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# Dyslexia 101

Parents, Caregivers, Community Members

May 10, 2022



# — Presenters

Kristin Kane, Founding Member, Decoding Dyslexia Virginia

Heather Fleming, M.Ed.

Tracy Hastings, Ed.S.



# Topics

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- ❑ Dyslexia overview
- ❑ Dyslexia and reading myths and facts
- ❑ How all children learn to read
- ❑ Signs of dyslexia at different ages
- ❑ Effective reading assessment and instruction
- ❑ Powerful conversations with schools
- ❑ Highlights of the Virginia Literacy Act
- ❑ VA advocacy resources



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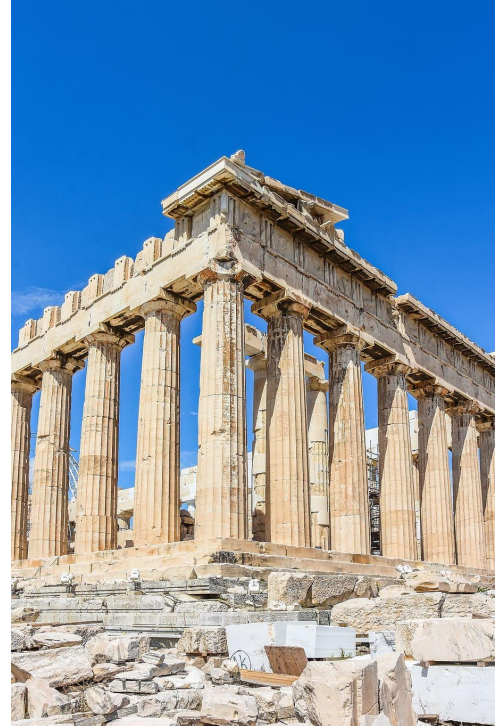
# Dyslexia



# Dyslexia: Let's “Greek” Out

Dys = difficulty

Lexis = language/words



## Did You Know?

- Dyslexia is the most common cause of reading, writing and spelling difficulties
- Dyslexia affects 10-20% of the population
- Dyslexia is genetic





# Dyslexia

A language-based learning difference that impacts skills requiring **language processing**.

# AT RISK READER

Left Hemisphere

Right Hemisphere

Kindergarten

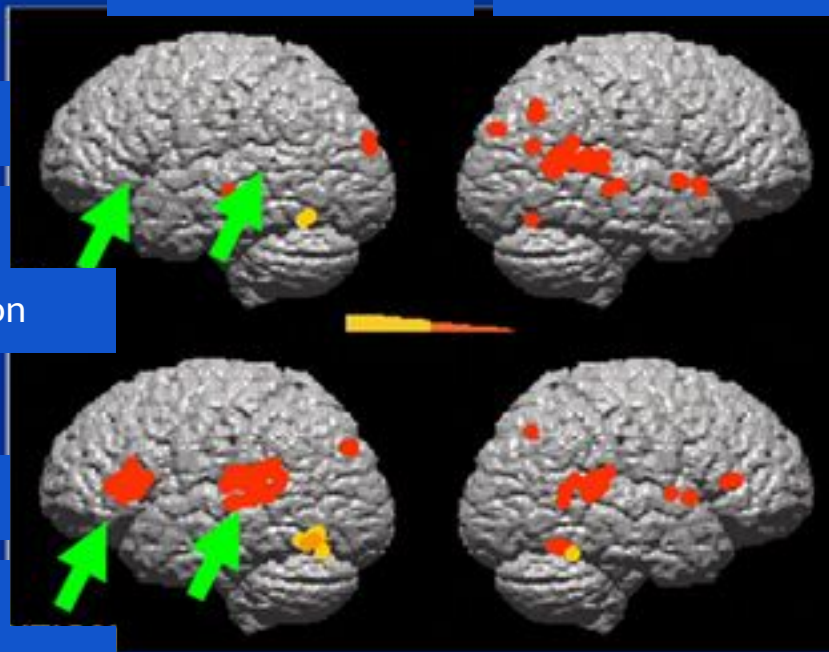
BEFORE

Intervention

First Grade

AFTER

Intervention





# Language Processing Tasks

- Oral Language 

- Reading 

- Spelling 

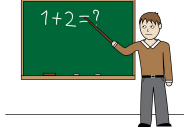
- Oral and Written Language Organization



- Handwriting



- Taking Notes



- Word Retrieval



# Additional Associated Difficulties



Working Memory | Processing Speed | ST Memory

- Math Facts
- Multistep Assignments or Directions
- Note-taking
- Timed Testing



## Good News: the brain can be re-wired!

Neuroscience shows that intensive, evidence-based interventions can **rewire** dyslexic brains to use the left hemisphere!

# Reading instruction can change the brain!

(Turkeltaub et al., 2003; Krafnick et al., 2011; Eden et al., 2004)

(aka)

## Teachers are neurosurgeons



# AT RISK READER

Left Hemisphere

Right Hemisphere

Kindergarten

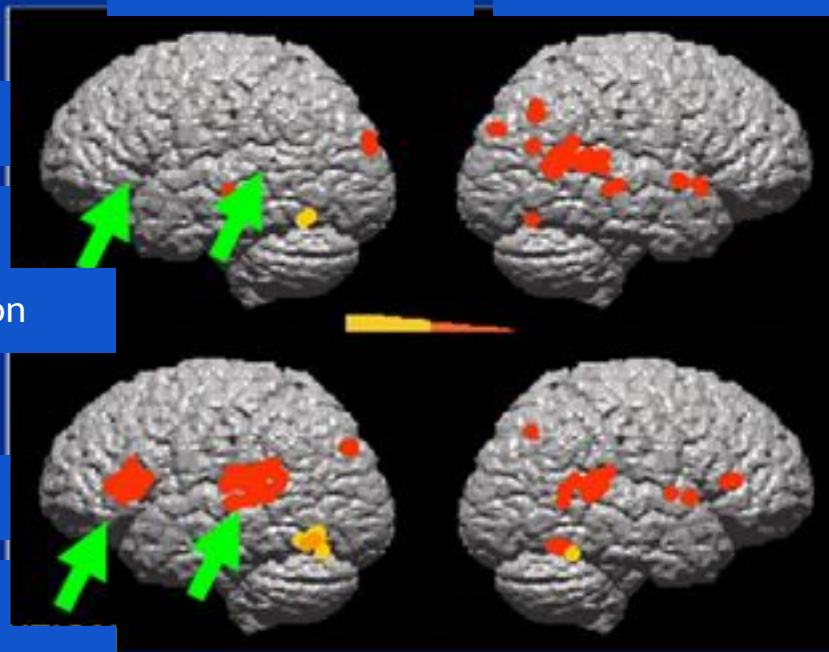
BEFORE

Intervention

First Grade

AFTER

Intervention





## Observed Strengths of People with Dyslexia

- Strong thinking skills: conceptualization, reasoning, imagination, abstraction
- Sophisticated listening vocabulary
- Strong listening comprehension
- Succeeds in areas not dependent on reading
- Able to understand complex patterns or issues

~Utah Dyslexia Guidebook

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# Dyslexia

## Myths and Facts

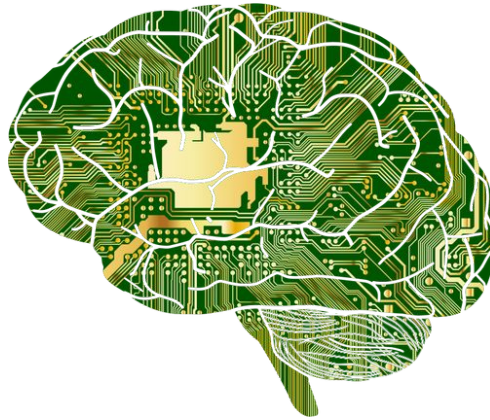


Isn't dyslexia just seeing  
and writing letters and  
words backwards?





Dyslexia is not seeing letters and words backwards. It is a difference in how the brain processes those letters in the brain.



# Isn't dyslexia rare?





“Dyslexia affects 20 percent of the population and represents 80–90 percent of all those with learning disabilities.”

Are children with  
dyslexia likely to have  
parents with  
dyslexia?



Generally speaking, yes. Dyslexia is genetic, but does not show up in every person in the family.



# What causes dyslexia?

why?  
**how?** who?  
WHEN?  
Where?

Dyslexia is caused by genetic differences in how the brain processes language.

**Non-dyslexic brain**



**Dyslexic brain**

I heard that dyslexia occurs more frequently in boys than in girls.

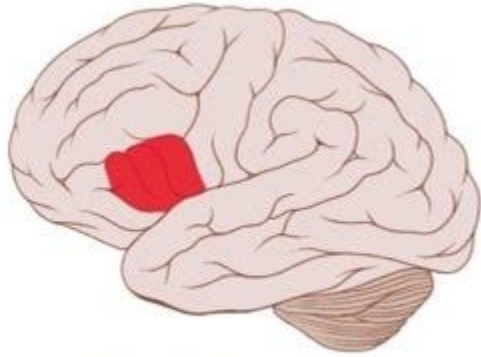




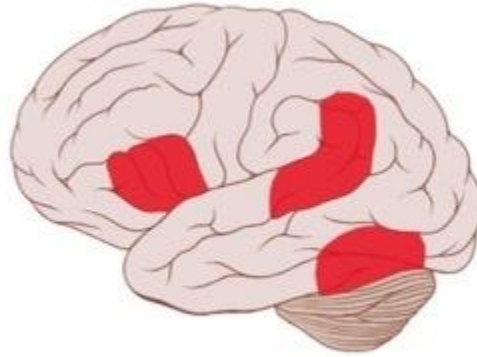


Won't children  
outgrow dyslexia?





**Dyslexic Readers**



**Typical Readers**

Neurobiological difference

<https://www.literacyhow.org/sld-dyslexia/>

Treatment is educational



I was told that my  
child would one day  
just magically catch  
up.



# Reading does not happen...



*...magically*

## **I was told that...**

Dyslexia is caused by a lack of reading in the home.

My child needs to try harder or focus more.

I need to lower my expectations because not all children are good at all things.

## I was told that...

Dyslexia is caused by a lack of reading in the home.

My child needs to try harder or focus more.

I need to lower my expectations because not all children are good at all things.

# I was told that dyslexia can be treated using...



colored overlays



colored lenses

The Quick Brown  
Fox Jumps Over  
The Lazy Dog

g

abcdefghijklmnopqrstuvwxyz0123456789[ ]({})/ \<>?

special fonts



Nope.

The only treatment for dyslexia is instruction that fills specific foundational reading skill gaps.

Eye tracking  
exercises and  
vision therapy  
are an effective  
cure for dyslexia.

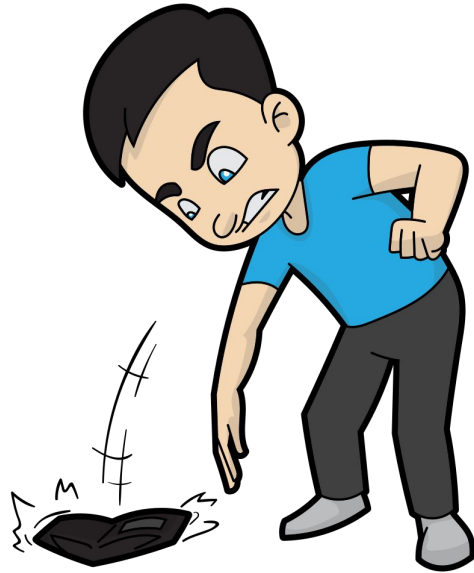


The only thing vision therapy will do for your child with dyslexia is help to drain your bank account of money you could have used for skilled tutoring.



*Read the American Academy of Pediatrics: Joint Statement—Learning Disabilities, Dyslexia, and Vision.*

At some age, is it too late to teach a student with dyslexia to read.





It is never too late to teach a person with  
dyslexia to read.

*I encourage you to watch the David Chalk video on  
YouTube about learning to read at age 62.*

Children with  
dyslexia cannot  
be effectively  
diagnosed until  
the 3<sup>rd</sup> grade.



Dyslexia can be  
diagnosed as early as first  
grade.



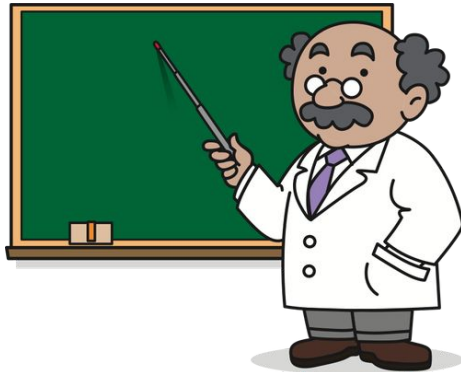
Someone told  
me that there is  
medication for  
dyslexia.





***NOPE.***

The only treatment for  
dyslexia is instructional.



Dyslexia and emotional/social problems are highly correlated.



As early as in Kindergarten, kids report being aware and feeling ashamed that some things are harder for them.



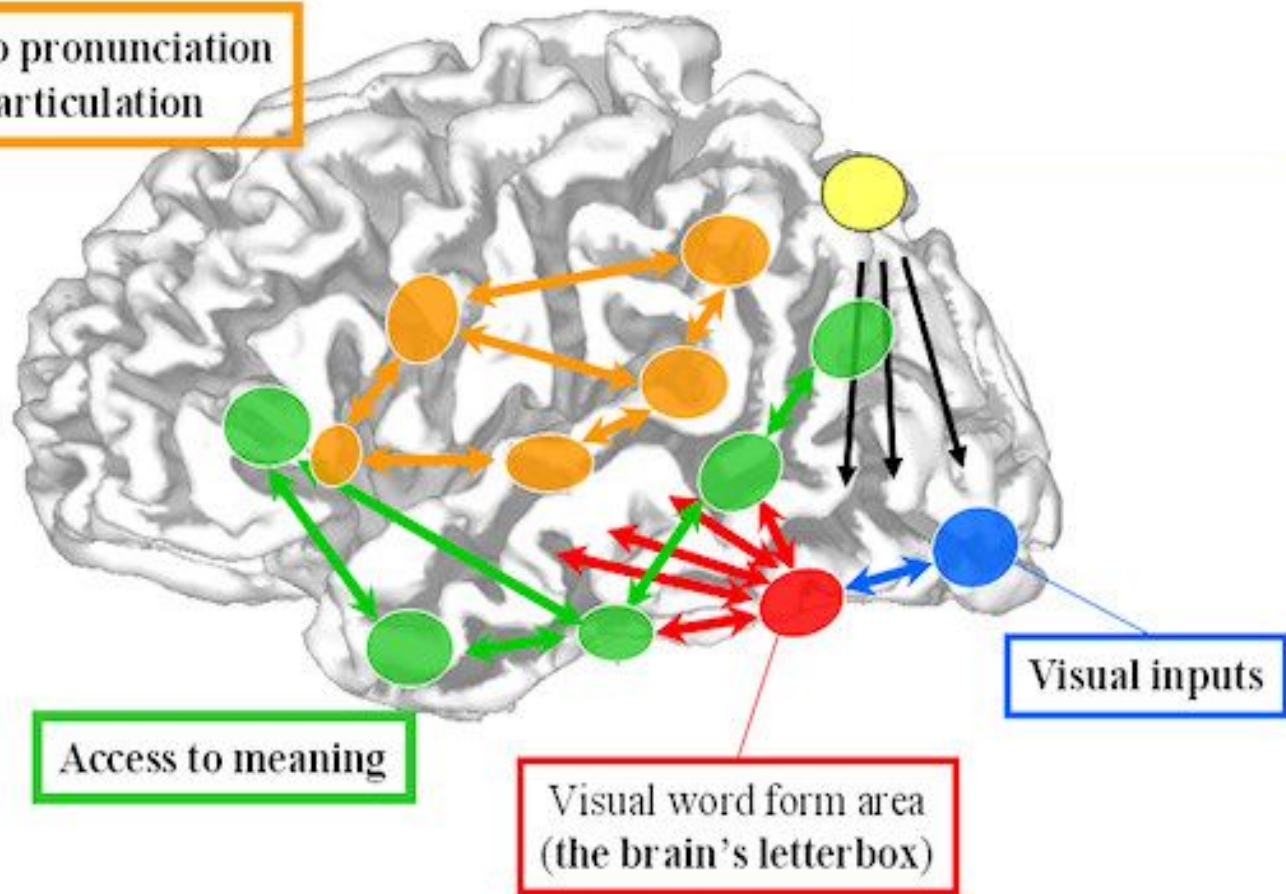
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# How all Children Learn to Read





Access to pronunciation  
and articulation



Access to meaning

Visual word form area  
(the brain's letterbox)

Visual inputs





# FACTS

26 letters

44 sounds

250 graphemes

1,000,000 words!





HELP!



“Dyslexia is a specific learning disability that is **neurobiological** in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often **unexpected** in **relation** to other **cognitive abilities** and the provision of **effective classroom instruction**. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”



# Characteristics of Dyslexia and other Related Learning Disorders

# Oral Language

- Late learning to talk
- Difficulty pronouncing words
- Difficulty acquiring vocabulary or using age appropriate grammar
- Difficulty following directions
- Difficulty learning the alphabet, nursery rhymes, or songs
- Difficulty with word retrieval or naming problems
- Family history of reading problems

# Reading Difficulties

- Difficulty identifying or generating rhyming words, or counting syllables
- Difficulty with hearing and manipulating sounds in words
- Difficulty distinguishing different sounds in words
- Difficulty in associating the letters that represent sounds (phonics)
- Difficulty naming letters rapidly
- Misreading or omitting common short words
- “Stumbles” through longer words
- Poor reading comprehension
- Slow, laborious oral reading

# Writing Difficulties

- Difficulty putting ideas on paper
- Many spelling mistakes
- May do well on weekly spelling tests, but may have mistakes in daily work
- Difficulty proofreading

# Dysgraphia (trouble with writing letters)

- Unsure of handedness
- Poor or slow handwriting
- Messy and unorganized papers
- Difficulty copying
- Poor fine motor skills
- Difficulty remembering the kinesthetic movements to form letters correctly



# Undiagnosed and Unsupported Dyslexia

- Avoids reading out loud
- Rarely read for pleasure
- Skips entire lines of text or struggles with continuity of text organization
- Use of fewer complicated words in writing that are easier to spell than more appropriate words
- Reliance on listening rather than reading for comprehension
- Difficulty with note taking
- Difficulty with the volume of reading and written work
- Difficulty expressing themselves in writing
- Difficulty learning a foreign language

# Undiagnosed and Unsupported Dyslexia

- Frustration with the amount of time required and energy expended for reading and writing and projects
- Working harder than peers for academic gains including hours spent in remediation
- Embarrassment and anxiety leading to stress in academic situations
- Reading failure is the most commonly shared characteristic of juvenile justice offenders.
- As many as 75% in the criminal justice system have a learning disability. (National Institute of Health)





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# Effective Reading Assessment and Instruction



# Four Purposes of Assessment

## Universal Screening

- Who is at risk for reading difficulties?
- How healthy is the core program?

## Diagnostic/Formative

- Which underlying skills are weak?
- What do I need to teach this student first?

## Progress Monitoring

- Is the support working?
- Do we need to make changes?

## Outcome

- Have students mastered a specific set of standards?



# Evidenced Based Literacy Instruction and Science Based Reading Research

- Structured
- Sequential
- Cumulative
- Cognitive
- Flexible
- Continuous Feedback
- Emotionally Sound
- Diagnostic & Prescriptive
- Direct & Explicit
- Systematic & Structured
- Cumulative
- Comprehensive Language-based



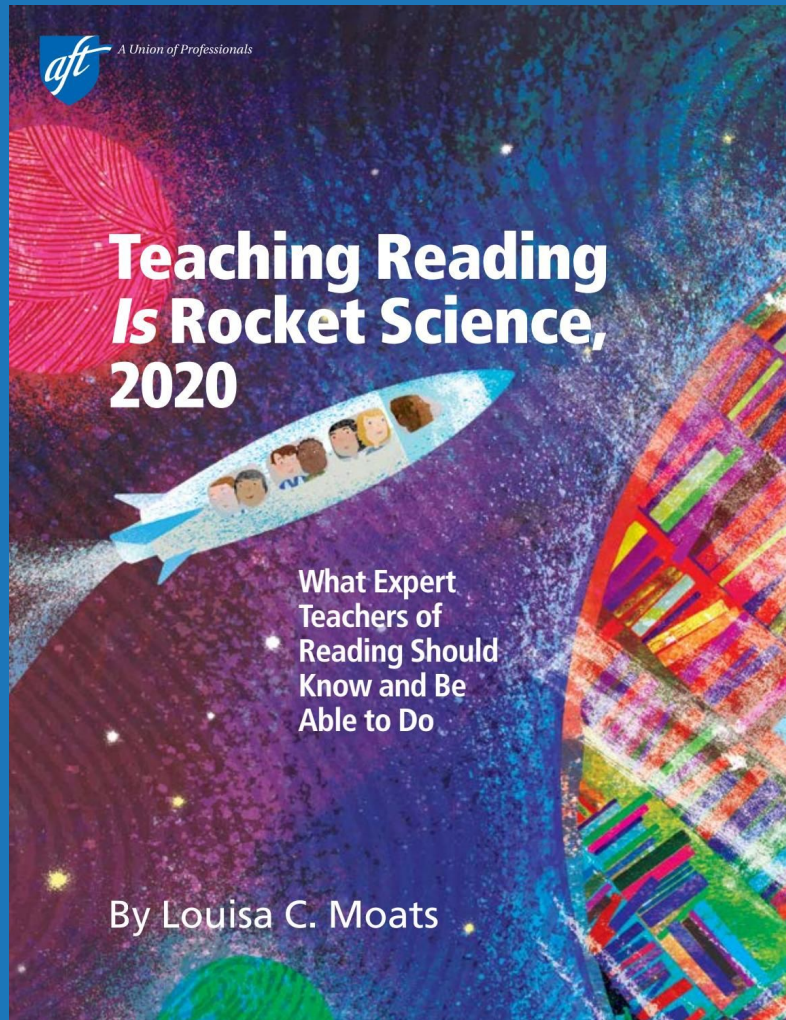
# Evidence-Based Literacy Instruction / Intervention Includes

- Handwriting
- Phonological/Phonemic or Morphological Awareness
- Phonics: connecting sounds (phonemes) to letters (graphemes)
- Orthography: spelling rules and conventions
- Syllables: 6 types
- Syllabication Rules for Division and Accenting
- Morphology
- Vocabulary
- Comprehension
- Written Expression

# Teaching Reading Is Rocket Science, 2020

What Expert  
Teachers of  
Reading Should  
Know and Be  
Able to Do

By Louisa C. Moats



# — Powerful Conversations with Schools



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# Supporting Dyslexic Students

  
PLEASE  
TRUST  
YOUR  
GIZZARD!!



← (Not a gizzard)

# **ACTION:** Listen to or read Emily Hanford's Reporting and PBS Piece on Dyslexia

[At a Loss for Words: How a Flawed Idea is Teaching Millions of Kids How to be Poor Readers](#) (link)

[Hard Words: Why Aren't Kids Being Taught to Read?](#) (link)

[PBS: Lessons from Dyslexic Students Reshape Literacy Education](#)  
(link)

# **ACTION:** Powerful Questions: General Ed



- What tool(s) do you use to screen for reading difficulties?
- How and when do you progress monitor foundational reading skill development?
- What is the name of your evidence-based core reading program?
- What training have Gen Ed teachers had in the core reading program and in progress monitoring?

# **ACTION:** Powerful Questions: Intervention

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- Which evidence-based intervention do you use?
- How and when do you progress monitor reading skill progress?
- What training have Special Education teachers (including anyone supporting reading) received in the intervention program and in progress monitoring?



# **ACTION:** Powerful Questions: Administrators



- What training have teachers had about:
  - how the brain learns to read
  - the rules and structures that govern the English language
  - how to directly, explicitly, systematically teach and assess foundational reading skills
  - how to use data to provide small group or individualized instruction?

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# Accommodations

(see Appendices for more details)



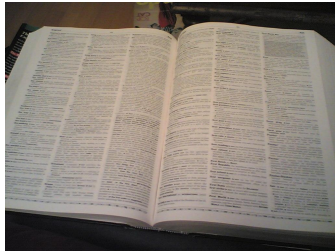
# Big Ideas



Level the playing field



Access their education



Get words and numbers off of and back onto the page

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# Virginia and Dyslexia



# Virginia and Dyslexia



# OBJECTIVES

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- Review Dyslexia in VA Code
- Where can you learn more about Dyslexia in VA?
- Dyslexia Laws in VA
- Virginia Literacy Act Overview



## Did you Know Dyslexia is Defined in VA code?

**Dyslexia** is distinguished from other learning disabilities due to its weakness occurring at the phonological level. Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.

Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

(§ 22.1-213 of the Code of Virginia; 34 CFR 300.8(c)(10))


(IDA, International Dyslexia Association)

(National Institute for Child Health & Human Development)



# Where can you learn more about Dyslexia in VA?

An Agency of the Commonwealth of Virginia

 **VIRGINIA IS FOR LEARNERS** **VIRGINIA DEPARTMENT OF EDUCATION**

[HOME](#) » [TEACHING IN VIRGINIA](#) » [LICENSURE](#) » [DYSLEXIA TRAINING](#)

About VDOE

Board of Education

News

Superintendent's & Principals' Memos

For Families & Students

Education Directories

Standards of Learning (SOL) & Testing

Instruction

Special Education

Early Childhood

Student & School Support

Teaching in Virginia

Federal Programs

Statistics & Reports

## DYSLEXIA TRAINING

### Mandatory Dyslexia Training Requirement

Effective July 1, 2017, every person seeking initial licensure or renewal of a license shall complete awareness training, provided by the Virginia Department of Education, on the indicators of dyslexia, as that term is defined by the board pursuant to regulations, and the evidence-based interventions and accommodations for dyslexia. For more information, read [House Bill 842](#).

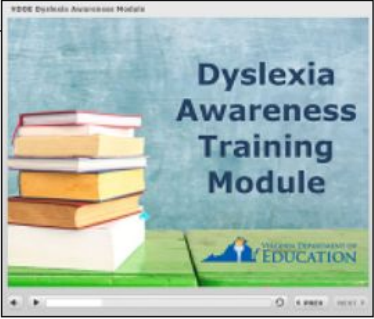
### Dyslexia Awareness Training Module

To meet the requirements, VDOE has developed a free online [Dyslexia Awareness Training Module](#). This module is accessible from PCs and Mac computers and some other types of mobile devices. Users should complete the module in one session and have access to a printer. Individuals completing the module should print a copy of the certificate of completion for verification. The module has a value of five professional development points.

- [Dyslexia Awareness Training Module](#)
- [Dyslexia Awareness Training Module Transcript](#) (Word)

### Technical Assistance

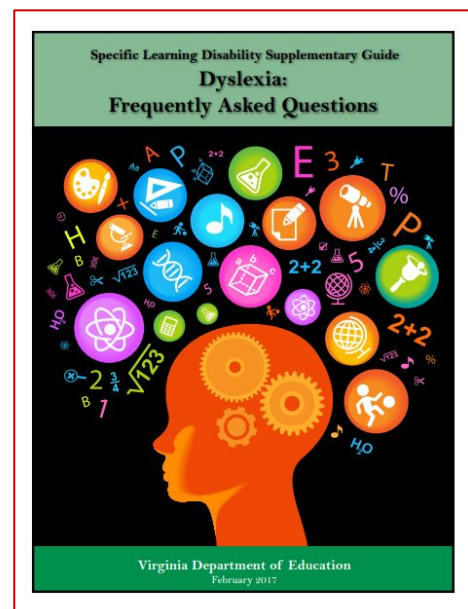
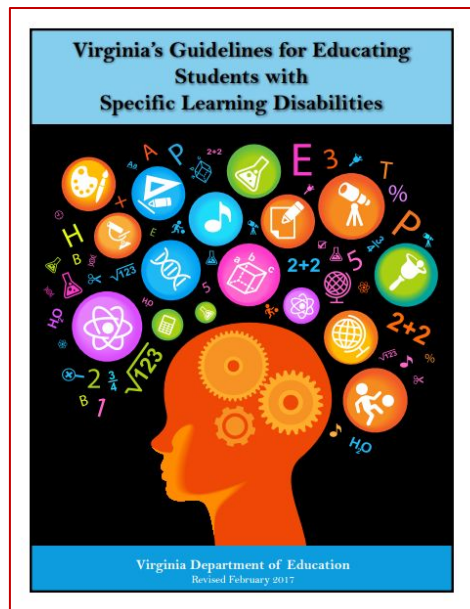
Questions or concerns relating to the Dyslexia Awareness Training Module should be directed to Special Education Instruction via email at [spedinstruction@doe.virginia.gov](mailto:spedinstruction@doe.virginia.gov).







## Where can you learn more about Dyslexia in VA?





## **Initial Screening Process For Reading Disabilities**

The Virginia Department of Education (VDOE) requires universal screening of all kindergarten students at the beginning of the year to detect any student who exhibits early signs of reading difficulties.

**The Phonological Awareness and Literacy Screening – Kindergarten (PALS-K)** was developed as part of this effort and is considered to be a reliable criterion-referenced screening, diagnostic and prescriptive tool to inform instruction. – *VDOE Specific Learning Disability Supplementary Guide—Dyslexia: Frequently Asked Questions; Page 8*



## **What components of reading should be included in the screening process when identifying characteristics of dyslexia?**

Screening instruments must address all components of reading including **phonemic awareness, phonics, fluency, vocabulary, and reading comprehension.**

-VDOE Specific Learning Disability Supplementary  
Guide—Dyslexia: Frequently Asked Questions; Page 9



## **What instructional approaches are recommended for a student with dyslexia?**

Students with dyslexia will benefit from evidence-based instruction that targets the development of basic reading and spelling skills. Intervention for students with dyslexia must be intensive, explicit, systematic, structured, multi-sensory, and be accompanied by frequent progress monitoring. -VDOE *Specific Learning Disability Supplementary Guide—Dyslexia: Frequently Asked Questions; Page 13*



## Characteristics

- Difficulty with the development of phonological awareness and phonological processing skills
- Difficulty naming colors, objects, and letters rapidly, randomly and in a sequence (RAN)
- Difficulty accurately decoding nonsense or unfamiliar words
- Difficulty reading single words in isolation
- Inaccurate and labored oral reading
- Lack of reading fluency
- Various degrees of difficulty learning the names of letters and their associated sounds
- Difficulty learning to spell
- Difficulty in word retrieval and rapid naming (RAN)
- Variable difficulties with aspects of written composition
- Variable degrees of difficulty with reading comprehension



## Summary of Characteristics of Individuals with Dyslexia

Age	Language Characteristic(s)	Writing Characteristics	Reading Characteristics
Early Elementary	Difficulty learning alphabet, rhyming	Difficulty writing letters and numbers in order	Difficulty naming letters, and remembering printed and sight words
Upper Elementary	Problems reading at age-appropriate level, remembering new words and site word and performing math word problems	Challenges spelling words correctly consistently, writing neatly and taking notes	Challenges remembering new words, sight words and enjoying reading
Adolescent/ High School	Challenges using correct grammar, knowing the difference between similar words	Problems editing writing, organizing ideas and spelling correctly	Problems reading out loud and with confidence
Adult	Comprehension fluctuates depending on subject, becomes frustrated with <u>long forms or sequential processes</u>	Poor handwriting, masks spelling mistakes, may write with all capitals or <u>mixes capitals within words</u>	Frequently has to re-read to understand, difficulty reading <u>unfamiliar fonts</u>



# Accommodations for students with dyslexia

- Extended time on assignments
- Expanding test time by breaking it down into sessions
- Read aloud
- Clarify or simplify written directions
- Provide graphic organizers and visual clues
- Provide copy of lecture notes
- Change response mode
- Dictation to scribe
- Reduce amount of copying
- Pre-Teach vocabulary
- Pre-Teach grammar
- Access to assistive technology
  - Word prediction
  - Voice to text
  - Audio books
  - Text to speech



## Where can you learn more about Dyslexia in VA?

### Regional Training and Technical Assistance Center (T/TAC)

Sample Dyslexia  
Resource from Region 2





Where can you learn more about Dyslexia in VA?





# Dyslexia Laws in VA

**2016 HB842** - for 40-minute teacher training module on dyslexia attached to state licensure. July 1, 2017, implementation

**2017 SB1516** - for all districts with a reading specialist to designate one as a dyslexia advisor, acting as an expert for the district. July 1, 2017, implementation

**2018 SB368** for all VA reading specialist higher education programs to include coursework on dyslexia. July 1, 2018, implementation

**2019 SB1718** bill to include a RAN to the VA PALS literacy screener converted to a workgroup to study literacy screeners with reporting to the General Assembly on December 1, 2019



## Dyslexia Laws in VA

**2020 HB410** bill directs each local school board to enact a policy to require that timely written notification is provided to the parents of results of a literacy screening and planned intervention. July 1, 2020, implementation.

**2020 SB323** permits a student who is pursuing an advanced diploma and whose individualized education program specifies a credit accommodation for world language to substitute two standard units of credit in computer science for two standard units of credit in a world language. July 1, 2020, implementation.

**2020 SB904** directs the State Council of Higher Education for Virginia to facilitate the development of a statewide coalition of public institutions of higher education in the Commonwealth, by December 1, 2020.

**2021 HB1865** requires reading intervention services for students in kindergarten through grade three who demonstrate deficiencies based on their individual performance on the SOL reading test or any reading diagnostic test that meets criteria established by the Department of Education to be evidence-based and grounded in the science of reading. Parental notification of intervention must be made in a timely manner. July 1, 2021, implementation.



## Dyslexia Laws in VA

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**2022 HB 418** Removes Reading Recovery from the list of programs and initiatives for which school boards may use at-risk add-on funds. July 1, 2022, implementation.

**2022 HB 419** Requires each education preparation program offered by a public institution of higher education or private institution of higher education that provides training for any student seeking initial licensure by the Board of Education to (i) include a program of coursework and require all such students to demonstrate mastery in science-based reading research and evidence-based literacy instruction and require such program of coursework and the student mastery required to be demonstrated therein to be consistent with definitions and expectations established by the Board of Education and the Department of Education after consultation with a commission consisting of independent literacy experts and stakeholders with knowledge of science-based reading research and evidence-based literacy instruction that has reviewed the relevant regulations and (ii) for any such student seeking initial licensure by the Board of Education as a teacher with an endorsement in early childhood, elementary education, or special education or with an endorsement as a reading specialist, ensure that reading course work and field practice opportunities are a significant focus of the education preparation program. The bill requires the Department of Education to audit at least once every seven years each education preparation program, in alignment with each program's accreditation cycle, for compliance with such requirements. 2024 2025 school year, implementation.



## Virginia Literacy Act

**2022 HB319** Virginia Literacy Act; early student literacy; evidence-based literacy instruction; science-based reading research. Makes several changes relating to early student literacy, including requiring (i) each education preparation program offered by a public institution of higher education or private institution of higher education or alternative certification program that provides training for any individual seeking initial licensure with an endorsement in a certain area, including as a reading specialist, to demonstrate mastery of science-based reading research and evidence-based literacy instruction, as such terms are defined in the bill; (ii) the literacy assessment required of individuals seeking initial teacher licensure with endorsements in certain areas to include a rigorous test of science-based reading research and evidence-based literacy instruction; (iii) each local school board to establish a division wide literacy plan; (iv) each local school board to employ one reading specialist for each 550 students in kindergarten through grade three; and (v) each local school board to provide a program of literacy instruction whereby, among other things, (a) the program provides reading intervention services to students in kindergarten through grade three who demonstrate deficiencies based on their individual performance on the Standards of Learning reading assessment or an early literacy screener provided or approved by the Department of Education; (b) a reading specialist, in collaboration with the teacher of any student who receives such reading intervention services, develops, oversees implementation of, and monitors student progress on a student reading plan; and (c) each student who receives such reading intervention services is assessed utilizing either the early literacy screener provided or approved by the Department or the grade-level reading Standards of Learning assessment again at the end of that school year. The provisions of the bill become effective beginning with the 2024–2025 school year. This bill is identical to **2022 SB616**.



# Virginia Literacy Act

## Two New Definitions

**Evidence-based literacy instruction** means structured instructional practices, including sequential, systematic, explicit, and cumulative teaching, that (i) are based on reliable, trustworthy, and valid evidence consistent with science-based reading research; (ii) are used in core or general instruction, supplemental instruction, intervention services, and intensive intervention services; (iii) have a demonstrated record of success in adequately increasing students' reading competency, vocabulary, oral language, and comprehension and in building mastery of the foundational reading skills of phonological and phonemic awareness, alphabetic principle, phonics, spelling, and text reading fluency; and (iv) are able to be differentiated in order to meet the individual needs of students.

**Science-based reading research** means research that (i) applies rigorous, systematic, and objective observational or experimental procedures to obtain valid knowledge relevant to reading development, reading instruction, and reading and writing difficulties and (ii) explains how proficient reading and writing develop, why some children have difficulties developing key literacy skills, and how schools can best assess and instruct early literacy, including the use of evidence-based literacy instruction practices to promote reading and writing achievement.



# Virginia Literacy Act

## State Components

- A list of core literacy curricula, supplemental instruction practices and programs, intervention programs and professional development that consist of evidence-based literacy instruction aligned with science-based reading research.
- A template for student reading plans
- A plan for the annual collection and public reporting of division-level and school-level literacy data,
- The Department shall provide free online evidence-based literacy instruction resources that can be accessed by parents and local school boards to support student literacy development at home.
- Provide technical assistance, including literacy coaching, to local school divisions to provide professional development in science-based reading research and evidence-based literacy instruction.
- Establish a microcredential program for the purpose of permitting any public elementary or secondary school teacher who holds a renewable or provisional license or any 15 of 15 individual who participates in any alternate route to licensure program to earn a series of microcredentials in the reading specialist endorsement area.



# Virginia Literacy Act

## **Parent Components**

- VDOE to provide resources for parents
- Literacy Screening scores including subtest scores will be provided to parents
- Student reading plans will be developed

## **District Components**

- District Literacy Plan development
- Curriculum Adoption to align with Scientifically Based Reading Research and Evidence Based Literacy Instruction
- District to offer Professional Development aligned with Scientifically Based Reading Research and Evidence Based Literacy Instruction

## **Higher Ed Components**

- The literacy assessment for any individual seeking initial licensure, (including alternate route) with an endorsement in early/primary education preschool through grade three, elementary education preschool through grade six, special education general curriculum kindergarten through grade 12, special education deaf and hard of hearing preschool through grade 12, or special education blindness/visual impairments preschool through grade 12 or as a reading specialist shall include a rigorous test of science-based reading research and evidence-based literacy instruction





Decoding Dyslexia Virginia  
Follow us on:



# — Stay in Touch!

Kristen Kane, Founding Member, Decoding Dyslexia Virginia  
[decodingdyslexiava@gmail.com](mailto:decodingdyslexiava@gmail.com)

Tracy Hastings, Ed.S. [tracy.hastings@msj.edu](mailto:tracy.hastings@msj.edu)

Heather Fleming, M.Ed. [heather@wylit.org](mailto:heather@wylit.org)



Q & A



**VCU**

School of Education

# Dyslexia 101

## Evaluation Form



May 10th, 2022  
7-8:15PM EST



## Resources

[IDA Dyslexia Handbook: What Every Family Should Know](#)

[Dyslexia in the Classroom: What Every Teacher Needs to Know](#)

[Infant & Toddler Connection of Virginia](#)

[Teaching Reading Is Rocket Science | American Federation of Teachers](#)

[For Parents | Reading Rockets](#)

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# Q and A



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# Appendices



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# Signs of dyslexia at different ages





## Preschool: Possible signs of Dyslexia

- Delay in speaking
- Difficulty with rhyming; poor memory for nursery rhymes
- Difficulty “filling in blanks” of books read several times
- Difficulty pronouncing words (e.g., “mawn lower” for “lawn mower”)
- Difficulty reciting alphabet letters or days of week in sequential order
- Inability to recall the right word (word retrieval)
- Difficulty learning and remembering colors, letters, numbers
- Family history of reading problems

~Texas Dyslexia Handbook



## K-1 Possible Signs of Dyslexia (in addition to above)

- Tells stories that are hard to follow; events and details are out of sequence
- Reading errors exhibit no connection to the sounds of the letters on the page (e.g., will say “puppy” instead of the written word “dog” on an illustrated page with a dog shown)
- Cannot sound out simple words like cat, map, nap
- Messy handwriting: letters are awkwardly formed and difficult to read
- Difficulty learning letter names and corresponding sounds
- Cannot remember a sight word even after substantial practice
- Does not understand that words “come apart” into syllables
- Complains about how hard reading is, or “disappears” when it is time to read
- Family history of reading problems



## 2nd-3rd: Possible Signs of Dyslexia in Reading

- Reads first part of word, but “fills in” or guess the rest: “canyon” for “castle”
- Trouble sounding out unfamiliar, multisyllabic words, makes wild guesses;
- Slow to acquire reading skills; reading is slow, choppy, inaccurate, without expression
- Avoids reading out loud: water, stomachache, bathroom
- Confuses words that sound alike or may be in the same category, such as saying “tornado” for “volcano” or “lotion” for “ocean”
- Skips or mixes up prepositions / similar words: of, for, from, the, and, an, there, then, where, were
- Skips entire lines of text



## 2nd-3rd: Possible Signs of Dyslexia in Spelling

- Phonetic spelling persists such as “wat” for “wait” or “jragin” for “dragon”
- Confuses words that are similarly spelled: of, for, from, there, where
- May be able to spell words on spelling test, but not in free writing
- Persistent difficulty with sight or red words



## 2nd-3rd: Possible Signs of Dyslexia in Math

- “Counts” multiplication tables. Trouble memorizing them.
- Slow at long division (related to x tables...)
- Understands math concepts but has difficulty lining up numbers, leading to incorrect answers.
  - Accommodation ideas:
    - Hand out examples of worked out problems
    - Graph Paper
    - Calculator



## 4th-6th: Additional Possible Signs

- Avoidance of reading (particularly for pleasure)
- Difficulty reading fluently (e.g., reading is slow, inaccurate, and/or without expression)
- Difficulty decoding unfamiliar words in sentences using knowledge of phonics
- Use of fewer complicated words in writing that are easier to spell than more appropriate words (e.g., “big” instead of “enormous”)
- Reliance on listening rather than reading for comprehension



## Additional Middle School and High School Signs

- Difficulty with note taking
- Difficulty with the volume of reading and written work
- Frustration with the amount of time required and energy expended for reading and writing and projects
- Difficulty expressing themselves in writing; quantity and quality of writing seems low
- Difficulty learning a foreign language

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# General accommodations





# Supporting Students with Dyslexia

- Ask a student to read aloud **only** if student volunteers
- Provide content in audible format
- Provide copies of class notes
- Provide written examples of writing assignments, math problems
- Allow students to take pictures of examples and assignments
- Adapt test formats, such as allowing oral responses, providing large spaces for writing, or providing word banks or circling an answer instead of filling in the blank
- Focusing on **content** of answers, rather than spelling, grammar or syntax
- Provide text-to-speech / speech-to-text / writing programs (Grammarly)

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# Brief family and child screening questions

# Dyslexia and other reading difficulties screening:



## Family Reading History Matters

[Parent Dyslexia Screening Questionnaire](#) (hyperlink)

[School Age Child Screening Questionnaire](#) (hyperlink)

[Parent Screener for Preschoolers](#) (hyperlink)

Dyslexia is genetic therefore if parents or other family members had trouble learning to read, children may too. Administering this questionnaire or the following subset of questions may be a useful screening practice.

**A subset of Adult Reading History Questionnaire questions may be sufficient:**

**A meta-analysis of the ARHQ questions found that the following five parent questions may predict dyslexia or other reading difficulties in children:**

1. How much trouble did you have learning to read in elementary school?
2. Did you ever reverse the order of letters or numbers when you were a child?
3. Did you have difficulty learning letter and/or color names when you were a child?
4. In comparison to others in your classes, how much did you struggle to complete your work?
5. How much difficulty did you have learning to spell in elementary school?

ARHQ: Adult Reading History Questionnaire (Leffly, Pennington. J Learn Disabil. 2000 May-Jun;33(3):286-96. "Reliability and validity of the adult reading history questionnaire" <http://www.ncbi.nlm.nih.gov/pubmed/15505966>)

ADC: Adult Dyslexia Checklist (Smythe & Everatt. British Dyslexia Association <http://www.bdadyslexia.org.uk/screening>. 2001)

ASRD: Adult Self-Report of Dyslexia (Snowling et al. Dyslexia 2012) <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3382192/>)

## Dyslexia (and other reading difficulties) screening question examples:

	Never/ Not at all	Rarely/ A little	Sometimes	Frequently/ Quite a bit	Always/ A great deal
1. Has difficulty with spelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Has/had difficulty learning letter names	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Has/had difficulty learning phonics (sounding out words)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Reads slowly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Reads below grade level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Requires extra help in school because of problems in reading and spelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*This screener was developed by the Colorado Learning Disabilities Research Center (NICHD 027802); Anne Arnett MA and Eric Aune MA helped develop the online versions.*

## References



- Simos, P. G., Fletcher, J. M., Sarkari, S., Billingsley, R. L., Francis, D. J., Castillo, E. M., et al. (2005). Early development of neurophysiological processes involved in normal reading and reading disability: a magnetic source imaging study. *Neuropsychology* 19, 787–798. <https://doi-org.msj.idm.oclc.org/10.1037/0894-4105.19.6.787>.
- Turkeltaub PE, Gareau L, Flowers DL, Zeffiro TA, Eden GF. Development of neural mechanisms for reading, *Nat Neurosci.*, 2003, vol. 6 (pg. 767-773). <https://doi-org.msj.idm.oclc.org/10.1038/nn1065>.
- Krafnick, A. J., Flowers, D. L., Napoliello, E. M., & Eden, G. F. (2011). Gray matter volume changes following reading intervention in dyslexic children. *NeuroImage*, 57(3), 733–741. <https://doi-org.msj.idm.oclc.org/10.1016/j.neuroimage.2010.10.062>.