

California Dyslexia Guidelines



SAN MATEO
COUNTY
OFFICE OF
EDUCATION

www.smcoe.org

How did we get here?

- Assembly Bill (AB) 1369, Statutes of 2015, required the **Superintendent of Public Instruction** to develop and to complete **program guidelines** for dyslexia. The guidelines may be used to assist regular education teachers, special education teachers, and parents to identify and assess pupils with dyslexia, and to plan, provide, evaluate, and improve educational services to pupils with dyslexia.
- For purposes of writing the guidelines, the **California Department of Education (CDE)** was required to consult with teachers, school administrators, other educational professionals, medical professionals, parents, and other professionals involved in the identification and education of pupils with dyslexia.

Specific Changes in Law

Assessment for Special Education

The **state board** shall include “phonological processing” in the description of basic psychological processes in Section 3030 of Title 5 of the California Code of Regulations.

Specific Learning Disability

Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may have manifested itself in the imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The basic psychological processes include attention, visual processing, auditory processing, **phonological processing**, sensory-motor skills cognitive abilities including association, conceptualization and expression.

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Dyslexia Guidelines

Released to the public in August 2017
Updated in October 2017

<http://www.cde.ca.gov/sp/se/ac/documents/cadyslexiaguidelines.pdf>

Included in the Guidelines:

- Historical Context
- Neuroscience
- Framework as a Language Learning Disability
- Characteristics
- Socioemotional Factors
- Impacts for English Learners
- Appropriate Teacher Training
- Screening and Assessment
- Relationship to Special Ed and 504
- Approaches for Intervention
- Information for Parents
- Assistive Technology
- FAQs

California Dyslexia Guidelines

California Department of Education
Sacramento, 2017

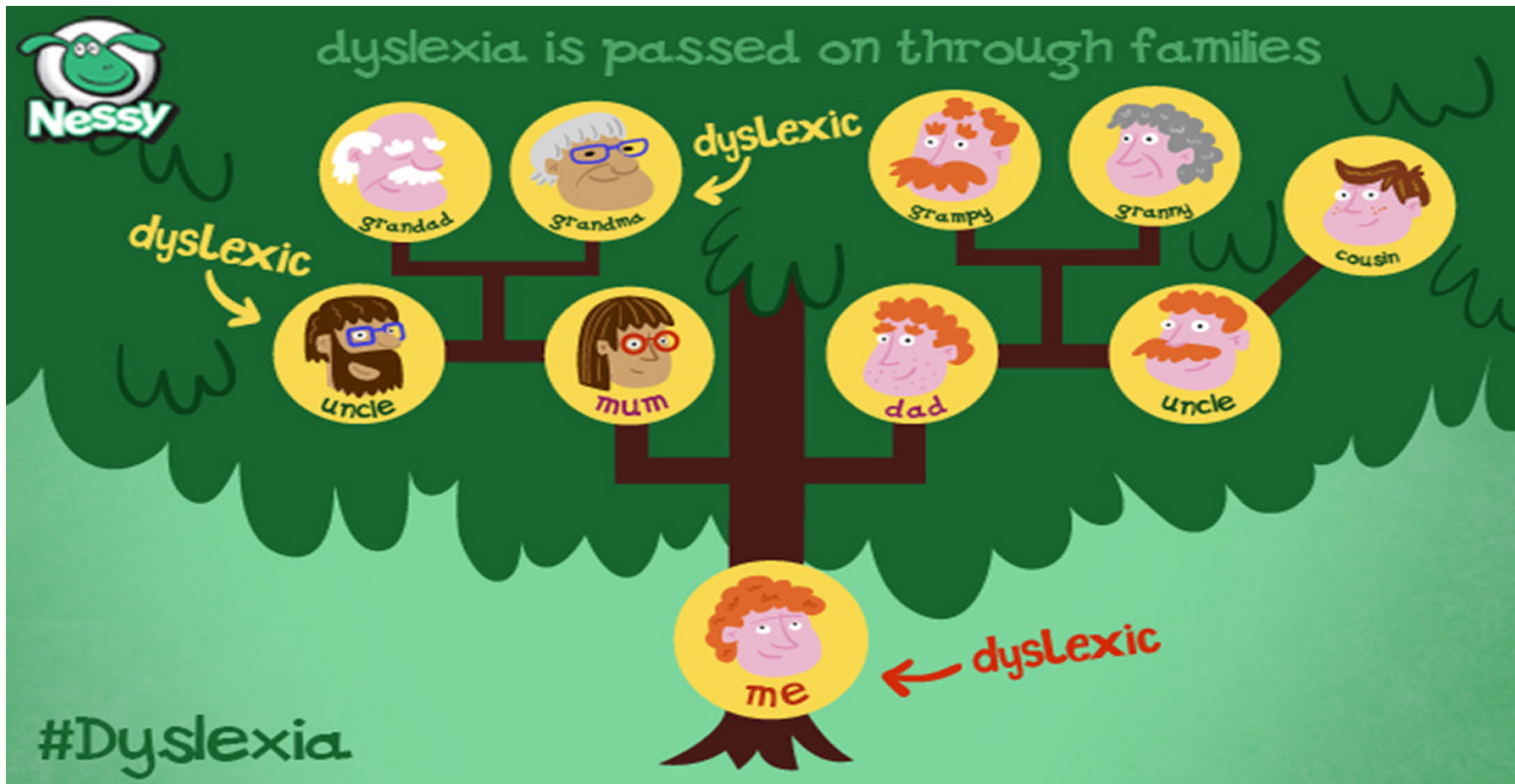


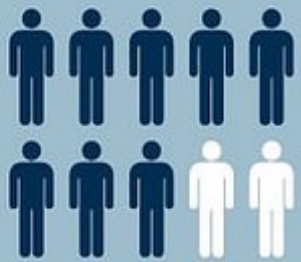
Dyslexia Basics - Definition

A **language-based** learning disability that is **neurobiological** in origin affecting a student's ability to read individual words accurately and fluently which typically results from a deficit in the **phonological component of language**. Difficulties are often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Dyslexia also impacts student's ability to spell with secondary consequences impacting reading comprehension and written expression

International Dyslexia Association, 2002

Dyslexia Basics - Genetics





80% of the population
believes that dyslexia
is associated with
low intelligence

THIS IS NOT TRUE.

DYSLEXIA
occurs in people of **ALL**
INTELLECTUAL LEVELS

KEY FACTS ABOUT DYSLEXIA

DYSLEXIA
is the **MOST COMMON**
LEARNING DISABILITY



and affects
15-20%
of the US population

dyslexia
RUNS IN
FAMILIES

parents with dyslexia
ARE MORE LIKELY
TO HAVE CHILDREN
with dyslexia

research has proven that
students with dyslexia

CAN LEARN
TO READ
when instruction is:

Explicit and systematic

Multisensory

Consistent and frequent

Phonics based

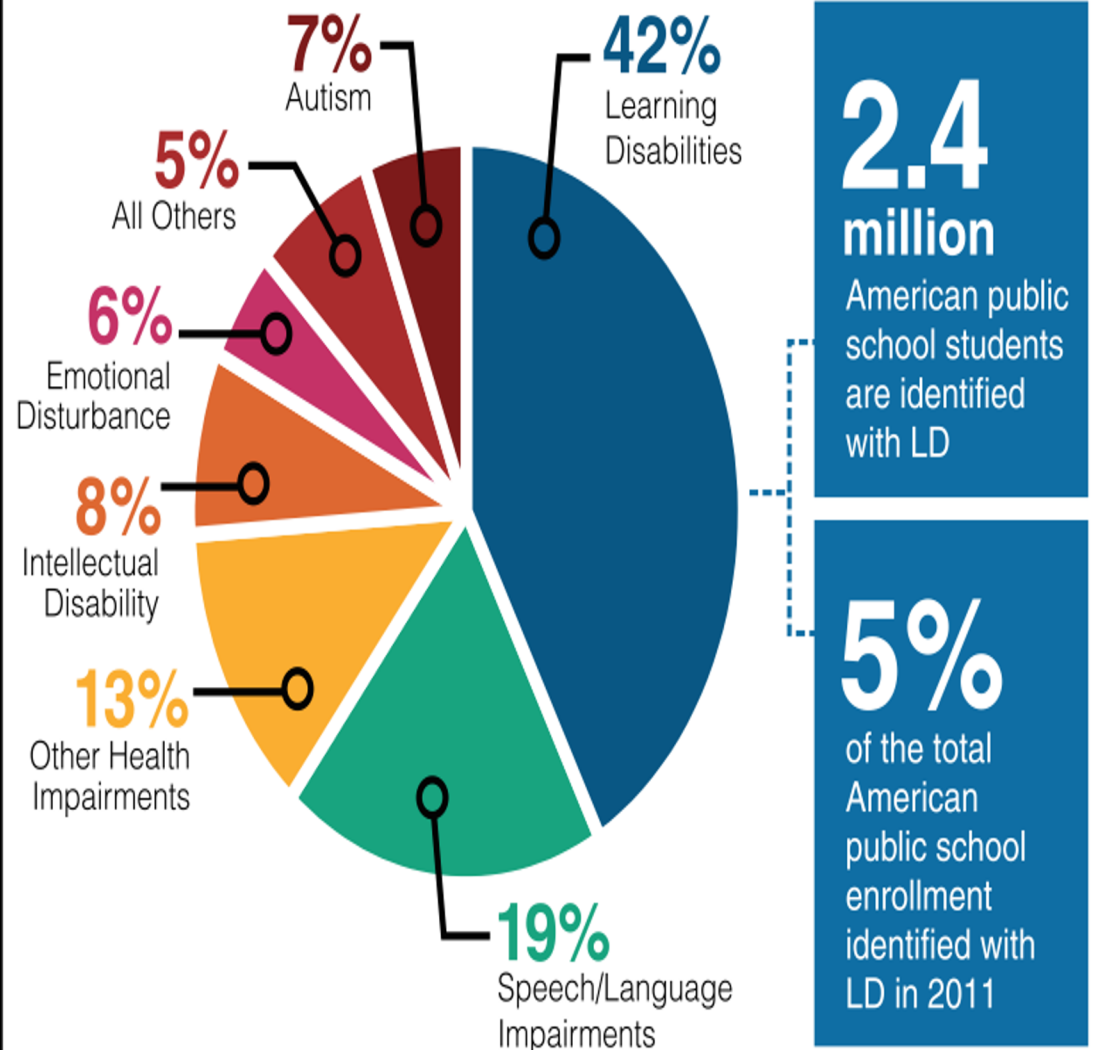
Individualized

Emotionally reinforcing

Dyslexia Basics

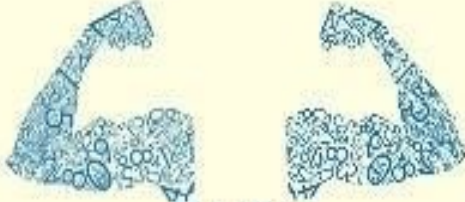
Estimates are that of the 42% of students with Learning Disabilities, up to 80% have a language-based learning disability such as dyslexia.

Special Education Students: 2011 By Disability Category




Source: IDEA Part B Child Count, Ages 6–21. Does not include Developmental Delay category (allowable to age 9).

DYSLEXIC STRENGTHS



- Creative
- Intuitive
- Persistent
- Empathetic
- Critical thinkers
- Big picture thinkers
- Strong reasoning skills
- Excellent at solving puzzles
- Excelled oral comprehension



DECODING
DYSLLEXIA

- Auditory Processing Difficulties
- ADHD
- Specific Language Impairment
- Autism Spectrum Disorders
- Dysgraphia
- Dyscalculia
- Giftedness

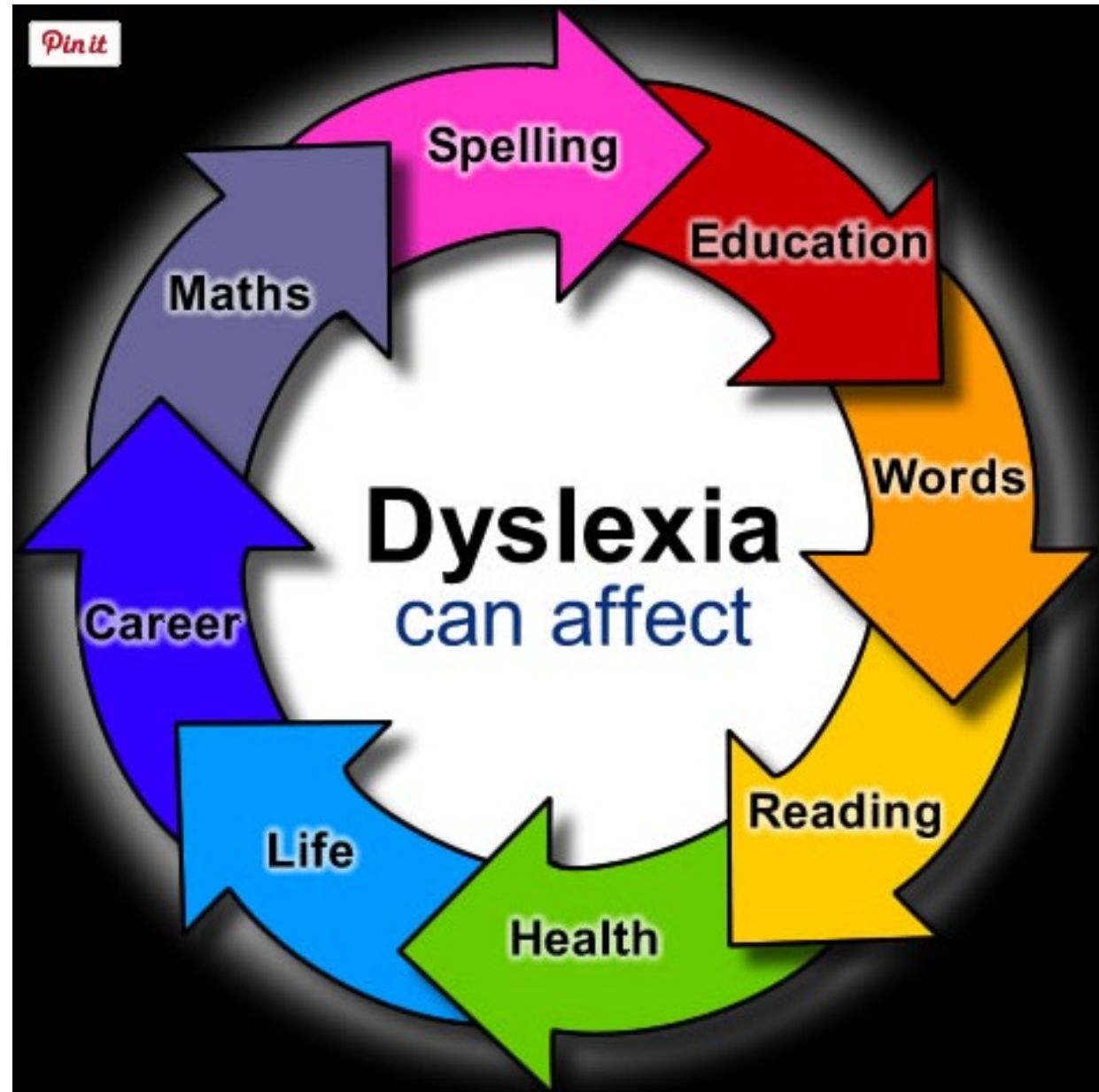
Dyslexia Basics

Early **screening and intervention** are critical

Structured Literacy approaches to reading and language work

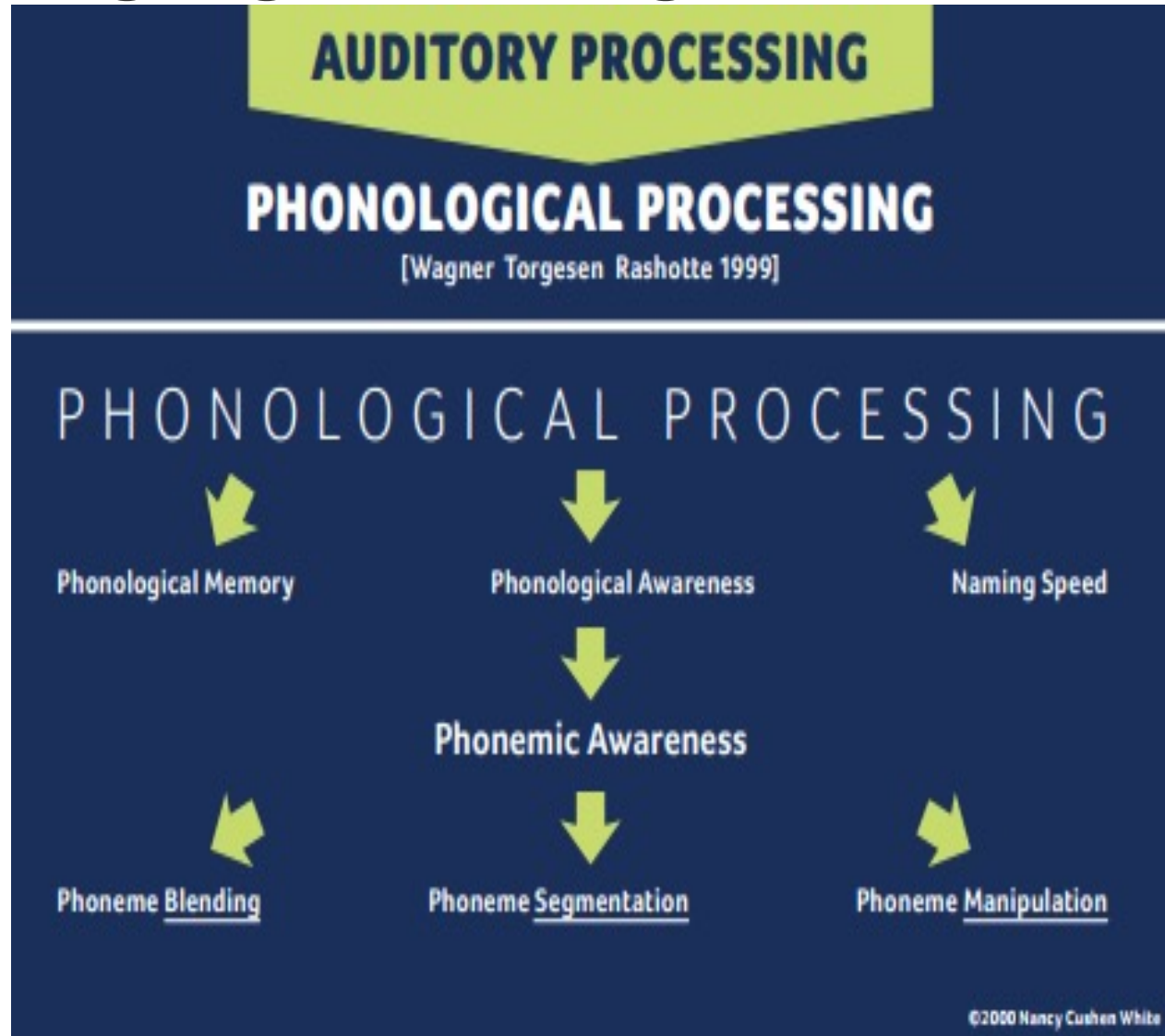
It's never too late to remediate a student with dyslexia

With effective MTSS, including universal screening and early intervention, schools can reduce the number of students who may need special education by 70%



Dyslexia as a Language Learning Disorder

The majority of people with dyslexia have a core deficit in the phonological processing component of language. Phonological processing includes phonological memory, **phonemic awareness**, and speed of naming (Wagner et al. 2013).



5 Components of Language

Phonology

- Rules of the sounds in language
- Individual speech sounds

Morphology

- Form of language and structure of words
- Meaningful units of sound

Syntax

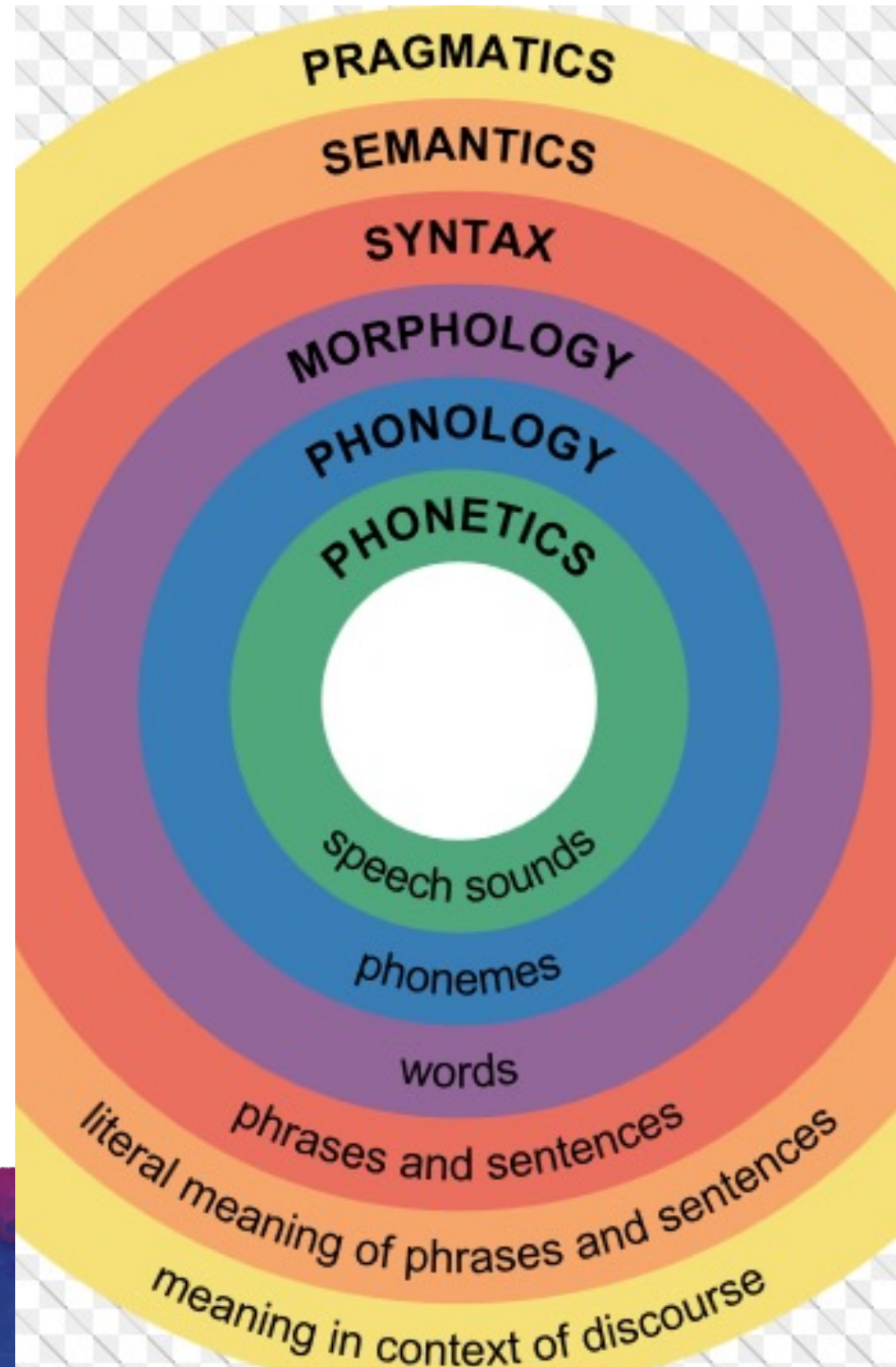
- Meaningful structure of words into sentences

Semantics

- Content or meaning of a word or words.

Pragmatics

- Social use of language

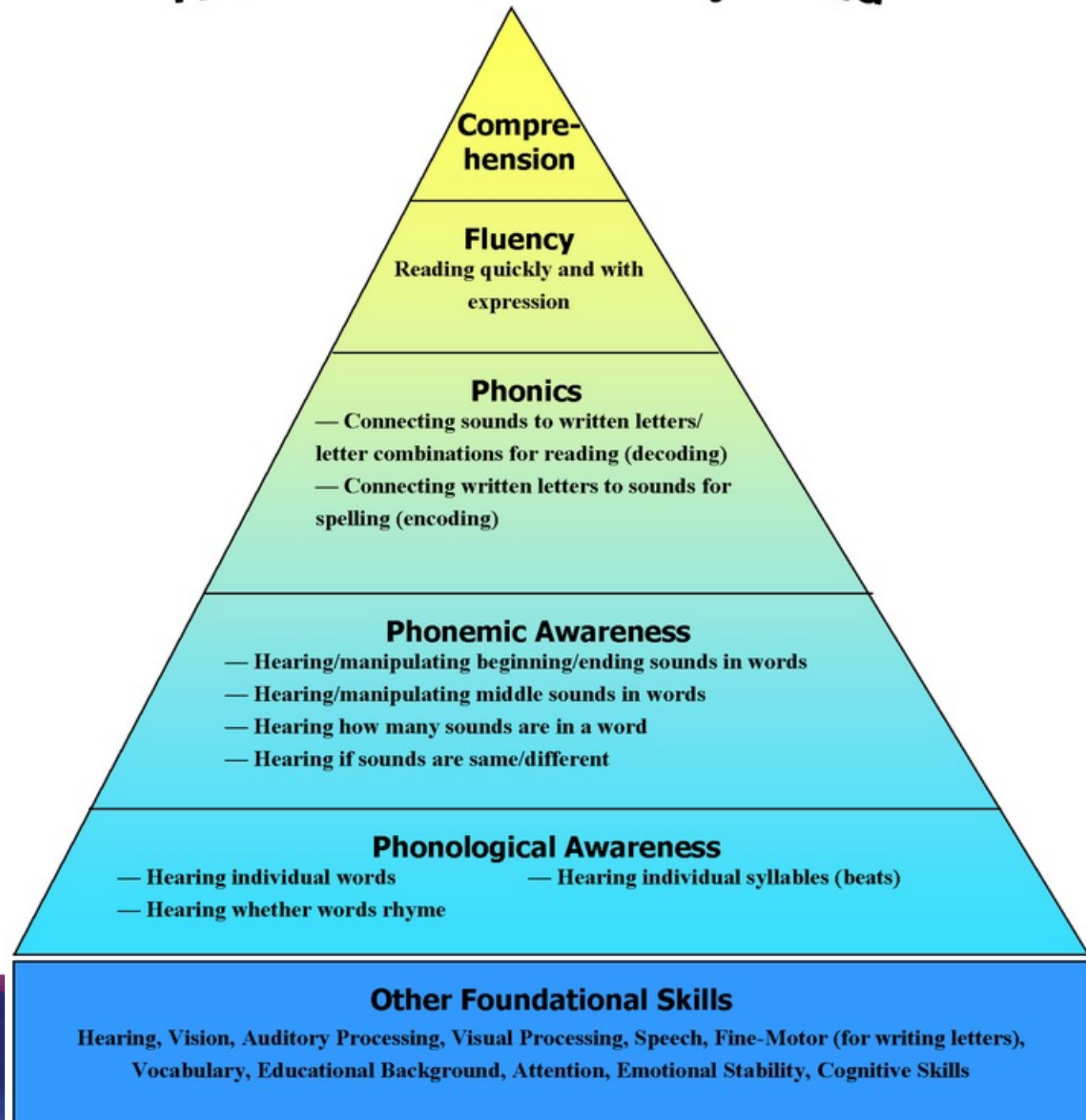


The Reading Skills Pyramid

Reading Skills

The 5 components of language combine during the process of reading and writing.

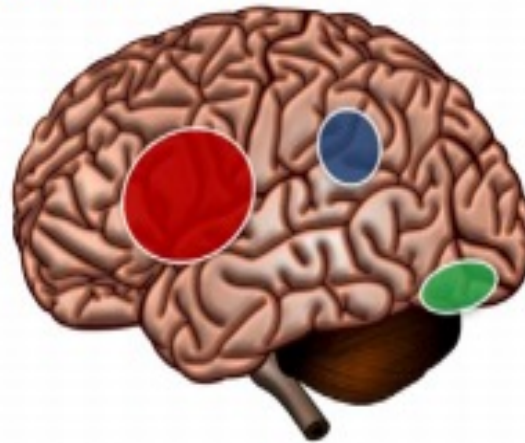
Foundational skills start with listening and speaking, then reading and writing follow.



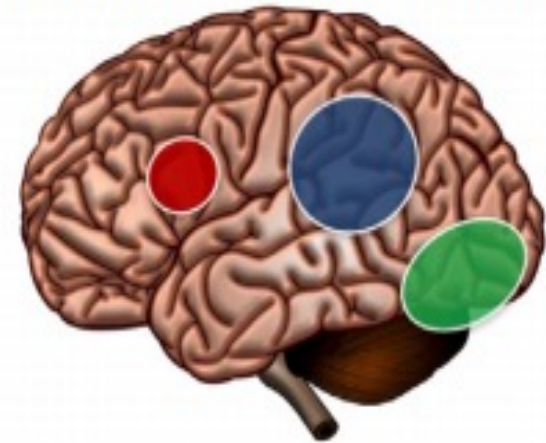
Neuroscience of Dyslexia

Dyslexia is a neurobiological disorder with brain patterns (“neural signatures”) that reflect poor phonological and orthographic processing

BRAIN PATTERNS THAT DYSLEXIC STUDENTS MAY SHOW



BRAIN PATTERNS THAT NON-DYSLEXIC STUDENTS MAY SHOW



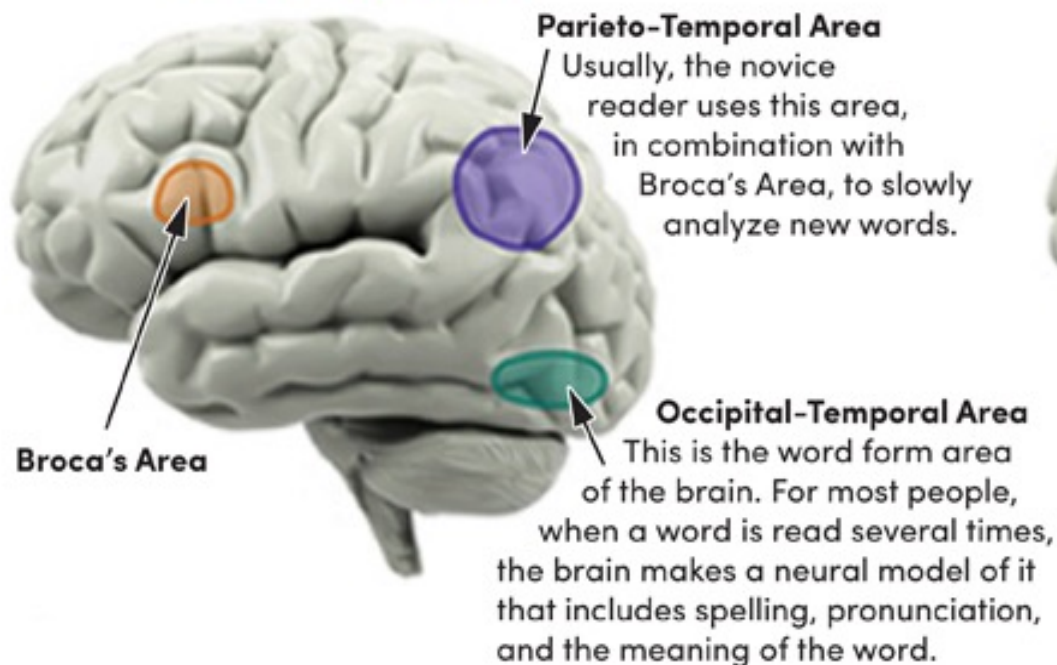
- **LEFT FRONTAL REGION:** Important for compensation
- **LEFT TEMPORO-PARIETAL REGION:** Important for phonological processing and grapheme-phoneme association
- **LEFT OCCIPITO-TEMPORAL REGION:** Important for orthographic processing

Figure 2.1. Key brain structures that are often impacted in dyslexia. Developed by and used with permission from Fumiko Hoeft.

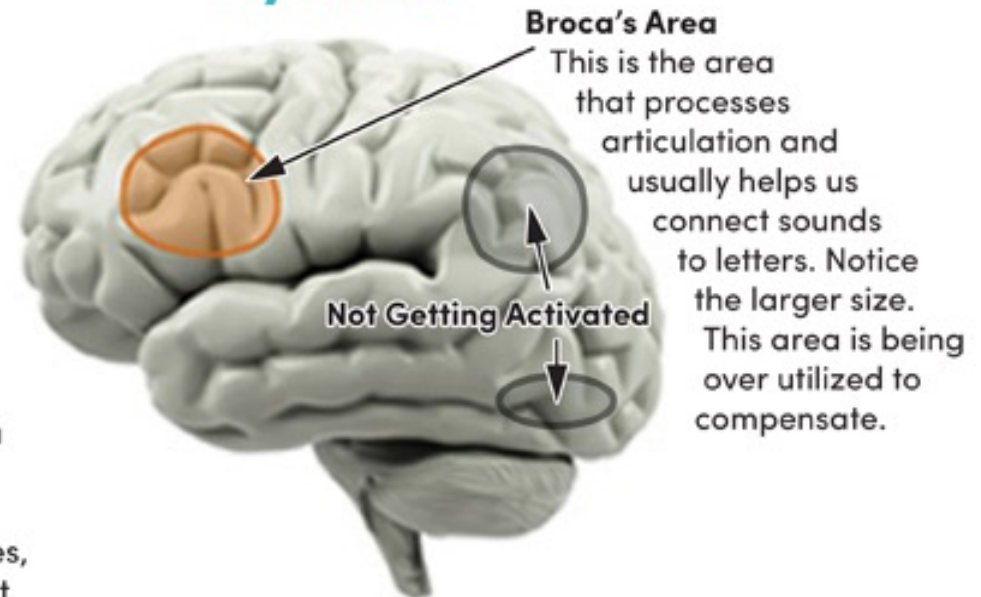
Neuroscience of Dyslexia

NON-DYSLEXIC BRAIN vs. DYSLEXIC BRAIN WHEN READING

Non-Dyslexic



Dyslexic



Research in neuroscience reveals that the brain functions differently in people with dyslexia than those without it. These structural and neural differences make it more difficult for people with dyslexia to read, spell and write. For example, in the left brain hemisphere, three dominant areas of the brain are usually activated for reading, but in those with dyslexia, only one area of the brain is being stimulated.

Characteristics of Dyslexia

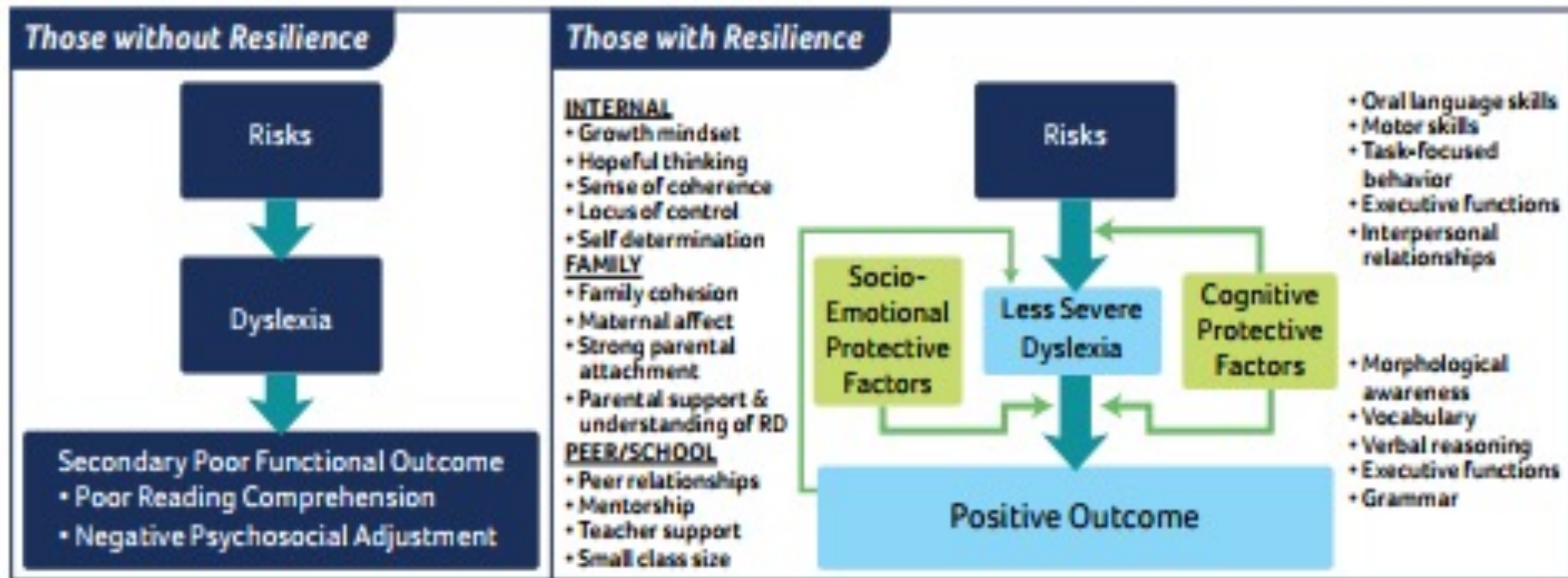
- Inability to sound out new words
- Limited sight-word vocabulary
- Listening comprehension exceeds reading comprehension
- Inadequate response to instruction and intervention

Struggles with writing assignments

- Organization
- Punctuation
- Grammar
- Spelling
- Often slow writing
- May miss humor of language

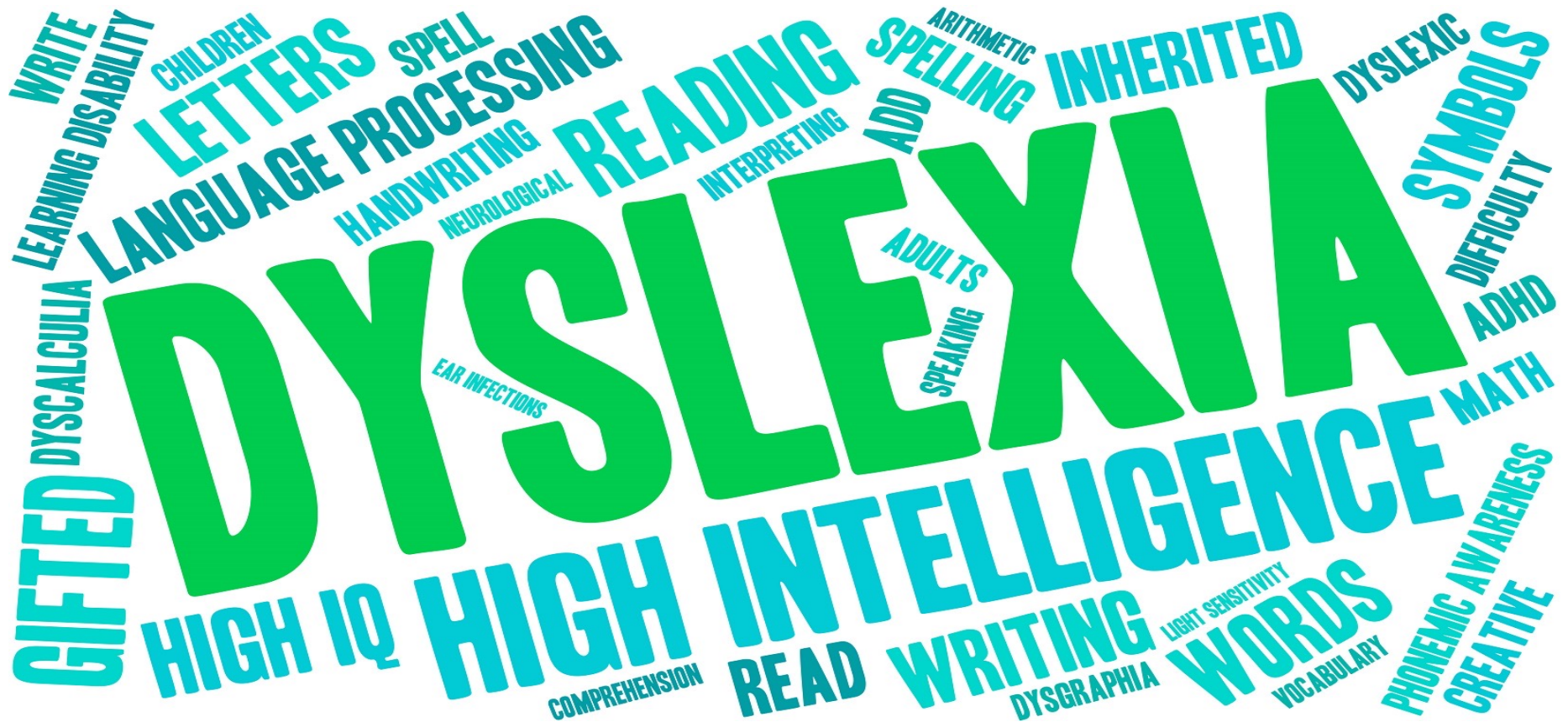
Dyslexia and Social Adjustment

Cognitive and Socio-Emotional Framework of Dyslexia (Adapted from Hoft, Myers, Hoft, Curr Opin Beh Sci 2016)



Students with stronger social-emotional protective factors show more resilience in navigating the social impacts of dyslexia. Awareness of potential need for monitoring and support is key.

What should we do?

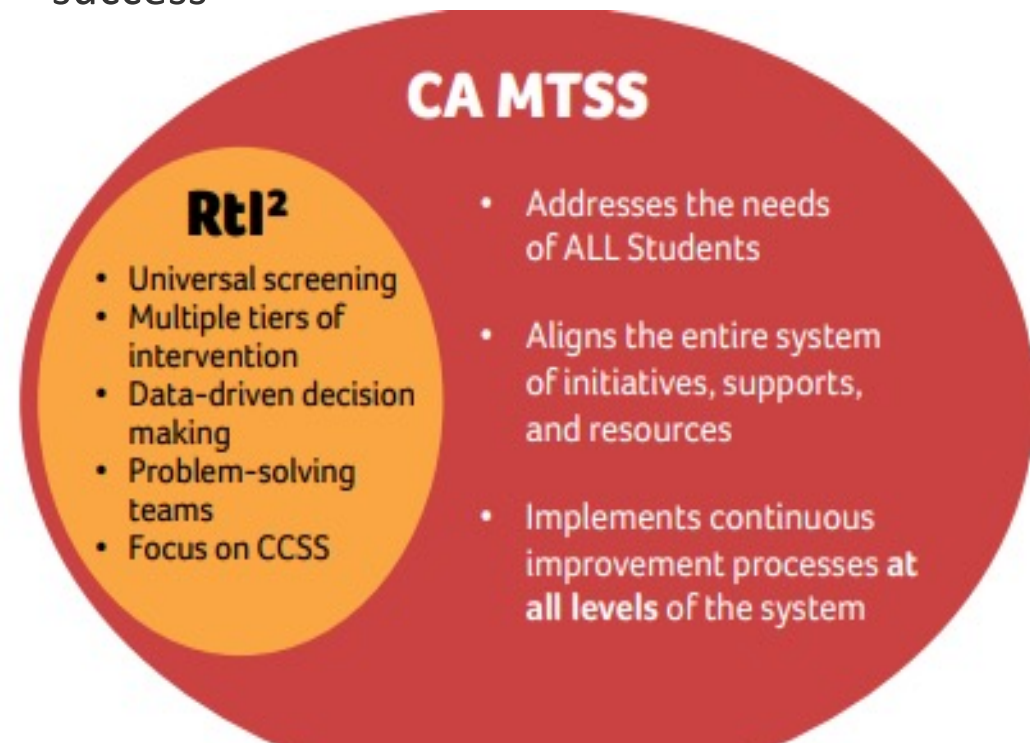


Schools and parents can support students experiencing dyslexia and other learning disabilities.

Universal Screening, MTSS and General Ed

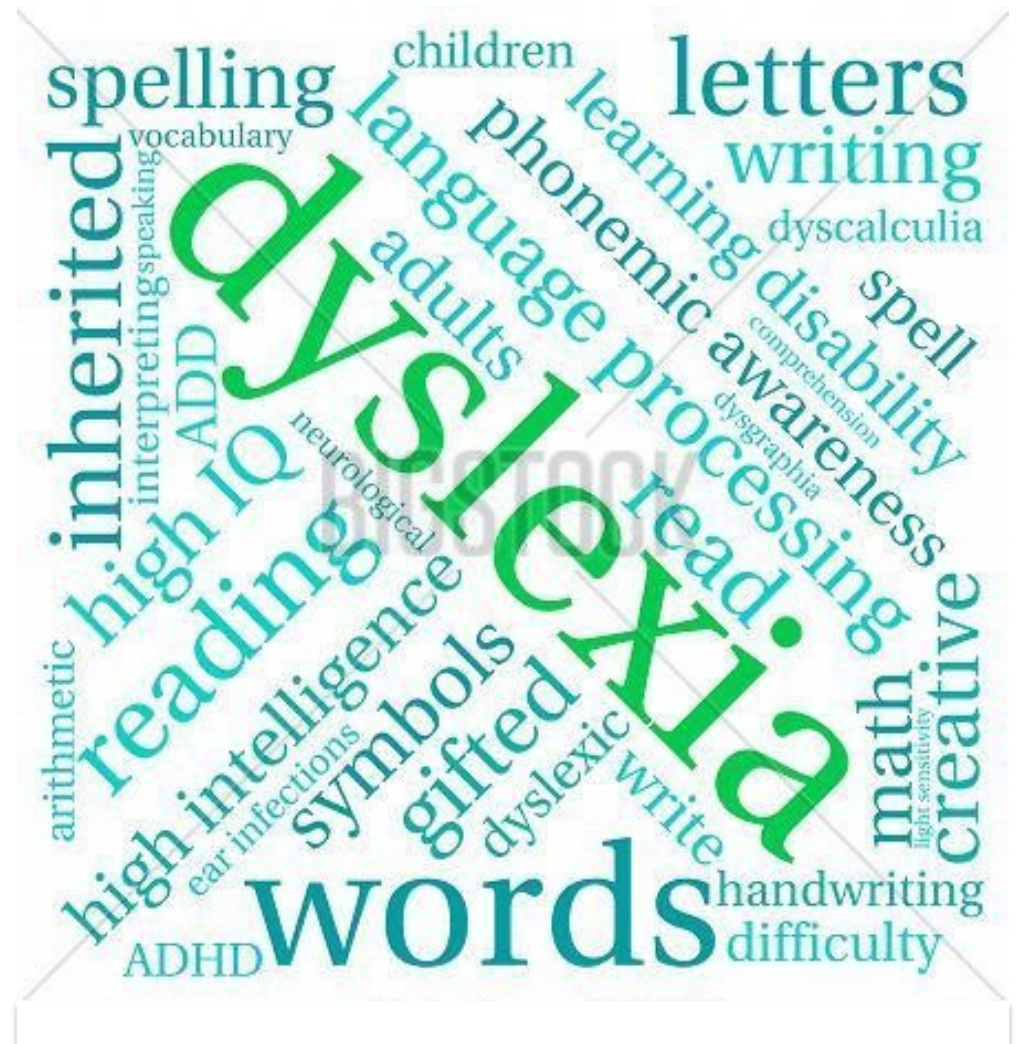
- “Universal screening” means that all students are screened: the entire grade level or the entire classroom.
- Screening for children at risk for dyslexia is a critical first step in the identification of and effective intervention for students with dyslexia.
- It is important that the teacher, who knows the student well, be involved and that the screening instrument has good psychometric properties (e.g., good sensitivity and specificity) and has been shown to be effective.

In California, MTSS is defined as “an integrated, comprehensive framework that focuses on [the Common Core State Standards], core instruction, differentiated learning, student centered learning, individualized student needs, and the alignment of systems necessary for all students’ academic, behavioral, and social success”

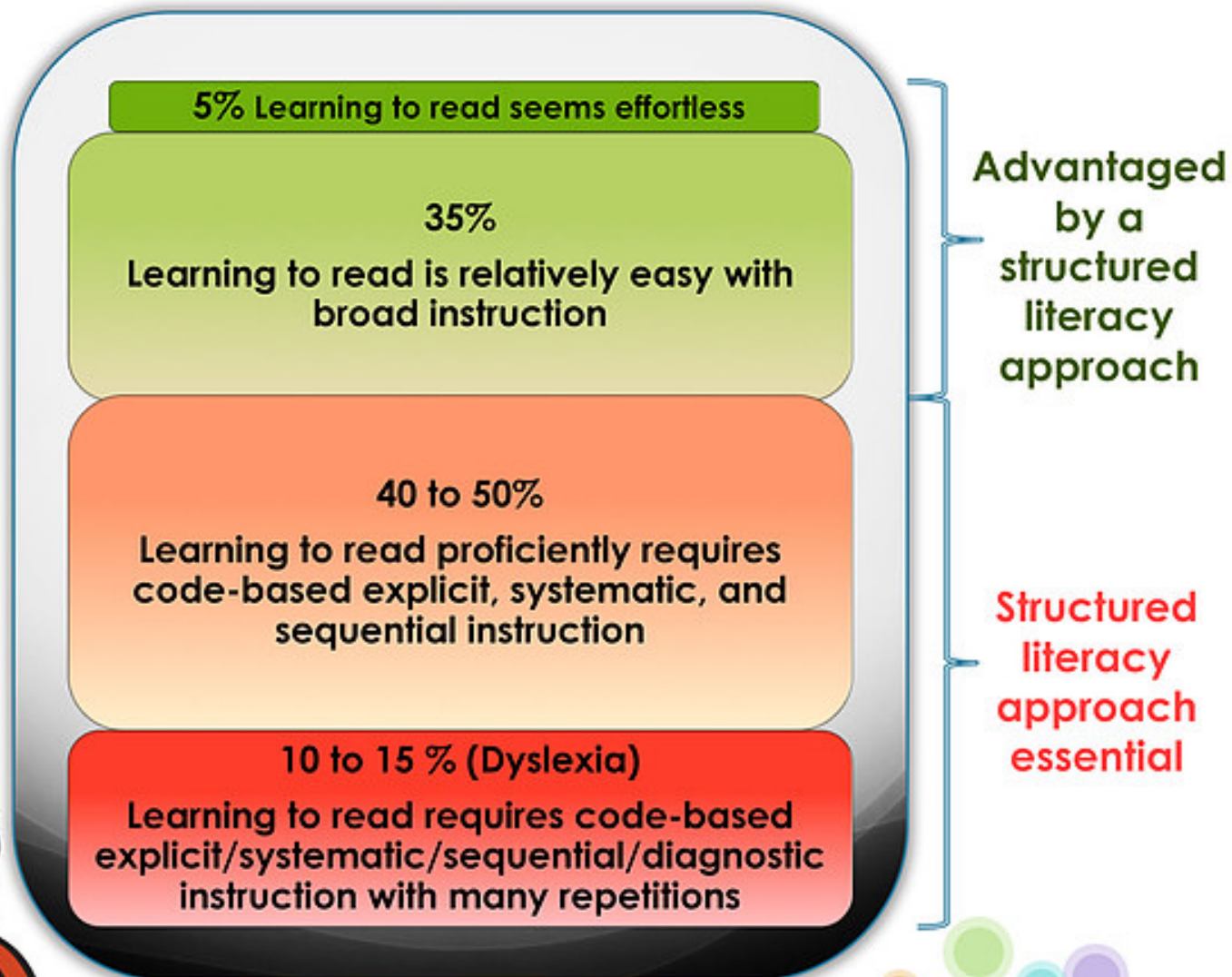


Effective Intervention

According to researchers at the National Institutes of Child Health and Human Development, for 90 to 95 percent of poor readers, prevention and early intervention programs that combine instruction in **phonemic awareness**, phonics, fluency development, and reading comprehension strategies—provided by well-trained, linguistically informed teachers—can increase reading skills to average reading levels or above (Lyon 1997).



The Ladder of Reading



© N. Young, 2012 (updated 2017)

Artwork by Dean Stanton

(Lyon, 1998; NRP, 2000; IDA, 2015; Hempenstall, 2016)

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Reading
Spelling
Writing

Structured Literacy (International Dyslexia Association)

STRUCTURED LITERACY PRIMER

**Structured Literacy's
ELEMENTS work together.**



Structured Literacy's
Evidence-Based Elements

Phonology (study of sound structure of spoken words) is a key element of Structured Literacy Instruction. **Phonemic awareness** (ability to distinguish / segment / blend / manipulate sounds relevant to reading/spelling) is central to phonology.

Sound-Symbol Association Once students develop phoneme awareness, they must learn the **alphabetic principle**—how to map phonemes to letters (**graphemes**) and vice versa.

Syllables Knowing the six syllable / vowel grapheme types helps readers associate vowel spellings with vowel sounds. Syllable division rules help readers divide / decode unfamiliar words.

Morphology A **morpheme** is the smallest unit of meaning in language. Studying base elements and affixes helps readers decode and unlock the meanings of complex words.

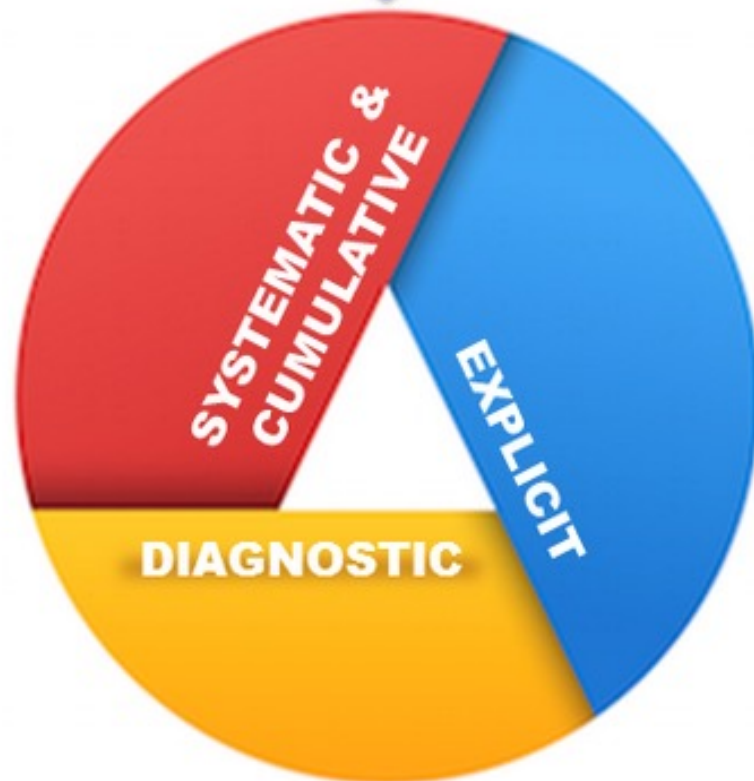
Syntax—the set of principles that dictate the sequence and function of words in a sentence—includes grammar, sentence structure, and the mechanics of language.

Semantics Semantics is concerned with meaning. The Structured Literacy curriculum (from the start) includes instruction in the comprehension and appreciation of written language.

Structured Literacy (International Dyslexia Association)

STRUCTURED LITERACY PRIMER

These **PRINCIPLES** guide how
Structured Literacy's elements
are taught.



Structured Literacy's
Evidence-Based Teaching Principles

Systematic & Cumulative

Structured Literacy teaching is systematic and cumulative. **Systematic** means that organization of material follows the logical order of language. The sequence begins with the easiest and most basic concepts and elements and progresses methodically to the more difficult. **Cumulative** means each step is based on concepts previously learned.

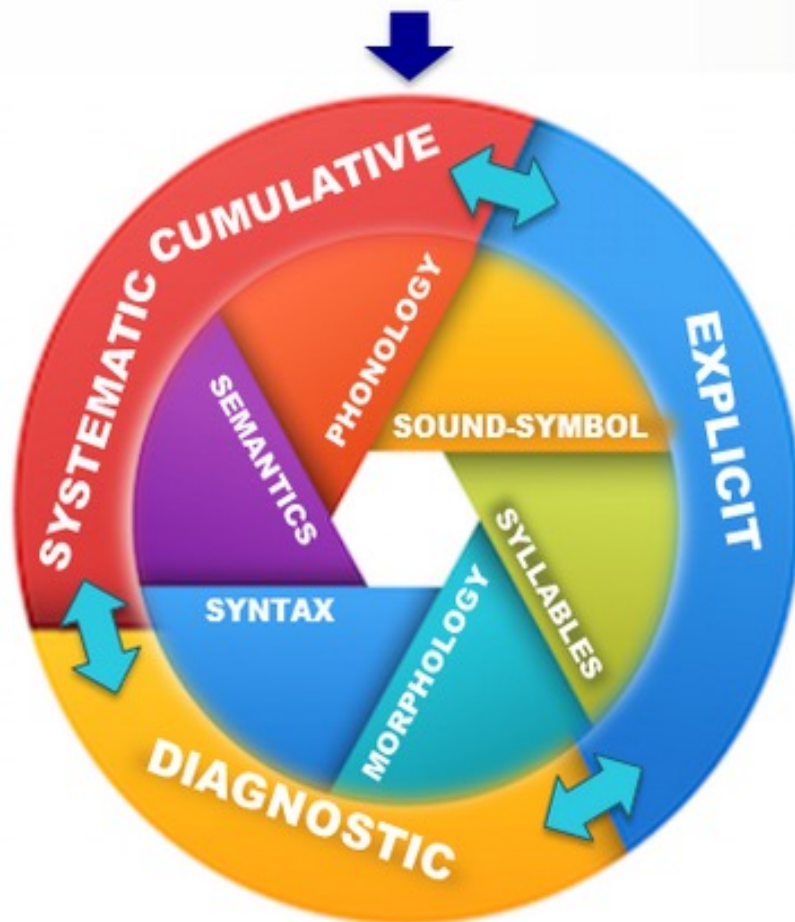
Explicit Structured Literacy instruction requires direct teaching of concepts with continuous student-teacher interaction and does not assume students deduce concepts. (While **multisensory teaching** lacks the extensive research validating Structured Literacy's other teaching principles, decades of clinical results support efficacy of simultaneous association of auditory, visual, and kinesthetic-motor modalities for enhancing memory and learning in students with dyslexia.)

Diagnostic Teachers must be adept at individualizing instruction (even within groups) based on careful and continuous assessment, both informal (e.g., observation) and formal (e.g., with standardized measures). Content must be mastered to the degree of automaticity needed to free attention and cognitive resources for comprehension and oral/written expression.

Structured Literacy (International Dyslexia Association)

STRUCTURED LITERACY PRIMER

Effective reading instruction for most children incorporates *all* this.



Inner Circle: Elements
Outer Circle: Teaching Principles

To ensure that *all* children have access to effective reading instruction, we must ensure that their teachers have **BOTH** the ...

- ✓ deep content knowledge and
- ✓ specific teaching expertise needed ...



to teach these **elements** according to these **principles**.



Next Steps for LEAs

Provide Training and access to Guidelines for teachers

Identify local options for Structured Literacy Intervention

Provide Assessment tools for Psychs and Reading Specialists

Benefits are earlier intervention, prevention and fewer students with preventable disabilities.



Next Steps for Parents

Research, Research, Research

Consider computerized,
home-based or early
intervention activities that
make sense for use at home

Communicate early and often
with teachers

Advocate for early screening
and intervention for all
students



- Play phonological awareness games
- Help your child master the alphabet letters and sounds
- Read to your child to model fluency skills
- Encourage your child to read books aloud
- Discuss interesting aspects of books
- Listen to recorded stories and books
- Practice spelling words using magnetic letters
- Introduce new vocabulary words in books
- Subscribe to magazines that interest your child

Questions?



Thanks to those who provided the infographics, research and resources referenced in this presentation.

Decoding Dyslexia
International Dyslexia Association
Understood.org
UCSF Dyslexia Center

Fumiko Hoeft
Nancy Cushen-White
Kathy Futterman
Nancy Young

Nessy.org
Reading Horizons
Dite Bray