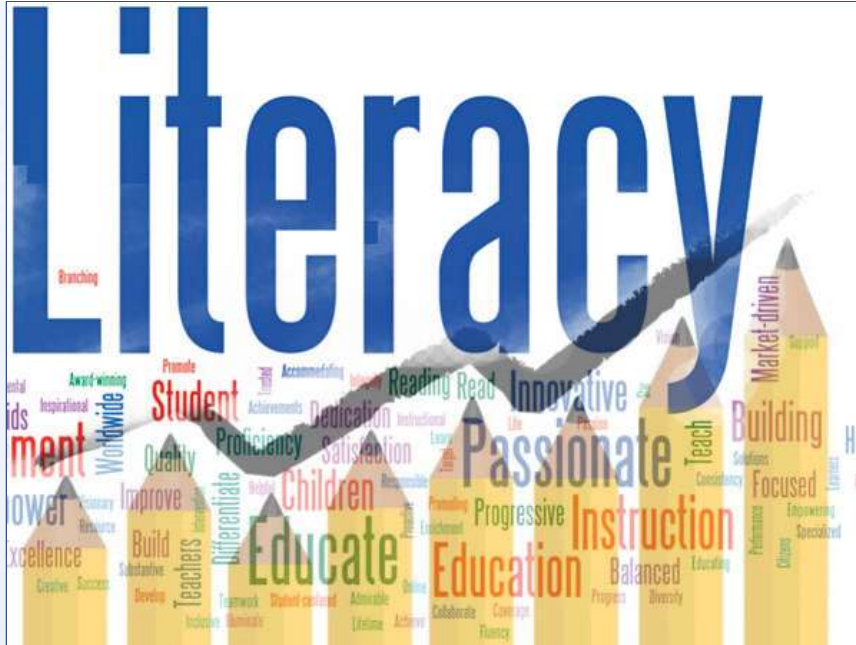




Reading Development & Dyslexia

Gabrielle Wilcox, PsyD, NCSP, RPsych
Sara Peden, MEd, RPsych
October 27, 2019



- US
 - 27% of HS seniors below basic
- Canada
 - 48% of Canadian 16+ are below basic

Canada Literacy Foundation, 2008; , Shaywitz & Shaywitz, 2008

Reading Development



- Reading IS Rocket Science

Pre-Reading Skills

Language

Print Awareness

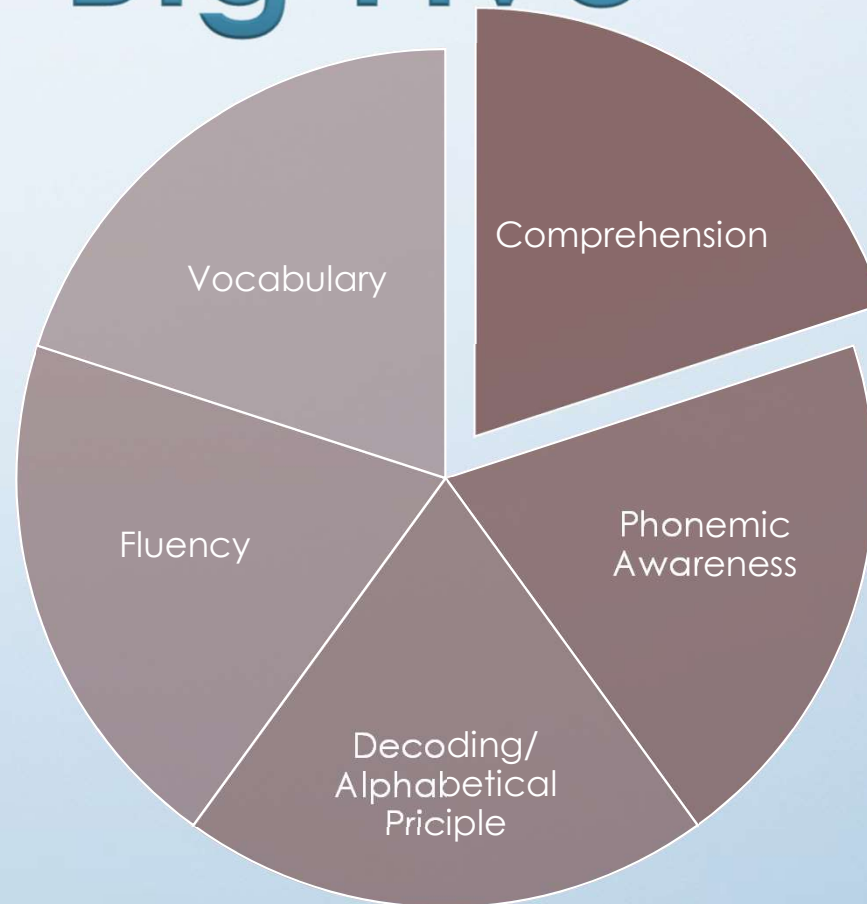
Print Motivation

Letter Knowledge

Narrative Skills

Phonemic Awareness

The Big Five



Phonemic Awareness Definitions

Phoneme –

- the smallest sound unit of language (/b/, /th/, /a/)

Onset- Rime

- Onset – part of word before the vowel (**h**ot); not all words have an onset (e.g., on, all)
- Rime – the part of the word from the vowel on (**o**t)

How Many phonemes are in
fox?

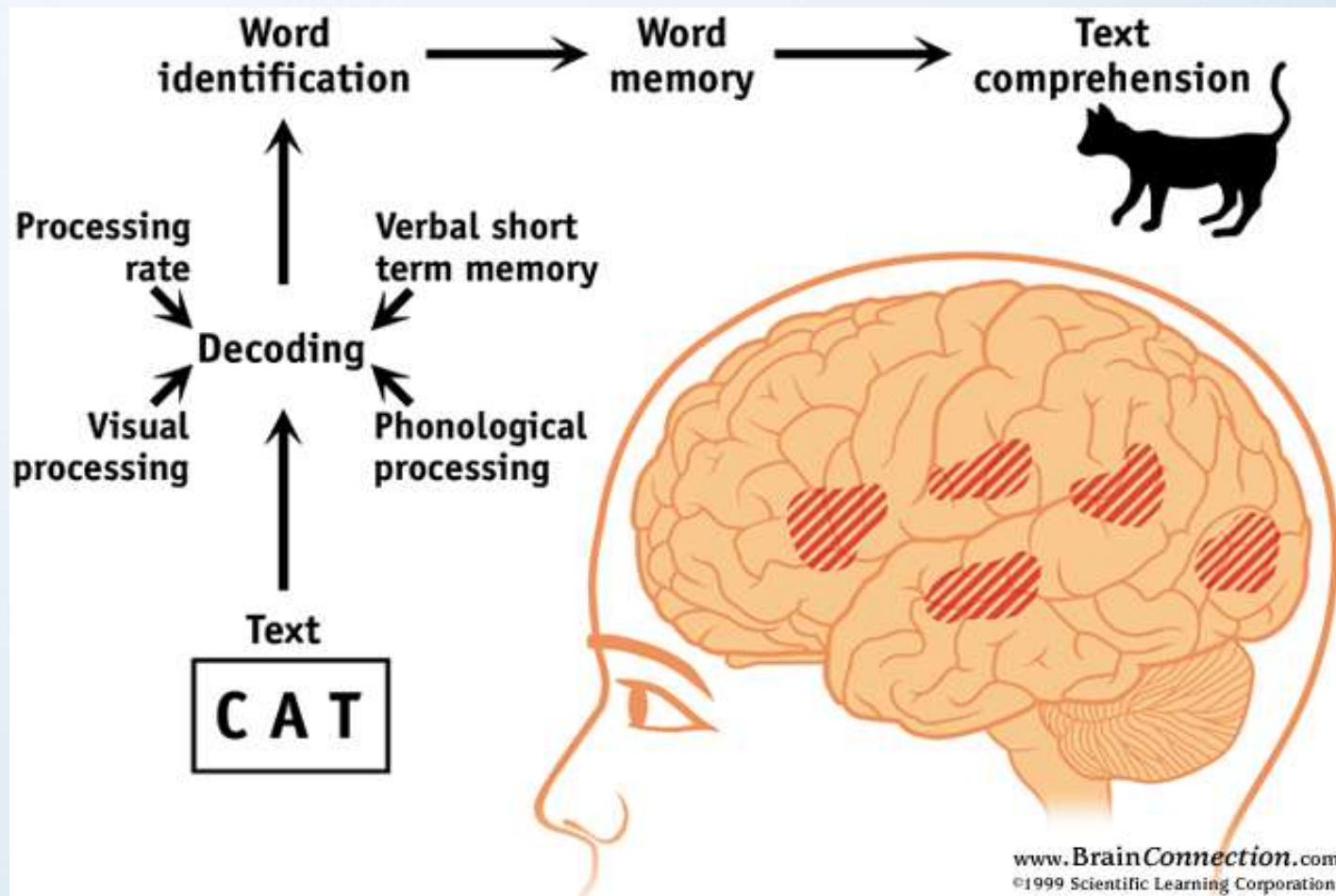


/f/

/o/

/k/

/s/



Rhyming

- The cat sat on the mat.

Sentence

- The sun is shining.

Word

- Cat Cup/cake

Syllable

- Sa - man - tha

Onset-Rime

- B - all

“Stages” of Phonemic Awareness

Blending

- /c/ /u/ /p/ = cup

Phoneme segmentation

- Cat = /c/ /a/ /t/

Phoneme deletion

- Say beetle without the /l/ = beet

Segmentation substitution

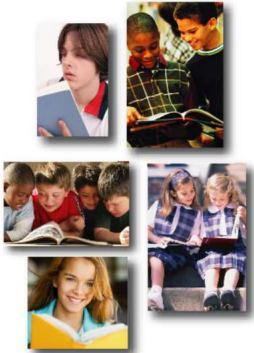
- Change the /dr/ in drink to /s/ = sink

“Stages” of Phonemic Awareness

Phonemic Awareness Activities and Resources

Equipped for Reading Success

A Comprehensive, Step-by-Step Program for Developing Phonemic Awareness and Fluent Word Recognition



David A. Kilpatrick, Ph.D.

Kindergarten Curriculum

2020 Edition

Heggerty
PHONEMIC AWARENESS CURRICULUM
by Literacy Resources, Inc.

Phonemic Awareness:

The Skills That They Need To Help Them Succeed!

A 35 Week Curriculum of Daily Phonemic Awareness Lesson Plans
Developed on a Systematic Scope and Sequence of Skills with Explicit Modeling

Michael Heggerty, Ed.D.
With Revisions By
Alisa VanHekken, M.Ed.

Common Core Aligned!

Primary Curriculum

2020 Edition

Heggerty
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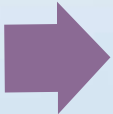
Michael Heggerty, Ed.D.
With Revisions By
Alisa VanHekken, M.Ed.

Common Core Aligned!

Decoding



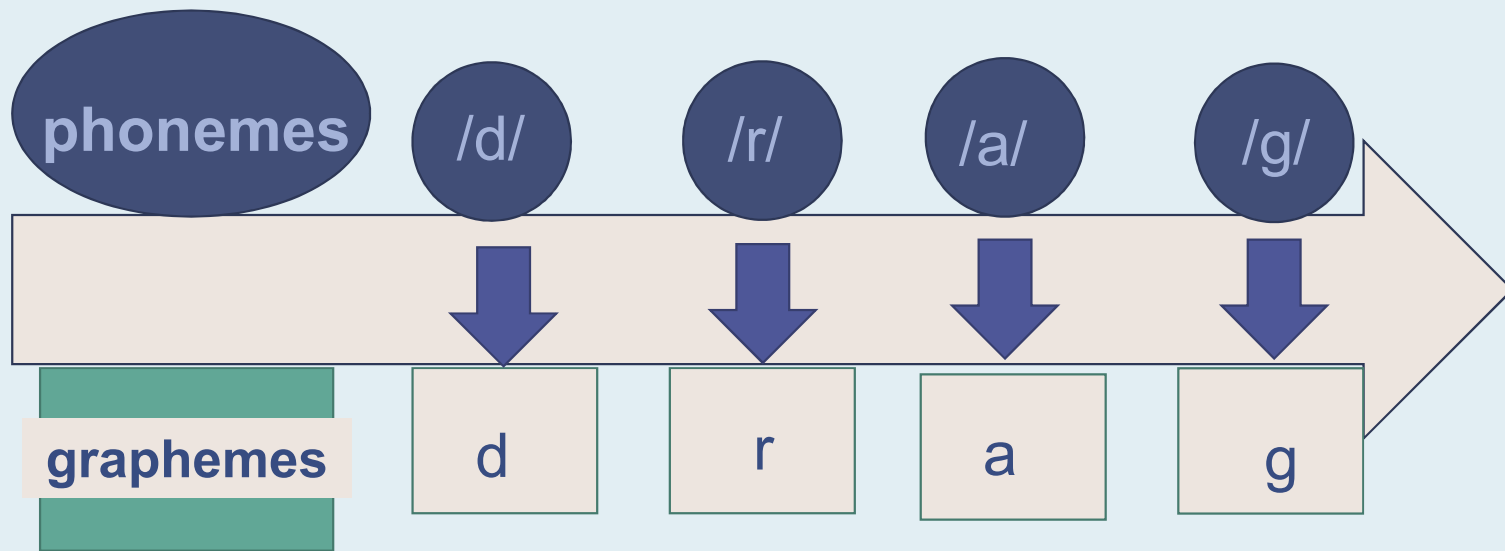
Orthography
(this is a g)



Phonemic Awareness
(there is a /g/
in get)

Decoding
(the letter
g says /g/)

Breaking the Code



Levelled versus Decodable Texts

- Levelled texts – Fountas and Pinnell, Guided Reading etc.
- Your child is reading Level A text or Level H or Level R (A-Z)
- Levelled texts – predictable texts; multi-cuing



Levelled versus Decodable Texts

- Levelled texts – predictable texts; multi-cuing



Levelled versus Decodable Texts

- Levelled texts – predictable texts; multi-cuing

Mom is reading.



Levelled versus Decodable Texts

- Levelled texts – predictable texts; multi-cuing



Levelled versus Decodable Texts

- Levelled texts – predictable texts; multi-cuing



Levelled versus Decodable Texts

- Decodable texts start with a few connections between letters and sounds, and gradually increases the number and connection of those connections.



“Sight” Words

- Exceptions are not arbitrary patterns that need to be memorized individually
 - Have = had, has, having
- Most “sight” words are high frequency
- English is statistical rather than rule-based

Vocabulary





MORPH + OLOGY:

the break down on breaking down

words

Role of Morphology



KEEP MORPHOLOGICAL
STRUCTURE RATHER THAN
FOLLOWING THE ALPHABETIC
PRINCIPLE



BORROWING WORDS FROM
OTHER LANGUAGES HAS
CONTRIBUTED MUCH TO THE
BROKEN ENGLISH RULES



SIGN, SIGNAL, SIGNATURE

Examples of Morphology in school

Morpheme

Photo

Therm

Graph

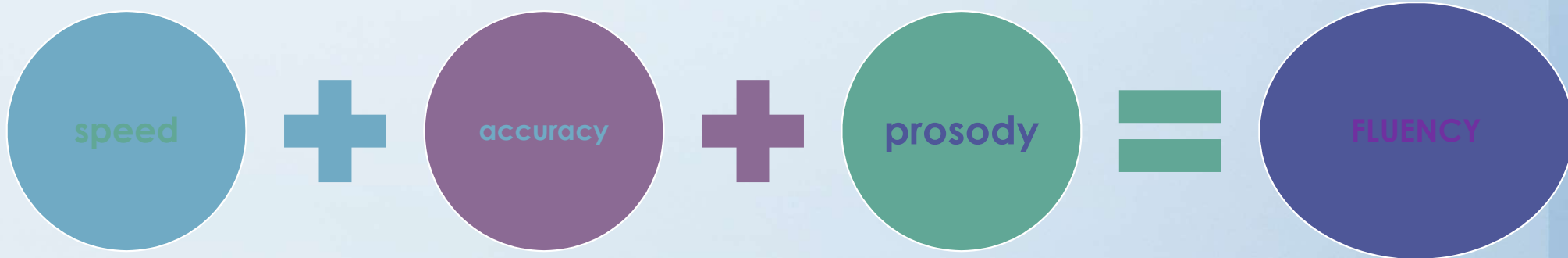
Related words

Photography
Photograph

Thermos Thermal

Autograph,
Biography, Bar Graph

Fluency



Reading Fluency Problems

Slow decoding

Skipping words/sounds

Adding words/sounds

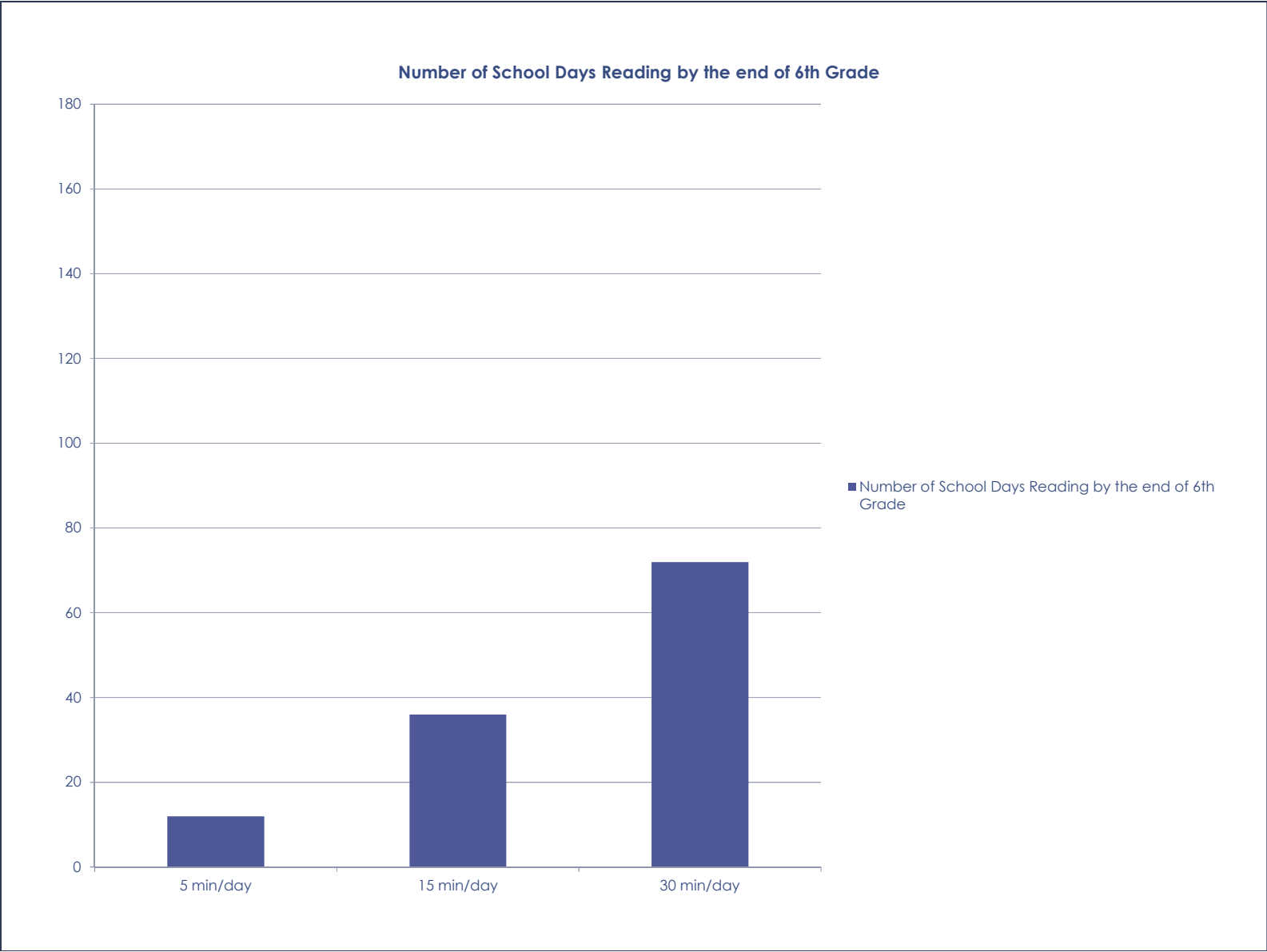
Substituting words/sounds

Importance of Independent Reading

(4 days/week)	5 minutes/ day	15 min/day	30 min/day
WEEK	20 minutes	1 hour	2 hours
MONTH	1 hour 20 minutes	4 hours	8 hours
SCHOOL YEAR	12 hours	36 hours	72 hours

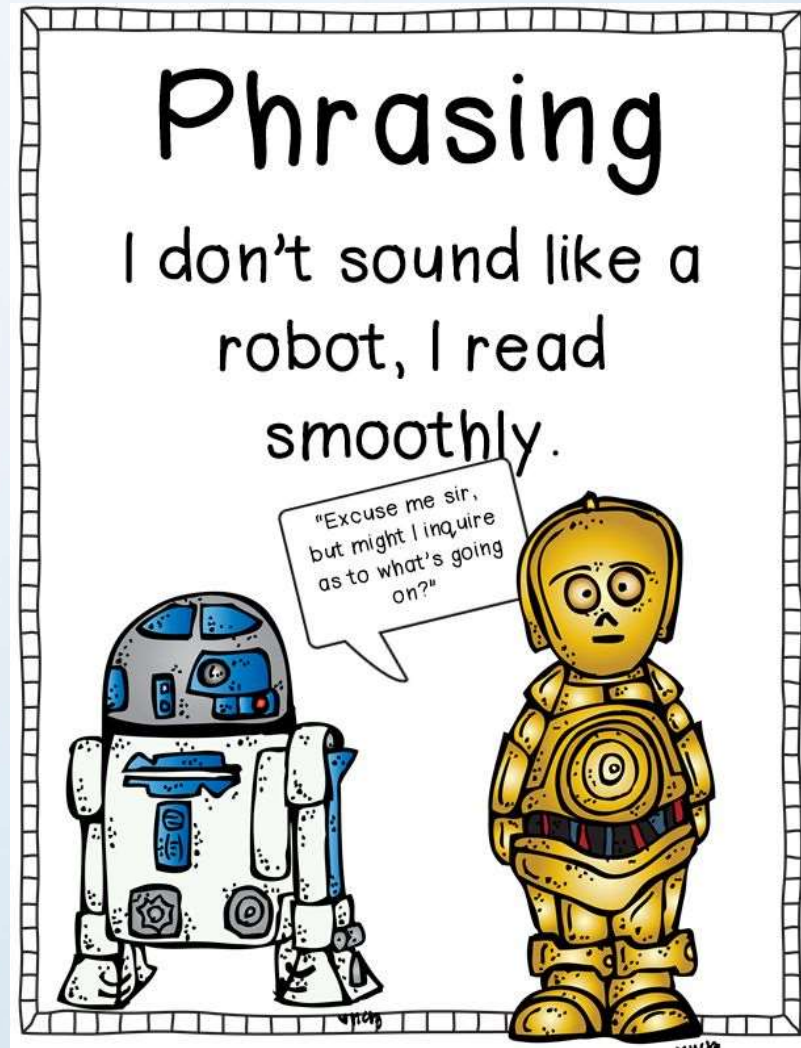
U.S. Department of Education, 1999

Cumulative Reading



Prosody

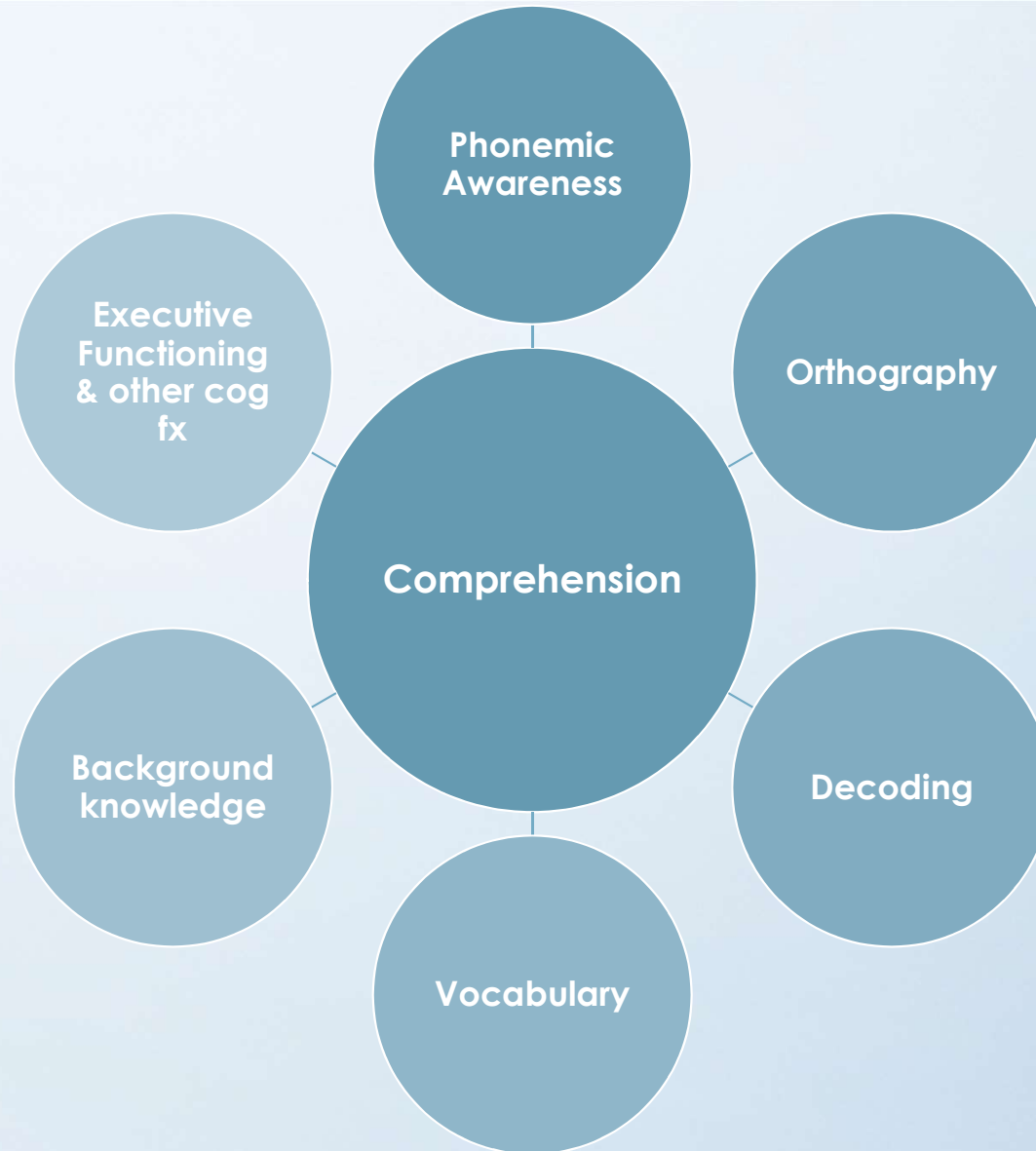
- Expression and volume
- Phrasing
- Smoothness
- Pace





Comprehension





Dyslexia Reading Disability





- Reading disabilities are underdiagnosed and undertreated
- **Most common SLD = over 80% of kids with an SLD have a RD**
- Identifying and remediating reading difficulties is more important than diagnosing dyslexia
- Dyslexia develops, so the best treatment is prevention

Seidenberg, 2017; Shaywitz & Shaywitz, 2008

Heritable

Having a parent or sibling with dyslexia increases your risk

More for families with higher SES

Suggests importance of other environmental factors for those with lower SES

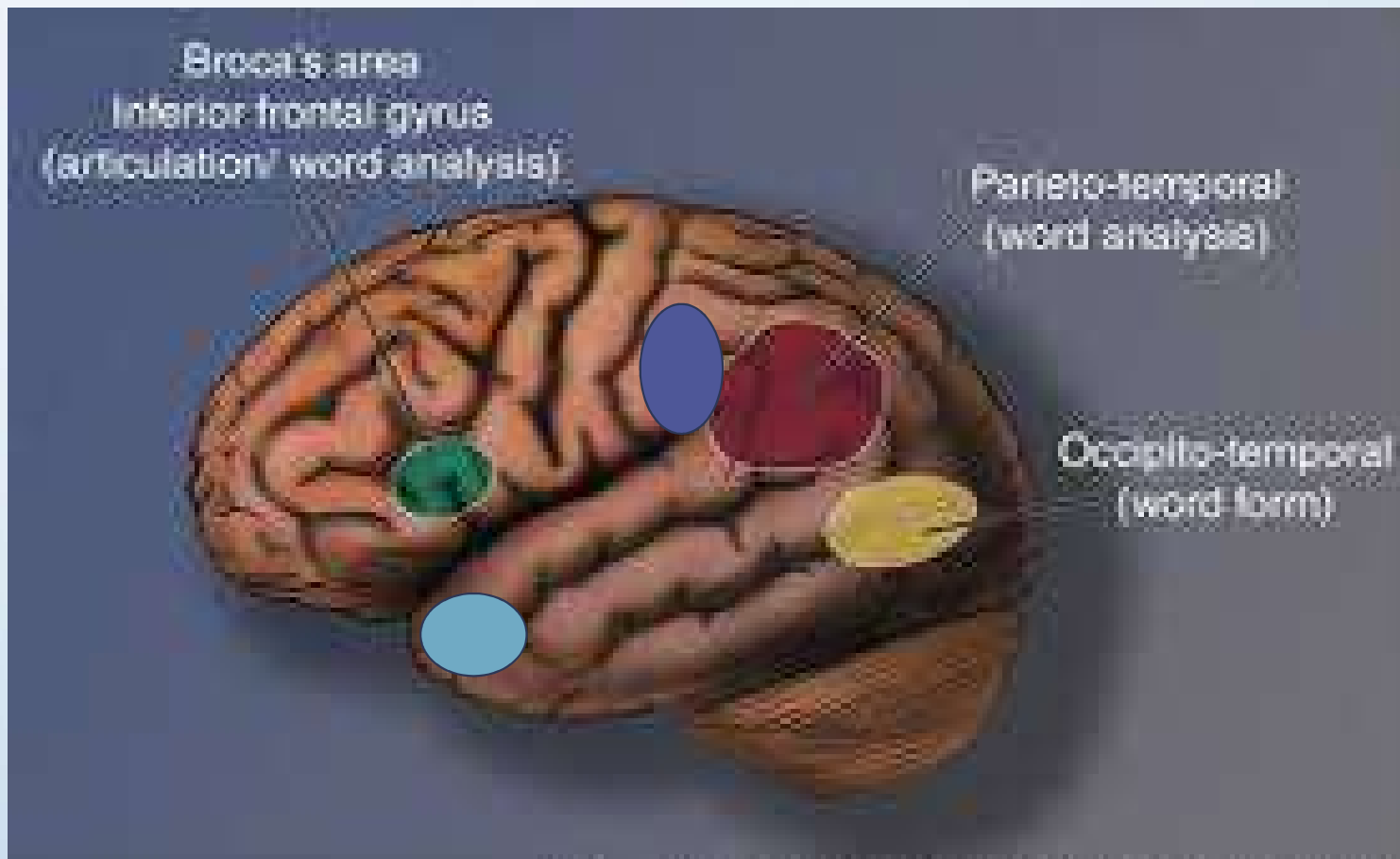
Four Types of Dyslexia

Dysphonetic Dyslexia	<ul style="list-style-type: none">• Poor decoding, usually due to weak phonological awareness• Often tries to memorize words (over-reliance on orthography)
Surface Dyslexia	<ul style="list-style-type: none">• Weak orthographic mapping• Over-reliance on decoding = weak fluency, difficulty reading irregular words
Mixed Dyslexia	<ul style="list-style-type: none">• Weak: language, phonological processing, slow RAN, word recognition• <u>Most severe</u>• Requires: balanced literacy and focus on morphology
Reading Comprehension	<ul style="list-style-type: none">• Often have weak executive functioning and language (especially working memory) foundational skills

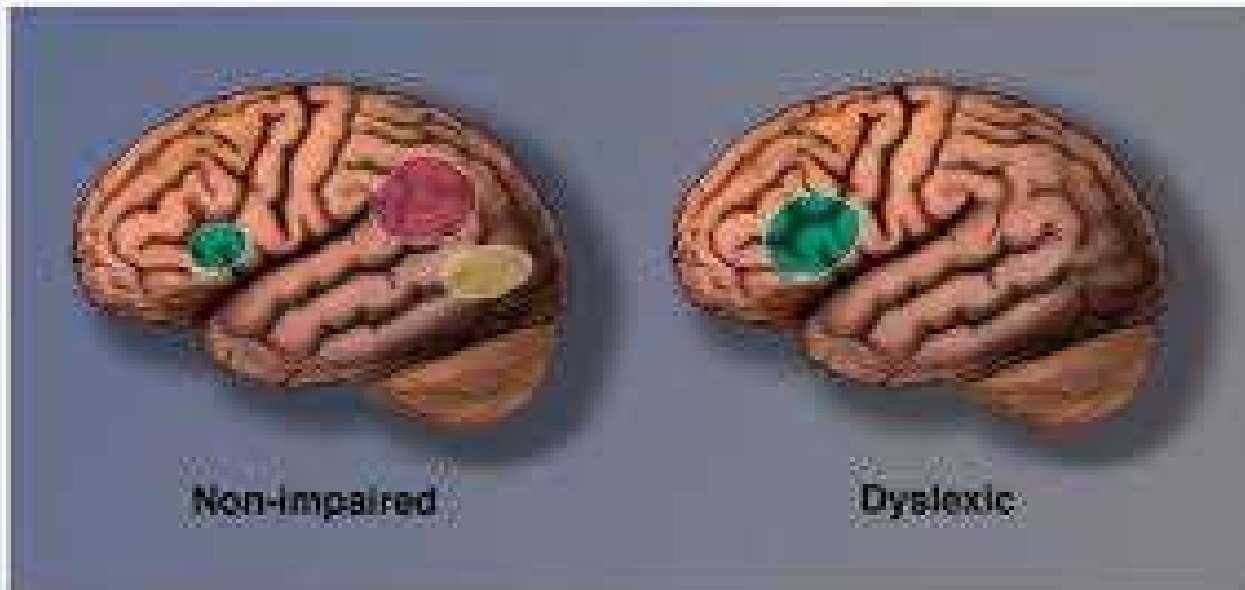
Dyslexia versus Reading Disability

Neurobiology of Reading





Shaywitz & Shaywitz, 2008 p. 1335

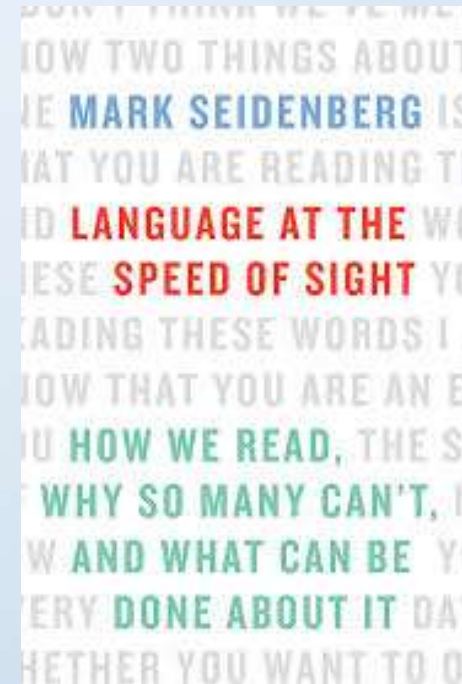
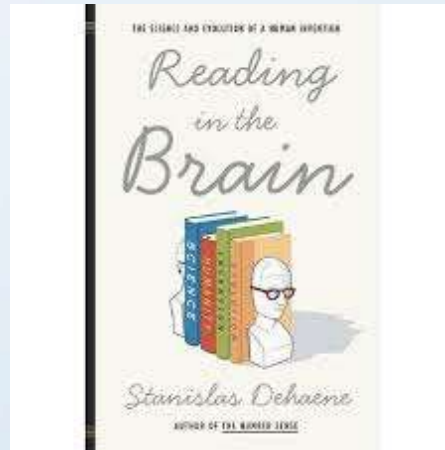
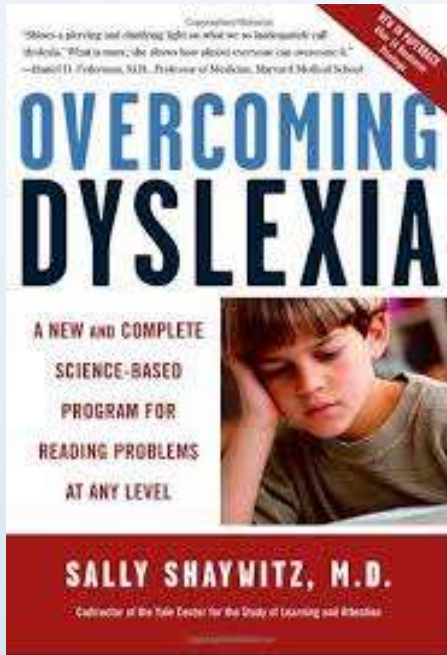


Shaywitz & Shaywitz, 2008 p. 1337

brain function

"Children who received the experimental intervention not only improved their reading but also demonstrated an increase in activation in the anterior system as well as in the parietotemporal and occipitotemporal systems, compared to their preintervention brain activation pattern."

Shaywitz & Shaywitz, 2008; p. 1340



Resources