

Understanding Overlapping Learning Differences

Dyslexia, Dysgraphia, Dyscalculia, and ADHD

Many students who struggle in school are not struggling because of a lack of intelligence or effort. They may be living with one or more learning differences that affect how their brains process information. Dyslexia, dysgraphia, dyscalculia, and ADHD are among the most common — and they frequently occur together.

This resource explains each condition, how they overlap, and what families and educators can do to support students who experience more than one of these challenges.

Understanding Each Condition

Dyslexia

Dyslexia is a language-based learning difference that affects reading, spelling, and phonological processing — the ability to hear and manipulate the individual sounds in words. It is the most common specific learning difference, and it is neurological in origin, not a result of poor vision, low motivation, or insufficient instruction.

What it looks like in students:

- Difficulty decoding unfamiliar words ("sounding out")
- Slow or inaccurate reading; words may be skipped or substituted
- Persistent spelling difficulties, even with familiar words
- Trouble rhyming, segmenting syllables, or manipulating sounds
- Strong listening comprehension that outpaces reading ability
- Avoidance of reading tasks; frustration or anxiety around literacy

Key Facts About Dyslexia

- Affects approximately 10% of the population — roughly 1 in 10 students
- Represents about 80% of all identified specific learning disabilities
- Is neurological and genetic in origin; it runs in families
- Does NOT reflect intelligence — many individuals with dyslexia are highly gifted
- Responds well to structured literacy and explicit, systematic phonics instruction
- Wyoming SF0059 (signed into law March 2026) requires evidence-based literacy instruction for all K-12 students

Dysgraphia

Dysgraphia is a neurological learning difference that affects written expression. It goes far beyond messy handwriting — it can affect a student's ability to organize thoughts in writing, spell accurately,

maintain proper spacing and letter formation, and produce written work at a pace that keeps up with classroom expectations.

What it looks like in students:

- Illegible or inconsistent handwriting, even with effort
- Difficulty holding a pencil or pen without discomfort or fatigue
- Inconsistent spacing, capitalization, and letter sizing on the page
- Written work that is far shorter or less detailed than verbal expression
- Inability to write and think at the same time; mental overload
- Avoidance of writing tasks; incomplete written assignments

Key Facts About Dysgraphia

- Estimated to affect 5-20% of school-age children
- Often goes unrecognized because it can look like carelessness or laziness
- Is distinct from dyslexia but the two frequently co-occur (30-47% of students with dyslexia also show dysgraphia symptoms)
- ADHD treatment does not directly treat dysgraphia, but addressing attention challenges can reduce some writing difficulties
- Occupational therapy, assistive technology (voice-to-text, word processors), and explicit writing strategy instruction are effective supports

Dyscalculia

Dyscalculia is a specific learning difference affecting a student's ability to understand numbers, learn math facts, and reason mathematically. It is sometimes called "math dyslexia," though it has its own distinct neurological profile. Students with dyscalculia often have difficulty with number sense — the intuitive understanding of what numbers mean and how they relate to one another.

What it looks like in students:

- Difficulty understanding place value, number magnitude, or quantity
- Inability to recall basic math facts (addition, subtraction, multiplication tables) despite repeated practice
- Struggles with time, measurement, and spatial reasoning
- Confusion with math symbols, signs, or operational procedures
- Difficulty estimating or checking whether an answer is reasonable
- Anxiety around math tasks; avoidance or shutdown during math instruction

Key Facts About Dyscalculia

- Affects approximately 2-8% of school-age children
- Research shows students with dyslexia are 2-3 times more likely to also have dyscalculia than would be expected by chance
- Around 26% of individuals with dyslexia also show symptoms of dyscalculia

- Dyscalculia and dyslexia share some underlying cognitive challenges, particularly with working memory
- Effective supports include visual-spatial math tools, manipulatives, extended time, and calculator access during assessments

ADHD (Attention-Deficit/Hyperactivity Disorder)

ADHD is a neurodevelopmental condition that affects executive function — the brain's ability to plan, focus, control impulses, regulate attention, and manage time. ADHD is not simply about being "hyper" or unable to sit still. Many students with ADHD, particularly girls, present primarily with inattention, which can be easily missed.

The three presentations of ADHD:

- **Predominantly Inattentive:** difficulty sustaining focus, following multi-step directions, organizing tasks, and completing work (often "daydreaming")
- **Predominantly Hyperactive-Impulsive:** difficulty staying seated, waiting turns, controlling impulses, and regulating activity level
- **Combined Presentation:** features of both inattention and hyperactivity-impulsivity

What it looks like in students:

- Difficulty beginning, sustaining, or completing tasks (especially non-preferred tasks like reading and writing)
- Losing materials, missing deadlines, forgetting instructions
- Emotional dysregulation — frustration, outbursts, or shutting down
- Inconsistent performance: excels in high-interest activities, struggles with routine work
- Working memory deficits that affect following directions and retaining information

Key Facts About ADHD

- Affects approximately 6-10% of school-age children
- 30-50% of children with ADHD also have at least one co-occurring learning disability
- ADHD and learning disabilities like dyslexia share genetic risk factors — they often co-occur because of overlapping neurological profiles, not because one causes the other
- Effective supports include structured routines, preferential seating, chunked instructions, extended time, movement breaks, and where appropriate, medication management
- ADHD is not a behavior problem — it is a neurological difference in executive function development

How These Conditions Overlap

One of the most important — and frequently overlooked — facts about learning differences is that they rarely occur in isolation. Research consistently shows that students with one of these conditions are significantly more likely to have one or more additional conditions. This is not a coincidence:

groundbreaking twin studies published in 2025 found that ADHD, dyslexia, and dyscalculia co-occur primarily because of shared genetic risk factors — meaning these conditions have overlapping neurological roots.

Prevalence at a Glance

Condition	Estimated Prevalence in School-Age Children
Dyslexia	~10% of school-age children (up to 15-20% by some estimates)
ADHD	~6-10% of school-age children
Dysgraphia	~5-20% of school-age children
Dyscalculia	~2-8% of school-age children

Co-Occurrence Rates

When a student has one of these conditions, their likelihood of having a second condition rises dramatically:

Condition Pairing	Co-Occurrence Rate
Dyslexia + ADHD	~30% of students with dyslexia also show ADHD symptoms; ~25% of those with ADHD have dyslexia
Dyslexia + Dyscalculia	Up to 40% co-occurrence among students with a math learning disability; 2-3x higher than chance
Dyslexia + Dysgraphia	30-47% of students with dyslexia also experience dysgraphia
ADHD + Any Learning Disability	30-50% of children with ADHD have at least one co-occurring learning disability
ADHD + Dyslexia + Dyscalculia (all three)	Children with one condition are 2.1 to 3.1 times more likely to have a second condition (van Bergen et al., 2025)

Why Co-Occurrence Matters for Students

When multiple learning differences are present, the challenges compound. A student with both dyslexia and ADHD, for example, may struggle not only with decoding words but also with sustaining the attention needed to persist through a text. A student with dysgraphia and dyscalculia may be able to understand a math concept verbally but be unable to show their work accurately on paper.

This compounding effect has real consequences:

- Academic gaps widen faster when multiple areas of processing are affected
- Students may be diagnosed with one condition while a second goes unrecognized
- Interventions designed for only one condition may be less effective when others are present
- Emotional and social consequences — low self-esteem, anxiety, school avoidance — increase with each unaddressed challenge

Research also shows that both dyslexia and ADHD can cause students to believe they are "stupid" or "slow." Early, accurate identification and genuinely supportive intervention can protect students' belief in their own potential.

What Families and Educators Can Do

Step 1: Recognize the Signs Early

The earlier a student receives an accurate evaluation, the earlier targeted support can begin. Parents and teachers should request a comprehensive evaluation when a student shows significant, persistent difficulty in reading, writing, math, attention, or any combination of these — especially when the student is clearly trying but not making expected progress.

Be aware that:

- One diagnosis does not rule out others — ask evaluators to assess for all areas of potential difficulty
- Girls with ADHD are frequently missed because they often present as inattentive rather than hyperactive
- High intelligence can mask learning differences; students may "compensate" for years before the gap becomes obvious
- Students should never be told to "try harder" as the primary response to learning struggles

Step 2: Request a Comprehensive Evaluation

Under the Individuals with Disabilities Education Act (IDEA), public schools are required to evaluate students suspected of having a disability that affects their education — at no cost to families. Parents can submit a written request to their school's special education department at any time.

A thorough evaluation for a student with potential overlapping conditions should include:

- Phonological processing and reading fluency assessment
- Written language and fine motor assessment (to identify dysgraphia)
- Mathematical reasoning and number sense assessment (to identify dyscalculia)
- Attention, executive function, and behavioral assessment (to identify ADHD)
- Working memory and processing speed measures
- Assessment of the student's social-emotional wellbeing

Step 3: Ensure Instruction and Accommodations Match the Full Profile

Effective support for students with overlapping conditions must address each area of need — not just the one that is most obvious. A student whose dyslexia is addressed but whose ADHD remains unsupported will continue to struggle. Likewise, addressing ADHD without providing explicit literacy instruction will not close reading gaps.

Effective instructional approaches include:

- Structured Literacy (Orton-Gillingham based, Wilson Reading System, RAVE-O) for dyslexia and dysgraphia
- Explicit, systematic math instruction with visual and manipulative supports for dyscalculia
- Multisensory learning that engages sight, sound, and movement simultaneously
- Executive function coaching and organizational skills instruction for ADHD
- Short, chunked tasks with clear goals and frequent feedback

Common classroom accommodations:

- Extended time on tests and written assignments
- Use of assistive technology (text-to-speech, speech-to-text, audiobooks, calculator access)
- Reduced quantity of written output required while maintaining quality expectations
- Preferential seating and reduced visual/auditory distractions
- Oral response as an alternative to written response
- Graphic organizers, checklists, and visual schedules
- Chunked, written instructions rather than multi-step verbal directions
- Movement breaks and flexible seating where appropriate

Step 4: Support the Whole Child

Students with multiple learning differences often carry significant emotional weight. Years of struggle — especially when the root causes have not been identified or addressed — can result in anxiety, depression, school refusal, and a deep belief that they are less capable than their peers. This is not true, and these outcomes are preventable.

Families and educators can make a profound difference by:

- Naming the learning differences clearly and positively — a diagnosis is not a limitation, it is a map
- Helping students understand how their brains work differently, not deficiently
- Celebrating strengths — many individuals with dyslexia and related differences excel in creativity, problem-solving, spatial reasoning, and entrepreneurship
- Connecting students with peers and role models who share similar experiences
- Seeking mental health support when anxiety, low self-esteem, or school avoidance become significant concerns

Wyoming Context: SF0059 and What It Means for Your Child

Wyoming's K-12 Language and Literacy Program (SF0059), signed into law in March 2026, represents a landmark commitment to evidence-based literacy instruction for all Wyoming students. The law requires schools to implement the Science of Reading — the body of research that confirms what structured, explicit, phonics-based instruction looks like — across K-12 classrooms.

For students with dyslexia and related learning differences, this matters because:

- The evidence-based instructional approaches required under SF0059 are also the most effective approaches for students with learning differences
- Early universal screening — required under the law — will help identify struggling readers sooner, including those with undiagnosed dyslexia
- Improved teacher training means more educators will recognize the signs of dyslexia, dysgraphia, and co-occurring conditions

WYO Right to Read believes that every Wyoming child deserves to read — and that every family deserves the information and support needed to advocate effectively for their student. If you have questions about your child's rights under IDEA, Section 504, or Wyoming law, or if you need help navigating the evaluation and IEP process, contact us.

Quick Reference: Key Terms

Term	Definition
Dyslexia	A neurological, language-based learning difference affecting reading, decoding, and spelling; the most common specific learning disability
Dysgraphia	A neurological learning difference affecting written expression, including handwriting, spelling, and the ability to organize ideas in writing
Dyscalculia	A specific learning difference affecting the ability to understand numbers, recall math facts, and reason mathematically
ADHD	A neurodevelopmental condition affecting executive function, including attention, impulse control, working memory, and organization
Co-occurrence	When two or more conditions are present in the same individual; also called comorbidity
Executive Function	A set of mental skills that help people plan, focus, follow instructions, and manage multiple tasks
Phonological Processing	The ability to hear, identify, and manipulate the individual sounds (phonemes) in spoken language; a core skill underlying reading
Structured Literacy	An evidence-based approach to reading instruction that is explicit, systematic, and multisensory; effective for all learners and essential for those with dyslexia
IEP	Individualized Education Program — a legally binding document outlining a student's special education services under IDEA

504 Plan	A plan providing accommodations to students with disabilities under Section 504 of the Rehabilitation Act, when special education services are not required
IDEA	Individuals with Disabilities Education Act — the federal law guaranteeing eligible students with disabilities a free appropriate public education

Sources & Further Reading

The following research and resources informed this document:

- van Bergen, E., de Zeeuw, E. L., Hart, S. A., Boomsma, D. I., de Geus, E. J. C., & Kan, K.-J. (2025). Co-Occurrence and Causality Among ADHD, Dyslexia, and Dyscalculia. *Psychological Science*.
- International Dyslexia Association (IDA) — www.dyslexiaida.org
- Understood.org — Research-based resources on learning and thinking differences
- National Center for Learning Disabilities — www.ncld.org
- Wyoming SF0059, K-12 Language and Literacy Program (signed March 2026)
- WPS Publish Blog: Dyslexia Comorbidities: ADHD, Anxiety & Learning Disorders (2026)
- Voyager Sopris Learning: What Is Dysgraphia? How to Identify and Support Students

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Every Wyoming child deserves to read.

This document is for informational purposes. It does not constitute legal or medical advice. Contact your school's special education department or a qualified professional for individualized guidance.