The New Jersey Dyslexia Handbook

A Guide to Early Literacy Development & Reading Struggles

Published 2017; Updated 2024

Table of Contents

1. Purpose

The purpose of **The New Jersey Dyslexia Handbook: A Guide to Early Literacy Development & Reading Struggles** is to provide information to educators, students, families, and community members about dyslexia, early literacy development, and the best practices for identification, instruction, and accommodation of students who have reading difficulties.

With this goal in mind, the intent is to:

- ***Build an understanding of dyslexia and related difficulties with written language;***
- ***Demonstrate how to identify and remediate students with dyslexia and other reading difficulties; and***
- ***Inform both educators and families in best practices to support students with dyslexia and other reading difficulties.***

In addition, this handbook will provide guidance for administrators, specialists, and teachers in making the best educational programming decisions for New Jersey students with dyslexia. It can also serve as a starting point when additional resources are needed to support students suspected of having difficulties in other areas, such as listening, speaking, reading, and/or writing.

Information on implementing strategies according to state statutes pertaining to dyslexia and how they relate to federal laws such as *Section 504 of the Rehabilitation Act of 1973 (Section 504)*, the *Americans with Disabilities Act (ADA)*, as amended, and the *Individuals with Disabilities Education Act (IDEA, 2004)* are also included.

To complement this handbook, the development of additional dyslexia resources will be ongoing. Currently, the New Jersey Department of Education (NJDOE) website hosts a *Dyslexia* page where professional development webinars are available. The content for these webinars was developed and presented by early literacy consultants and the New Jersey Branch of the International Dyslexia Association in collaboration with the NJDOE's Office of Special Education Policy and Procedure (OSEPP). The NJDOE website contains additional resources for families, educators and community members regarding the New Jersey Learning Standards, best practices, and professional development opportunities.

It should be noted that New Jersey school districts have considerable autonomy in making decisions about diagnostic tools and instructional programs. The NJDOE does not endorse specific diagnostic tools or instructional programs and, as a result, this handbook does not provide lists of mandated or preferred products or programs.

To assure a broad representation for input into this handbook, a diverse group of individuals with expertise in learning disabilities were brought together to develop the document released in 2017. We would like to acknowledge the following members of this dyslexia handbook taskforce:

Public Representatives

Edward Bray
Director, Public Policy & Advocacy - Learning Ally; Parent

Mary L. Farrell, Ph.D., LDT-C, CDT, OG Th-T
Director, Center for Dyslexia Studies and Dyslexia Specialist Orton Gillingham Teacher Training Program; University Director, Regional Center for Students with Learning Disabilities - Fairleigh Dickinson University

Nancy Graham, M.S., LDT-C, CCC-SLP
In-district Wilson Language Trainer - Monroe Twp Board of Education

Karen T. Kimberlin, M.S., CCC-SLP
Speech-Language Pathologist - New Jersey Speech-Language-Hearing Association

Deborah Lynam, M.A.
Co-chair - NJ State Special Education Advisory Council; Director, Partnerships & Engagement - AIM Institute for Learning & Research; Parent

Peggy O'Reilly, Ed.D., LDT-C
Board Member - New Jersey Literacy Association; Associate Professor - Bloomfield College (retired)

Alison Pankowski, M.Ed., LDT-C
Reading Interventionist, Wilson Language Trainer - Montgomery Township School District; Vice President - New Jersey Branch of the International Dyslexia Association

Dee Rosenberg, M.A., LDT-C
Director of Education - Laurel School of Princeton, Newgrange School, & Ann Robinowitz Education Center; Past President - New Jersey Branch of the International Dyslexia Association

Leslie Rubinstein, M.S.Ed, LDT-C
President - Learning Disabilities Association of New Jersey; Parent

Kathy Stratton, Psy. D.
Psychologist - Rider University; Parent

NJ Department of Education Representatives

Kathy Ehling
Manager, Bureau of Governance and Fiscal Support, OSEPP

Barbara Haake
OSEPP Specialist

Peggy McDonald, Ed.D.,
Acting Assistant Commissioner, Division of Learning Supports and Specialized Services

John Worthington
Director, Office of Special Education Policy and Procedure

2. Introduction

"Science has moved forward at a rapid pace so that we now possess the data to reliably define dyslexia, to know its prevalence, its cognitive basis, its symptoms and remarkably, where it lives in the brain and evidence-based interventions which can turn a sad, struggling child into not only a good reader, but one who sees herself as a student with self-esteem and a fulfilling future."

—Sally Shaywitz, 2014 Testimony Before the Committee on Science, Space, and Technology, United States House of Representatives

The International Dyslexia Association states "Of the students with specific learning disabilities receiving special education services, 70-80% have deficits in reading. Dyslexia is the most common cause of reading, writing, and spelling difficulties. Dyslexia affects males and females nearly equally, and people from different ethnic and socioeconomic backgrounds as well."

"Learning disabilities don't suddenly appear in third grade. Researchers have noted that the achievement gap between typical readers and those with dyslexia is evident as early as first grade. But many students struggle for years before they are identified with SLD [specific learning disability] and receive needed support" (Horowitz, Rawe & Whitaker, 2017).

Many educators and families are not surprised by this statement. They see the impact of this early delay in identification in their classrooms and homes every day. The typical window of identification varies; some students struggle to acquire early reading skills while other students' reading difficulties are masked by other strengths and not apparent until later grades when reading and writing demands intensify with greater quantities and more complex texts. There are also many factors that can impact reading development and add complexity to our efforts at identification. For example, it is critical to determine whether a student's difficulties are attributable to English language acquisition or language variations or whether there may be underlying signs of a disability in their primary language. Additionally, a student's lack of early literacy opportunities may add a layer of complexity to their struggles with a language-based learning disability. Even when identified, many students with dyslexia can continue to find reading, writing, and spelling challenging, despite conventional or intensified instruction. Students with dyslexia are at risk for being retained, failing courses, performing below proficient on academic assessments, receiving disciplinary actions, and dropping out of school; and these risks increase for those who are not identified, or not identified early, in their academic careers (Horowitz et al., 2017). It is vitally important to reach all struggling learners early and effectively so their progress can be monitored, and resources can be aligned to support not only their academic needs but also their social-emotional health and well-being.

Decades of research have yielded considerable progress in our understanding of the brain of individuals with dyslexia. We now have knowledge of the specific regions of the brain mapped to characteristic difficulties, of the identified differences in young children's brains prior to any reading instruction, and a greater understanding of the underlying genetic features. This research has contributed to the shaping of effective interventions while revealing new areas for research and exploration.

"Learning disabilities are not a prescription for failure. With the right kinds of instruction, guidance and support, there are no limits to what individuals with learning disabilities can achieve."

—Sheldon H. Horowitz, Ed.D., Director of LD Resources NCLD

Students with dyslexia represent a subgroup of all the students in school who experience difficulties learning to read, albeit a significant one due to their neurobiological predispositions. It is important to understand students may struggle in learning to read for different reasons, including weak preparation from the preschool environment, attendance at schools with chronically low achievement, issues associated with poverty, limited proficiency in spoken English, use of a dialect of English that differs substantially from the one used in school, low general intellectual ability, hearing impairments, or specific early language impairments (Snow, Burns, & Griffin, 1998). The good news is that all these students benefit from evidence-based screening practices, evidence-based literacy instruction, and ongoing progress monitoring.

It is imperative that New Jersey students have the opportunity to learn from teachers and specialists who are well versed in the cognitive science of reading and well trained in delivering literacy instruction that aligns to evidence-based practices and methodologies.

References and Resources:

Horowitz, S. H., Rawe, J., & Whittaker, M. C. (2017). *The state of learning disabilities: Understanding the 1 in 5*. National Center for Learning Disabilities.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. National Academy Press.

3. Definition

The New Jersey Administrative Code includes the definition of dyslexia adopted by the International Dyslexia Association (IDA) Board of Directors on November 12th, 2002.

(*N.J.A.C. 6A:14-1.3*) 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 the growth of vocabulary and background knowledge.

It is useful to consider each component of this definition:

• Dyslexia is a specific learning disability that is neurobiological in origin.

Dyslexia is a term used to refer to a specific type of learning disability in reading. The Individuals with Disabilities in Education Act (IDEA) lists it as one of the qualifying conditions under the special education eligibility category, Specific Learning Disability (SLD).

The problem is not simply one of poor instruction, lack of motivation on the part of the student, or inadequate exposure to literature in the home. While the exact causes of dyslexia are still not completely clear, it is neurobiological in origin. Anatomical and brain imagery studies show differences in the way the brain of a person with dyslexia both develops and functions at the level of neuronal activity.

• It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.

Although some students with dyslexia can show a variety of speech and language problems prior to entering the formal school environment (Catts & Kahmi, 2005), their problems become very noticeable once they begin early reading instruction. They have persistent difficulties acquiring accurate and/or fluent decoding and encoding skills that interfere with their ability to recognize words automatically, read text independently with proper accuracy, expression, and rate, and to spell words correctly.

• 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.

The phonological processing difficulties of students with dyslexia can significantly interfere with the development of phonemic awareness and phonics skills for reading and spelling. It should also be noted that many students with dyslexia also experience difficulties with orthographic processing and rapid automatized naming.

Dyslexia is not caused by low general intellectual ability, but rather by special difficulties processing the phonological and orthographic features of language that can coexist with all ranges of intellectual ability. However, some students with dyslexia may have strong cognitive abilities that allow them to compensate for or mask their deficits on certain tasks. These intellectual and compensatory skills may enable these students to obtain reading scores in the average range yet still have dyslexia. Research shows us that there is no difference between IQ consistent poor readers and IQ discrepant poor readers, providing very little justification for the use of the IQ-discrepancy approach solely to identify a reading disability (Stuebing, Fletcher, LeDoux, Lyon, Shaywitz & Shaywitz, 2002). Therefore, it is vital that we assess and account for the full profile of strengths and weaknesses of these bright students so that we are not missing or delaying their identification.

Students with dyslexia may struggle to read or show a slow rate of progress, despite evidence-based reading instruction or intensified reading interventions.

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

While language comprehension deficits are not the underlying core deficit of dyslexia, students who struggle to decode with the proper fluency to understand what they are reading will experience problems with reading comprehension. As students shy away from reading, problems will begin to compound quickly. Students can show reduced growth in both their vocabulary and background knowledge putting them further and further behind their grade-level peers. For these reasons, it is imperative to provide students with access to grade level text through audio, text to speech technologies or teacher read-alouds, when appropriate, while they continue to receive instruction and develop their foundational reading skills.

References and Resources:

Catts, H. & Kamhi, A. (2012). *Language and Reading Disabilities, 3rd Edition*. Allyn & Bacon, Inc.

Stuebing, K., Fletcher, J., LeDoux, J., Lyon, G., Shaywitz, S., & Shaywitz, B. (2002). Validity of IQ-discrepancy classifications of reading disabilities: A meta-analysis. *American Educational Research Journal*, 39, 469-518.

4. Comprehensive Literacy Instruction for All

The following guidelines are intended to provide a framework for literacy instruction and to guide districts and schools in their efforts to provide the structure, curriculum and interventions needed to ensure that all students are successful in learning the New Jersey Student Learning Standards for English Language Arts (ELA).

The Key Components of Comprehensive Literacy Instruction

The New Jersey Department of Education (NJDOE) adheres to the philosophy of evidence-based instruction, incorporating the elements of reading instruction to include:

- ***Phonemic Awareness***
- ***Phonics***
- ***Comprehension***
- ***Fluency***
- ***Vocabulary***
- ***Background Knowledge***
- ***Motivation***
- ***Writing***

These elements are drawn from the National Reading Panel Report (2000) and other respected research. The NJDOE, with input from stakeholders, has added motivation, background knowledge, and writing. The NJDOE has consistently held firm to the reciprocity of reading and writing instruction, and its benefit to students, as skills and strategies are cultivated in an integrated system of literacy instruction in the classroom.

The Role of the NJ ELA Student Learning Standards with Implications for Struggling Readers

In 2023, New Jersey adopted the NJ Student Learning Standards for English Language Arts (ELA) for K-12. The NJ Student Learning Standards for ELA define grade specific end-of-year expectations and a cumulative progression of literacy skills in reading, writing, speaking, listening, and language needed to prepare for college and careers by grade 12.

The standards are not inclusive of all skills and strategies that need to be taught. The standards acknowledge that interventions and supports for students whose achievement is below or way below grade level standards need to be in place and rely on the expertise of knowledgeable educators to determine the appropriate methods and materials needed. Struggling students regardless of grade level will require more instructional time and more systematic and intensive instruction to make progress in the standards. **Some will require instruction in foundational or other skills specified in the standards for students at lower grade levels.**

Within the K 5 reading standards are foundational skills that include print concepts, phonological awareness, phonics (decoding and spelling), sight word recognition, word structure and fluency. These critical skills underlie the development of independent reading and comprehension abilities and are of particular importance for students with dyslexia, as well as many other students who struggle with word level skills. These students require specific, intensive and systematic instruction in these foundational skills as an essential part of their program.

To support educators in the development of local curriculum aligned to the ELA Student Learning Standards, the NJDOE has developed curricular frameworks for *English Language Arts* for kindergarten through grade twelve. The **Key Principles of Comprehensive Literacy Instruction** chart included in this section, as well as the following sections of this handbook, address differentiated interventions for students who are below or very below grade level standards. In addition, Universal Design for Learning addresses the needs of struggling readers who require methods and materials at their instructional level for reading instruction. They also require accommodations to access current grade level texts to develop comprehension skills, vocabulary and content area knowledge.

Structuring the Literacy Block to Maximize Learning for Struggling Readers

The NJDOE recommends a minimum of 90-minutes of **uninterrupted** literacy instruction daily in grades K-5. The recommendation for grades 6-8 is 80 minutes in order to accommodate content/departmental classes at those grade levels. A block of 120-minutes is recommended for bilingual/ESL classes to allow additional allocated time for second language instruction and support.

Uninterrupted instruction means that no students are pulled for related services during the ELA block and no other classes are scheduled that would break the block into smaller units (PE, Art, Music, etc.). This recommendation also applies to students with Individualized Education Programs (IEP). The IEP team determines the location of special education services; however, they must be provided in the least restrictive environment. Supports and interventions can, and should be, provided within the literacy block as well as an additional intervention period to supplement literacy instruction beyond the block. As students get older and the gap between the actual and expected achievement broadens, more time and increased intensity of instruction will be needed.

It is generally agreed that these time allotments are not sufficient for adequate instruction and extensive practice required by the standards. In recognition of this problem, there are many districts within the state

that substantially exceed these time allotments especially at K-8 levels.

To allow sufficient time for differentiated instruction that includes structured literacy instruction as well as guided practice in reading and writing, the NJDOE recommends as a best practice that:

- At the elementary level a minimum of 90 minutes of uninterrupted time is devoted to literacy instruction. At least 60 minutes of the literacy block should be devoted to teachers providing structured literacy instruction through both whole group and differentiated small group lessons **in addition to** sustained reading and writing activities in meaningful, differentiated centers. Centers of this type provide opportunities for the inclusion of students reading at a variety of levels in the literacy block. While working in centers, struggling readers will require monitoring to ensure that they are appropriately and productively engaged.

- An ample and varied collection of literature (e.g., poetry, drama, narratives) and informational texts for instruction as well as for independent reading should be in every classroom. Instructional resources should include an ample supply of controlled, decodable texts for use in structured literacy lessons, uncontrolled texts for guided and independent practice opportunities, and exemplary texts with rich language for read-alouds. Decodable texts (controlled texts with phonetically regular content) provide opportunities for readers to practice their decoding skills with success. Classroom libraries should contain uncontrolled and exemplary texts for a wide range of genres, authors, reading skill levels, and topics/subject areas, including science, social studies and multicultural selections.

- A full array of media center services, text, as well as digital, is provided through a media center, staffed by a certified media specialist.

Universal Design for Learning (UDL)

UDL is a set of principles for curriculum development and instructional planning that gives all students equal opportunities to learn. UDL provides a blueprint for creating instructional goals, methods, materials, and assessments that work for everyone – not a single, one-size-fits-all solution, but rather, flexible approaches that can be customized and adjusted for individual needs. UDL provides guidance and examples for a wide range of instructional approaches and formats to stimulate and motivate learning, including the use of technology and assistive technology. UDL also incorporates principles of student choice and self-regulation as part of the design to foster independence in learning. UDL principles can benefit students in the classroom during core literacy instruction, as well as during intervention periods.

The Center for Applied and Special Technology (CAST) has extensive free resources for teachers, some developed by teachers, to build curricula utilizing the principles of UDL. Additionally, the NJDOE has established a *Universal Design for Learning Supports* page on their website.

Implementation of UDL relies heavily on students having access to appropriate technology, including assistive technology. For example, students with dyslexia will benefit from access to grade level content in a range of formats including audio and text-to-speech.

Differentiated Instruction

New Jersey classrooms should host a variety of types of reading instruction to offer appropriately differentiated instruction to all students addressing the following:

- Evidence-based literacy instruction is recommended for all students, including those who fail to meet screening benchmarks or are observed by their teachers to struggle with reading and spelling. This instruction should be explicit, systematic, cumulative, and as individualized as possible within small group settings.

- Each classroom should have a broad array of reading and writing instructional strategies (e.g., direct, explicit structured literacy instruction, small group differentiation, guided and independent practice opportunities, shared writing, and other evidence-based practices).

- There should be continuity and consistency of programs, language/terminology, and methods across grade levels and schools.

- Bilingual, English as a second language, and English language services programs should be provided as per New Jersey state and federal statute.

- All classrooms should be engaged in culturally and linguistically responsive instruction.

- The revised ELA state standards and the call for close reading and more informational text in classrooms must also be addressed. To learn skills to engage in close reading of complex text, commensurate with a student's current grade level, students who have dyslexia will require access to accommodations. Assistive technology tools to help students access text may include text-to-speech, word prediction and/or other technology applications to meet grade appropriate goals.

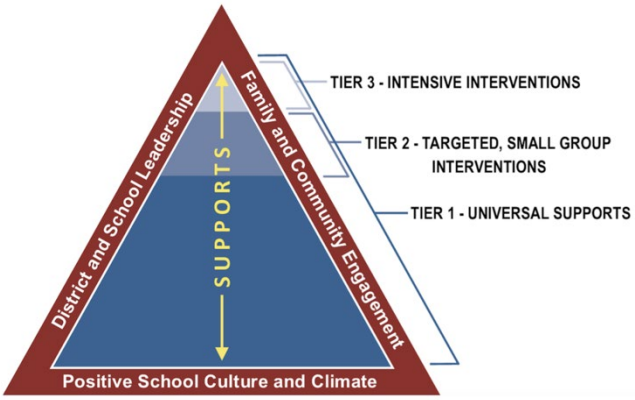
- The NJDOE believes that there is room for multiple strategies and instructional methods, and that it is incumbent upon teachers to consistently assess student needs (and struggles), while providing effective, varied instructional support for all learners. Early readers, as well as struggling readers of all ages, may need much more support one-on-one or in small groups, as they learn to make sense of text that is skillfully chosen to challenge them incrementally. For those same students, there are times that they will need to hear (and read) more complex text, build academic vocabulary, and increase their ability to use more advanced reading strategies.

Intervention and Referral Services (I&RS)

According to *N.J.A.C. 6A:16-8*, each district board of education is required to establish and implement a coordinated system in each school for the planning and delivery of Intervention and Referral Services. I&RS is designed to assist students who are experiencing learning, behavior or health difficulties, and to assist staff who have difficulties in addressing students' learning, behavior or health needs. **It is particularly important that these services begin in kindergarten and first grade for students struggling to acquire early reading skills.**

New Jersey Tiered System of Support–Early Reading (NJTSS-ER)

One way to implement the I&RS regulations is through implementation of a multi-tiered system of support (MTSS). NJTSS-ER is a framework of early reading assessments and interventions to improve student reading achievement, based on the core components of MTSS and the three tier prevention logic of Response to Intervention (RTI). With a foundation of strong district and school leadership, a positive school culture and climate, and family and community engagement, NJTSS-ER builds upon I&RS and gives schools a structure to meet the academic needs of all students in early reading.



NJTSS-ER was developed in collaboration with Rutgers University and other New Jersey stakeholders including educators and administrators from districts implementing an RTI/MTSS model, higher education experts, and parents. It provides schools and districts a systematic way to address learner variability and engage all students in learning the New Jersey Student Learning ELA Standards.
NJTSS-ER involves the systematic development of nine (9) essential components in schools for the effective implementation of the framework with fidelity and sustainability. Those components include:

1. Effective district and school leadership;
2. Family and community engagement;
3. Positive school culture and climate;
4. High-quality learning environments, curricula and instructional practices;
5. Universal screening;
6. Data-based decision making;
7. Collaborative problem-solving teams;
8. Progress monitoring; and
9. Staff professional development.

The New Jersey Tiered System of Supports - Early Reading website hosts resources to assist with implementation, including online training courses that provide guidance on planning for and implementing both essential assessments and effective instruction within response to intervention or multi-tiered system of supports frameworks.

Essential Assessments

Utilizing a multi-tiered system of support approach, districts identify multiple forms of both formative and summative assessment to measure both growth and achievement in ELA. All districts must assess English language proficiency and screen for reading disabilities according to New Jersey regulations. The *Universal Screening & Early Dyslexia Identification* section of this handbook outlines the requirements and guidelines for developing a screening protocol for dyslexia and other reading disabilities that aligns with New Jersey Tiered System of Support–Early Reading (NJTSS-ER). A *NJTSS-ER Universal Screening Quality Evaluation Worksheet* is available for district use.

In alignment with the requirements for screening for dyslexia, districts should utilize a system of formative assessment including universal screening, curriculum-embedded assessments, diagnostics, and progress monitoring, as well as summative assessments, including teacher-designed assessments and NJ state assessments, to measure student achievement.

To determine the needs of students, it is critical that districts and schools employ a system of formative assessment that includes:

Universal Screening: brief measures administered to all students; designed to assess the effectiveness of tier 1 core instruction and students' risk status relative to established grade-level benchmarks for skill areas that are predictive of early reading success. Screening should be administered at regular benchmark intervals (minimally,

three times a year) to identify students in need of additional diagnostic assessments and supplemental intervention.

Diagnostics: skill inventories administered to students identified as not meeting grade-level benchmark expectations on universal screening measures; designed to determine the specific foundational reading skills that need to be targeted for intervention. Diagnostics should be administered following each universal screening benchmark assessment to inform students' intervention planning.

Progress Monitoring: brief measures administered to students receiving interventions; designed to assess student progress towards intervention goals and to determine next steps in intervention planning. Progress monitoring of the skills targeted during intervention should be administered weekly or bi-weekly.

Districts and schools will also employ summative assessments to determine how well students are mastering the standards aligned with the ELA curriculum. Summative assessments include end-of-unit mastery tests and teacher-designed assessments, as well as the state-approved standardized assessment that is independent of the curriculum and/or reading instructional program.

Effective Instruction

The *Universal Screening & Early Dyslexia Identification* section of this handbook presents a flow chart which maps out the tiered system of supports for students not making adequate progress in reading, spelling and/or writing. All students, including those with or at-risk for dyslexia, receive evidence-based, tier 1 core structured literacy instruction. Students receiving supplemental tier 2 or tier 3 intervention are placed in small groups based on similar skill needs.

"Increasing learning time is one of the most important ways to intensify academic interventions in areas such as reading."

—Joseph K. Torgesen, 2000

Intervention must be targeted, sustained and re-designed when not producing the intended results. Students should be identified for intervention when they struggle with any element of the reading, spelling and writing process. Interventions may be short-term or long-term as determined by a team of educators, based on data from regular progress monitoring. It is most important that struggling students have the full benefit of grade level literacy instruction, while receiving additional instruction on identified areas needing intervention. To close the gap, students in need of long term intervention need more time on task within the ELA block and beyond. See the *Intervention: A Structured Literacy Framework for Struggling Readers* section of this handbook for specific information regarding intervention for students with dyslexia or other reading disabilities.

NJTSS-ER Tier 1 Core Instruction and *Tier 2 and 3 Intervention Analysis Tools* are available for district use.

References and Resources:

Kettler, R. J., Glover, T. A., Albers, C. A., & Feeney-Kettler, K. A. (2014). *Universal screening in educational settings: Evidence-based decision making for schools*. Washington, D.C.: American Psychological Association.

National Reading Panel (U.S.), & National Institute of Child Health and Human Development (U.S.). (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups.* Washington, D.C.: National Institute of Child Health and Human Development, National Institutes of Health.

Torgesen, J. K. (2000). Individual differences in response to early interventions in reading: The lingering problem of treatment resisters. *Learning Disabilities Research and Practice*, 15, 55–6.

Websites:

- New Jersey Student Learning Standards: ELA Curriculum & Instruction
- New Jersey Tiered System of Supports - Early Reading

NJ Tiered System of Supports - Early Reading Resources

Free NJTSS-ER online training courses and the tools mentioned in this chapter are available to support the planning and implementation of essential assessments and effective instruction within response to intervention or multi-tiered system of supports frameworks.

- Foundational Knowledge: Team-Based Early Prevention
- Foundational Knowledge: Assessment & Data-Based Decision Making
- Foundational Knowledge: Research-Based Priority Early Reading Skills
- Universal Screening
- Tier 1 Instruction
- Diagnostics
- Tier 2 and 3 Intervention and Progress Monitoring

Key Principles of Comprehensive Literacy Instruction		
Key Principle	**All Students Need:**	**Students Experiencing Reading Difficulty Need:**

Explicit instruction is necessary to build skills and strategies for reading, spelling, and writing.	• Evidence-based tier 1 instruction that includes:
	  ○ Teacher modeling with explanation (e.g., thinking aloud with step by step demonstration)
	  ○ Guided and independent practice opportunities
	  ○ Active responding techniques (e.g., choral responding, turn and talk, quick writes)
	• Content aligned with the National Reading Panel's findings (e.g., systematic and explicit instruction)
		Structured literacy interventions in small groups (Tiers 2 & 3) to build foundational skills not yet mastered; and differentiated core instruction (Tier 1). The instruction has the following characteristics:
		• Explicit instruction that is explained by the teacher one language and print concept at a time. Information is taught directly.
		• Sequential instruction that begins with the easiest concepts that the student does not know and remains on these to mastery before progressing to more difficult concepts.
		• Cumulative instruction that consistently reviews all concepts that have been introduced, and concepts unknown to the student are not included in the lesson.
		• Instruction that frequently uses multisensory strategies such as tracing, writing, fingerspelling and manipulatives to enhance learning for sound-letter correspondences; blending and segmenting sound-letter combinations; and learning syllable patterns to read and spell unknown decodable words, as well as to learn high frequency words.
		• Diagnostic instruction that requires continually monitoring a student's level of mastery of individual concepts and adjusts accordingly.
		• Repeated modeling and guided practice for students in small, flexible, homogeneous groups.
		• More frequent and longer periods of instruction.
		See the *Intervention: A Structured Literacy Framework for Struggling Readers* section of this handbook.

Instructional decisions should be guided by assessment of individual student knowledge and progress.	Access to a MTSS model, such as NJTSS-ER, that includes essential assessments and effective instruction: • Universal Screening • Tier 1 Instruction • Diagnostics • Tier 2 and Tier 3 Intervention • Progress Monitoring	• Diagnostic assessment, if the results of their universal screening show that they are not meeting grade-level benchmark expectations on priority early reading skills, to inform intervention planning and dyslexia screening. • Tier 2 and tier 3 intervention beginning in K-3 and continuing in higher grades when foundational skill needs are present in the areas of print concepts, phonological awareness, alphabetic knowledge, phonics, spelling, word recognition, or fluency. • Frequent progress monitoring to gauge effectiveness of interventions and to make timely instructional changes if progress is not sufficient. • A referral to the Child Study Team for comprehensive assessment if they present positive indicators of dyslexia and/or progress monitoring reveals a poor or slow rate of improvement. See the *Universal Screening & Early Dyslexia Identification* section of this handbook.
Coaching and immediate, specific feedback should be provided to address individual student needs.	• Immediate prompts, cues, and specific feedback to foster independent application of new skills and strategies. • Gradual reduction in the frequency and type of prompts provided as they gain proficiency.	More extensive coaching and immediate, specific feedback which may include re-teaching, teaching alternative strategies, and/or use of alternative materials.
Metacognitive skills are essential to the development of word solving strategies as well as higher order thinking skills.	To build an awareness of what strategy is needed, when a strategy is needed, and when to change or modify a strategy.	More explicit instruction and coaching to develop skills in self-monitoring and self-correction for word recognition and comprehension strategies.

Key Principles of Comprehensive Literacy Instruction		
Key Principle	**All Students Need:**	**Students Experiencing Reading Difficulty Need:**
Students need extensive practice in reading connected text.	To build reading stamina, reading accuracy, vocabulary, fluency and comprehension through: ● Opportunities to read connected text at their instructional level with teacher support. ● Opportunities to read connected text independently with comprehension.	● More time to engage in reading connected text to apply foundational skills and strategies in a meaningful context. ● Access to texts with controlled vocabulary and decodable phonics patterns during reading instruction to support practice in decoding and word recognition skills. ● Teacher guidance in selecting texts and monitoring engagement and comprehension during independent reading time.
Literacy learning is enhanced through social interaction and collaboration with peers.	Opportunities to exchange and respond to others' ideas to solidify and extend their knowledge and comprehension skills.	Conversations with peers and teachers to motivate and provide a supportive pathway to explore challenging grade level content.
Student motivation and interest in reading should be cultivated through rich literacy environments, activities, and materials.	● Classrooms filled with books and other media representing different genres and themes, of varying text complexities, organized, labeled and presented in attractive, accessible ways. ● Access to exemplary texts containing rich language and content through teacher read-alouds, book talks, peer discussions (e.g., literature circles) and independent reading activities.	● Assistive technology, such as text-to-speech and audiobooks, to access books on topics of interest and grade level texts. ● Accommodations, such as multimedia, audio, and read-aloud, to develop comprehension skills, vocabulary, background knowledge and knowledge of text structure as part of guided and independent practice opportunities.

5. Universal Screening & Early Dyslexia Identification

"The best solution to the problem of reading failure is to allocate resources for early identification and prevention."
—Joseph K. Torgesen, 1998

A multi-tiered system of supports such as the New Jersey Tiered System of Supports–Early Reading (NJTSS–ER) is designed to improve outcomes for all students through a data-driven, prevention based framework, and this approach, when implemented well, is especially helpful for teaching struggling readers and learners from all social groups (Prestwich, 2014). Research shows the rapid growth of the brain and its responsiveness to instruction in the primary years make the time from birth to age eight a critical period for literacy development (Nevills & Wolfe, 2009). It is therefore important to understand the basic principles of universal screening, the cognitive science of reading and literacy development, and specifically the potential indicators that serve as red flags for the common reading disability, dyslexia.

"Ninety percent of children with reading difficulties will achieve grade level in reading if they receive help by the first grade. Seventy five percent of children whose help is delayed to age nine or later continue to struggle throughout their school careers."

—Vellutino, Scanlon, Sipay, Small, Pratt, Chen & Denckla, 1996

Universal Screening for Reading

Following the NJTSS-ER best practice model, school districts implement universal reading screening of all students (K- 3) at various points in the beginning, middle, and end of the school year, regardless of the student's performance in the classroom. Universal screening results should identify those students potentially "at-risk" for future reading failure, including those with developmental reading disabilities, and can provide districts with information regarding the effectiveness of their core instructional program.

There is no one test or assessment tool that would measure all aspects of reading skill development. Different assessments measure different discrete skills. Districts should consider the use of multiple measures to ensure that all identified skills have been assessed at the appropriate grade level. Another consideration should be the use of both timed and untimed measures. When multiple measures are used to screen students and diagnose specific skill needs, the accuracy of classification for who is "at-risk" improves significantly.

Screening Measures by Grade Level

Kindergarten: Research indicates that kindergarten screening measures are most successful when they include assessment of the following areas: phonemic awareness including blending and phoneme segmentation, rapid automatic naming including letter naming fluency, sound-letter identification, and phonological memory including nonword repetition. (Catts, Nielsen, Bridges, Liu, & Bontempo, 2015 and Jenkins & Johnson, 2008).

First Grade: Research indicates that first grade screening measures are most successful when they include assessment of the following areas: phonemic awareness, specifically phoneme segmentation, rapid automatic naming including letter naming fluency, sound-letter identification, phonological memory including nonword repetition, oral vocabulary and word recognition fluency. (Compton, Fuchs, Fuchs, Bouton, Gilbert, Barquero, Cho & Crouch, 2010 and Jenkins & Johnson, 2008). The National Center on Response to Intervention's Screening Brief #3 also cites that oral reading fluency could be added in mid-first grade.

Second & Third Grade: The National Center on Response to Intervention's Screening Brief #3 states that starting in second grade, screening assessments should assess word reading, oral reading fluency, and reading comprehension. Word reading assessments should include both real and nonsense words.

Choosing Screening Tools

When establishing a process of universal screening for early reading, attention should focus on selection of evidence-based universal screening tools and fidelity of implementation. The rubric **Selecting A Universal Screener**, included in this handbook, can be used to guide decisions about appropriate screening tools by grade level. The *NJTSS-ER Universal Screening Quality Evaluation Worksheet* is also available for this purpose. School personnel should be appropriately trained in how to administer the universal screening tool before it is used with students.

Based on more than 30 years of research in curriculum-based measurement (CBM), universal screening tools are:

- ***Quick targeted assessments of discrete skills that indicate if students are making adequate progress in their reading achievement.***
- ***Administered 3-4 times a year, offering alternate formats.***
- ***Reliable and valid, following standardized directions and scoring protocols.***

School districts already implementing universal screening for early reading may wish to assess the evidence base of their current universal screening tools or assess the need for staff training. School districts not already implementing universal screening for early reading should evaluate potential screening tools based on several characteristics before making a selection. Districts should consider a tool's predictive validity and classification accuracy to ensure it is making useful and accurate predictions.

"Predictive validity is a measure of how well the prediction of future performance matches actual performance along the entire range of performance from highest to lowest, not just at or near the cut score. It answers the question, *If we used this screener to predict how every child will perform at some point in the future, how good would those predictions be?*

Classification accuracy is a measure of predicting into categories of risk. It answers the question, *If we used this screener to divide our students into those considered at-risk and those considered not to be at-risk, how well would we do based on the outcome of their future performance?*" (Dykstra, 2013).

Information on the reliability, validity, and classification accuracy of a screening tool can be found in the publisher's technical notes. The National Center on Intensive Intervention has an Academic Screening Tools Chart for reference.

Developmental Reading Disabilities

A process for universal screening for early reading provides the data needed to predict students' risk status for future reading difficulties and/or the early warning signs of developmental reading disabilities, such as dyslexia. Researchers currently propose that there are three kinds of developmental reading disabilities that often overlap but that can be separate and distinct (Moats & Tolman, 2009).

Figure 1 shows the subtypes of reading disability. Students with a primary phonological or fluency/naming speed deficit fit the profile for dyslexia.

Phonological Deficit: 70–80% of poor readers show difficulties with accurate and fluent word recognition originating from phonological processing weaknesses that often result in secondary consequences in poor fluency and reading comprehension.

Fluency/Naming Speed Deficit: 10–15% of poor readers show accurate word reading but have difficulties with slow word recognition and text reading. They have trouble with speed of word recognition and automatic recall of word spellings. They tend to spell phonetically but not accurately.

Reading researchers still debate the primary problem for this subgroup. Some indicate that it is a timing and processing speed problem, and others propose a specific deficit with the orthographic processor that affects storage and recall of exact letter sequences. This is also called a *processing speed* or *orthographic processing problem* (Moats & Tolman, 2009).

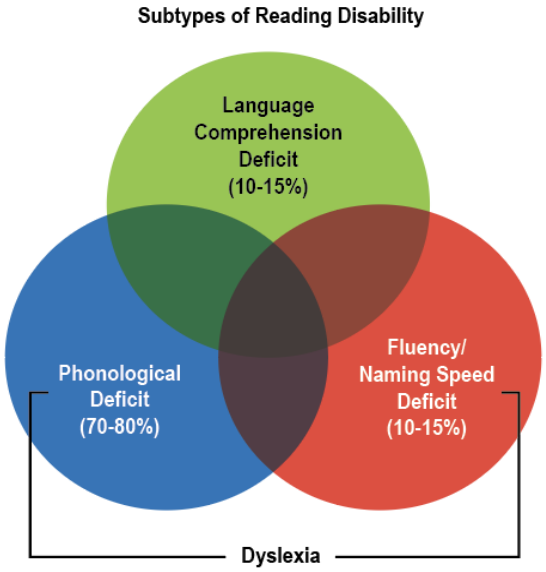


Figure 1 – Source: Adapted from Moats & Tolman, 2009

If a student with dyslexia has a specific weakness in either phonological or fluency/naming speed processing, they are said to have a single deficit. Students who have a combination of phonological and naming speed deficits are referred to as having a *double deficit* (Wolf & Bowers, 2000). Students with double deficit dyslexia are more common than single deficit and are also the most challenging to remediate.

Language Comprehension Deficit: 10–15% of poor readers present with social-linguistic disabilities (e.g., autism spectrum disorders), vocabulary weaknesses, generalized language learning disorders, and learning difficulties that affect abstract reasoning and logical thinking.

Although this deficit can occur along with the first two types of problems, these readers are distinguished from students with dyslexia because they can read words accurately and quickly and they can spell (Moats & Tolman, 2009). Their primary deficit is caused by disorders of social reasoning, abstract verbal reasoning, or language comprehension.

"Dyslexia is an alternative term used to refer to a pattern of learning difficulties characterized by problems with accurate or fluent word recognition, poor decoding, and poor spelling abilities."

—The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition

Screening for Dyslexia

The NJ dyslexia screening law states, "A board of education shall ensure that each student enrolled in the school district who has exhibited one or more potential indicators of dyslexia or other reading disabilities is screened for dyslexia and other reading disabilities using a screening instrument selected pursuant to section 2 of this act no later than the student's completion of the first semester of the second grade." A **Screening for Dyslexia Flowchart** is included in this handbook.

Diagnostic Assessment

It is important that school personnel are properly trained to understand the specific terminology used by the district's universal screening tool to identify students' reading proficiency risk status (e.g., some risk, at risk, below benchmark, well below benchmark, etc.). Students who are identified by the district's universal screening process as "at-risk" and not considered "likely on track" should be administered diagnostic assessments. A diagnostic assessment can assist in the development of a focused intervention plan. An effective diagnostic inventory will provide information about a student's level of ability or performance in the specific skill areas related to reading (e.g., phonemic awareness, word reading, oral reading fluency, spelling, comprehension), thus identifying the level where intervention and progress monitoring should begin. Diagnostic data is used to group students and promptly place them into structured literacy interventions with progress monitoring to screen for signs of dyslexia. Additionally, older students or students who scored adequately on universal screening measures but who demonstrate poor classroom performance or display other indicators for dyslexia should also be considered for differentiation, diagnostic assessment, intervention supports, and progress monitoring to screen for dyslexia.

All staff members, such as reading specialists, academic support/basic skills teachers, intervention specialists, speech-language pathologists, or classroom teachers, who are administering and analyzing student data from universal screening, diagnostic, and progress monitoring assessments, as well as any supplemental assessments used to collect more information about phonological or naming speed processing (e.g., Comprehensive Test of Phonological Processing, Rapid Automatized Naming/Rapid Alternating Stimulus Tests) should be appropriately trained in how to administer the respective assessment tool, how to monitor its age-appropriate literacy benchmarks, and how to interpret the student data collected to identify any characteristics or indicators of dyslexia. Additionally, a **Potential Indicators of Dyslexia Checklist**, included in this handbook, can be used by teachers to informally identify and document potential indicators of dyslexia.

Student Data Review: Kindergarten through Third Grade

Extensive research documents the role of phonemic awareness and the influence of rapid automatized naming (RAN) in the development of reading skills. These two skills have been identified as the best predictors of dyslexia (Moats & Dakin, 2008). Therefore, the universal reading screening data from these two areas must be integrated into any screening for dyslexia in kindergarten through third grade.

In kindergarten and first grade universal screening assessments should measure phonemic awareness skills through phoneme segmentation fluency and RAN through letter naming fluency. If data reveals a student is "below benchmark" on these measures, then diagnostic assessment data will provide information on the specific skill needs to target for intervention. A phonological and phonemic awareness diagnostic inventory will provide data on students' overall phonological awareness, including both phonological sensitivity such as their ability to identify and produce rhyming words, segment and blend syllables and onset/rimes, as well as phonemic awareness skills such as initial, final, and medial phoneme isolation, phoneme blending, phoneme segmentation, and phoneme manipulation. A measure of phonological memory, such as a non-word repetition task, can also provide important information about the child's phonological processing. RAN measure will provide data on students' rapid automatized naming ability beyond just letter naming, such as their fluency in naming objects, digits, or colors. This is important because an underlying RAN difficulty may also impact students' word recognition skill development.

Beyond phonemic awareness and RAN, assessment of kindergarten through third grade students' word recognition skills through word reading fluency, decoding skills through nonsense word fluency (correct letter-sound fluency and whole words recoded) and encoding skills (spelling) are critical to screen for dyslexia. If data reveals a student is "below benchmark" on universal screening measures, then a phonics diagnostic inventory/or a developmental spelling inventory can provide useful information. Data on students' oral reading accuracy and oral reading rate calculated in words correct per minute can also be compared to national norms created for oral reading fluency.

"The type of spelling errors made by the student should be analyzed and described. The analysis of a student's spelling errors indicates which phonics patterns and orthographic patterns the student does not know."

—Lowell, Felton, & Hook, 2014

A measure of vocabulary knowledge is often included to "estimate underlying oral language abilities that will be important for reading comprehension" (Lowell, Felton, & Hook, 2014). It can be a naming task of pictured objects and assessment of the student's expressive vocabulary skills. The results of oral vocabulary knowledge tasks should be compared to the student's written vocabulary. Often individuals with dyslexia will use an easier word in writing than when speaking due to the fear of spelling the word wrong. Professionals should also be aware of difficulties with word retrieval evidenced by some students with dyslexia. Word retrieval problems are defined as an inability to retrieve a word when the child knows the concept or meaning (German, 2002). Students might say "I know this word. It is on the tip of my tongue." yet struggle to produce the word.

Student Data Review: Beyond Third Grade

Typically starting at the end of third grade, school districts administer a reading assessment to all students at least once a year whether that is a statewide assessment or a particular district benchmark assessment. These assessments can be used to help identify students who may be struggling readers. Districts can review this data to identify students performing below expectations. These students should be screened for dyslexia as well. In addition, students who score adequately on these district reading assessments, but demonstrate poor classroom performance and/or display indicators for dyslexia, should be screened. It is particularly important that these students be recommended for screening because dyslexic students with high level cognitive ability may mask reading difficulty by using their strong reasoning ability. These students frequently will perform at the mean for their age and grade but actually be performing well below their potential.

As students enter third grade through adolescence, "the rate of reading, as well as facility with spelling, may be most useful, clinically, in differentiating average from poor readers." (Shaywitz, Fletcher, Holahan, Shneider, Marchione, Stuebing, Francis, Pugh & Shaywitz, 1999). Poor results are still indicators of an underlying deficit in phonological processing. Assessments that time how accurately and fluently a student can read real words, as well as nonsense words provide scores that can be compared to norms showing what is expected for students at different age or grade levels. Poor spelling is also an indicator of dyslexia. Additionally, students with dyslexia often demonstrate a higher level of listening comprehension as compared to reading comprehension.

Determining Response to Intervention

Based on the analysis of the universal screening and diagnostics data results (part of the dyslexia screening), student's specific areas of need should be confirmed and informed decisions about intervention grouping, evidence-based intervention strategies, and progress monitoring should follow. The results of students' progress monitoring will inform further intervention planning and/or indicate that the student may need further comprehensive assessment.

Progress Monitoring

Progress should be monitored frequently to determine the student's response to the chosen intervention and rate of improvement. According to the Institute of Education Sciences (IES) Practice Guide Assisting Students Struggling with Reading: Response to Intervention (RtI) and Multi-Tier Intervention in the Primary Grades, it is recommended that training is provided for teachers on how to collect and interpret student data on reading efficiently and reliably.

Progress can be monitored weekly but no less than once a month. Progressing monitoring probes can include skill-specific mastery measures that focus on a specific set of skills taught within a given curriculum or general outcome measures, such as those used for universal screening. Many intervention programs that have been commercially developed, contain weekly mastery tests that can be used to guide instruction.

Progress monitoring measures to use for kindergarten through second grade are suggested in ***Table 1***.

Progress Monitoring Measures

Grade	Measure
K	Letter Naming Fluency Phoneme Segmentation Fluency
Grade 1	Word Recognition Fluency (real word reading) Word Recognition Fluency/Decoding (nonsense word reading) Oral Reading Fluency (connected text)
Grade 2	Word Recognition Fluency (real word reading) Word Recognition Fluency/Decoding (nonsense word reading) Oral Reading Fluency (connected text)

Table 1 – Source: IES Practice Guide Assisting Students Struggling with Reading: Response to Intervention (RtI) and Multi-Tier Intervention in the Primary Grades, 2009

One of the main benefits of using these types of measures for progress monitoring is that the data can be displayed in graphs and charts. A standard graph used for progress monitoring is a line graph, see ***Figure 2***. The vertical axis usually indicates the number of correct student responses and the horizontal axis usually indicates the number of weeks the student will be monitored. This allows

professionals to record changes in student learning over time as a series of data points is collected.

To begin progress monitoring, the first set of data to be entered on the graph is the baseline data. If the district's universal screening tools assess the same skills needed for the individual student's progress monitoring, then this data can be used as a baseline data point. Second, a goal needs to be set to compare with the student's performance over time. Goals can be determined by using national or local norms. When they are available, national norms are good to use. Norms come in two forms: levels of performance and rates of improvement (ROI). Levels of performance norms are based on typical performance of same grade peers (e.g., a third grade student at the 50th percentile reads 107 wcpm by the end of the year). Rates of improvement norms have been determined as average weekly gain.

On a line graph, this is represented as a line drawn from the student's baseline data point to the goal data point establishing an aim line for student performance. As probes are administered to students weekly, the scores are plotted on the graph and connected to the previous point producing a student growth line.

Educators should be aware that although simple heuristics are sometimes proposed for interpreting a student's response to a given intervention, such as simply considering whether a certain number of data points are above or below the goal aim line, research actually supports comparing the median score from a student's three most recent progress monitoring data point scores to the projected aim line score for the most recent week for which data was collected. If the obtained median score is below the aim line projected for the most recent week this may indicate that the student would likely benefit from some type of intervention adjustment. This adjustment may be needed to address implementation fidelity (if it's determined that the intervention isn't being delivered as intended) or to address intervention plan changes that will better align instruction to the student's skill needs and/or increase the intensity and/or dosage of intervention to better support the student's growth rate.

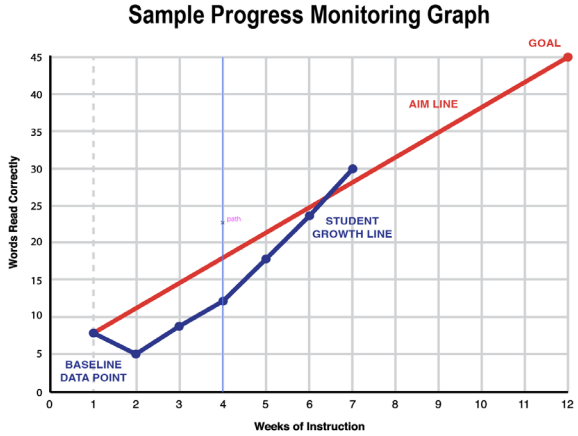


Figure 2

Further Comprehensive Evaluation

When the student's data review indicates characteristics of dyslexia, discussions regarding the need for further comprehensive evaluation by the Child Study Team (CST), or Section 504 eligibility determination are also warranted. Students may be referred to the school district CST or Section 504 Coordinator at any time for a formal, comprehensive evaluation for a specific learning disability, particularly if the student is not responding to the evidence-based intervention at an appropriate rate of improvement and may be in need of special education services or accommodations. Parents and guardians also have the right to request a formal CST evaluation at any time.

References and Resources:

National Center on Response to Intervention. (2014). *Screening Tools Chart*. American Institutes for Research.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. American Psychiatric Publishing.

Catts, H. W., Nielsen, D. C., Bridges, M. S., Liu, Y. S. & Bontempo, D. E. (2015). Early identification of reading disabilities within an RTI framework. *Journal of Learning Disabilities*, 48(3), 281–297.

Compton, D. L., Fuchs, D., Fuchs, L. S., Bouton, B., Gilbert, J. K., Barquero, L. A., Cho, E., & Crouch, R. C. (2010) Selecting at-risk first-grade readers for early intervention: Eliminating false positives and exploring the promise of a two-stage gated screening process. *Journal of Educational Psychology*. 102(2), 327–340.

Dykstra, S. P. (2013). *Selecting screening instruments: Focus on predictive validity, classification accuracy and norm reference scoring*. Literate Nation.

Francis, D. J., Shaywitz, S. E., Stuebing, K. K., Shaywitz, B. A., & Fletcher, J. M. (1996). Developmental lag versus deficit models of reading disability: A longitudinal, individual growth curves analysis. *Journal of Educational Psychology*, 88, 3–17.

German, D. (2002). A phonologically based strategy to improve word-finding abilities in children. *Communication Disorders Quarterly*, 23, 179–192.

Hall, S. & Moats, L. C. (1999). *Straight talk about reading: How parents can make a difference during the early years*. Contemporary Books.

Gersten, R., Compton, D., Connor, C. M., Dimino, J., Santoro, L., Linan-Thompson, S., & Tilly, W. D. (2008). *Assisting students struggling with reading: Response to Intervention and multi-tier intervention for reading in the primary grades. A practice guide.* (NCEE 2009-4045). Washington, DC: National Center for Edu-cation Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Hasbrouck, J. (2011). *Educators as physicians: Using RTI data for effective decision-making*. Gibson Hasbrouck & Associates.

Hosp, M., Hosp, J., & Howell, K. (2007). *The ABCs of CBM: A practical guide to curriculum-based measurement*. The Guilford Press.

Jenkins, J. R. & Johnson, E. S. (2008). *Universal screening for reading problems: Why and how should we do this?* RTI Action Network.

Lowell, S., Felton, R., & Hook, P. (2014). *Basic facts about assessment of dyslexia*. The International Dyslexia Association.

Moats, L. C. (2005). *Language essentials for teachers of reading and spelling: Assessment for prevention and early intervention (K-3) (Module 8)*. Sopris West Educational Services.

Moats, L.C. (2006). How spelling supports reading and why it is more regular and predictable than you may think. *American Educator*. Winter 2005/06, 12–22, 42–43.

Moats, L. C. (2005). *Language essentials for teachers of reading and spelling: The speech sounds of English: Phonetics, phonology and phoneme awareness (Module 2)*. Sopris West Educational Services.

Moats, L. C. & Dakin, K. (2008). *Basic facts about dyslexia & other reading problems*. The International Dyslexia Association.

Moats, L. C. & Tolman, C (2009). *Language essentials for teachers of reading and spelling: The challenge of learning to read (Module 1)*. Sopris West Educational Services.

National Center on Response to Intervention (2013). *Progress Monitoring Briefs*. Washington, DC: U.S. Department of Education, Office of Special Education Programs, National Center on Response to Intervention.

National Center on Response to Intervention (2013). *Screening Briefs Series*. Washington, DC: U.S. Department of Education, Office of Special Education Programs, National Center on Response to Intervention.

Nevills, P. & Wolfe, P. (2009). *Building the reading brain, PreK–3 (2nd ed.)*. Corwin Press.

Pretstwich, D. (2014). *Multi-tiered system of supports for teaching all children to read*. Literate Nation.

Shaywitz, S., Fletcher, J., Holahan, J., Shneider, A., Marchione, K., Stuebing, K., Francis, D., Pugh, K. & Shaywitz, B. (1999). Persistence of dyslexia: The Connecticut Longitudinal Study. *Adolescence Pediatrics*. 104, 1351-1359.

Torgesen, J. K. (1998). Catch them before they fall: Identification and assessment to prevent reading failure in young children. *American Educator*, Spring/Summer, 1–8.

Vellutino, F. R., Scanlon, D. M., Sipay, E. R., Small, S. G., Pratt, A., Chen, R., & Denckla, M. B. (1996). Cognitive profiles of difficult-to-remediate and readily remediated poor readers: Early intervention as a vehicle for distinguishing between cognitive and experiential deficits as basic causes of specific reading disability. *Journal of Educational Psychology*, 88, 601–638.

Wolf, M. & Bowers, P. (2000). Naming-speed processes and developmental reading disabilities: An introduction to the special issue on the double-deficit hypothesis. *Journal of Learning Disabilities*, 33, 322.

Websites:

- Institute of Education Sciences What Works Clearinghouse
- National Center on Improving Literacy
- National Center on Intensive Intervention at American Institutes for Research
- New Jersey Tiered System of Supports - Early Reading
- RTI Action Network

NJ Tiered System of Supports - Early Reading Resources:

Free NJTSS-ER online training courses and the tools mentioned in this chapter are available to support the planning and implementation of essential assessments and effective instruction within response to intervention or multi-tiered system of supports frameworks.

Topics related to essential assessments include:

- Assessment & Data-Based Decision Making
- Universal Screening
- Diagnostics
- Tier 2 and 3 Intervention and Progress Monitoring

Selecting A Universal Screener

This rubric is designed to help educators evaluate universal screening tools for use within the NJTSS ER Framework. No single tool is sufficient for all of the data based decisions that schools must make (e.g., universal screening, ongoing/benchmark assessment, diagnostic assessment, progress monitoring, accountability/program evaluation). Therefore, it is imperative for schools to consider the purpose of the universal screening tool and its evidence base.

Screening Tool Name: _____ **Publisher:** _____

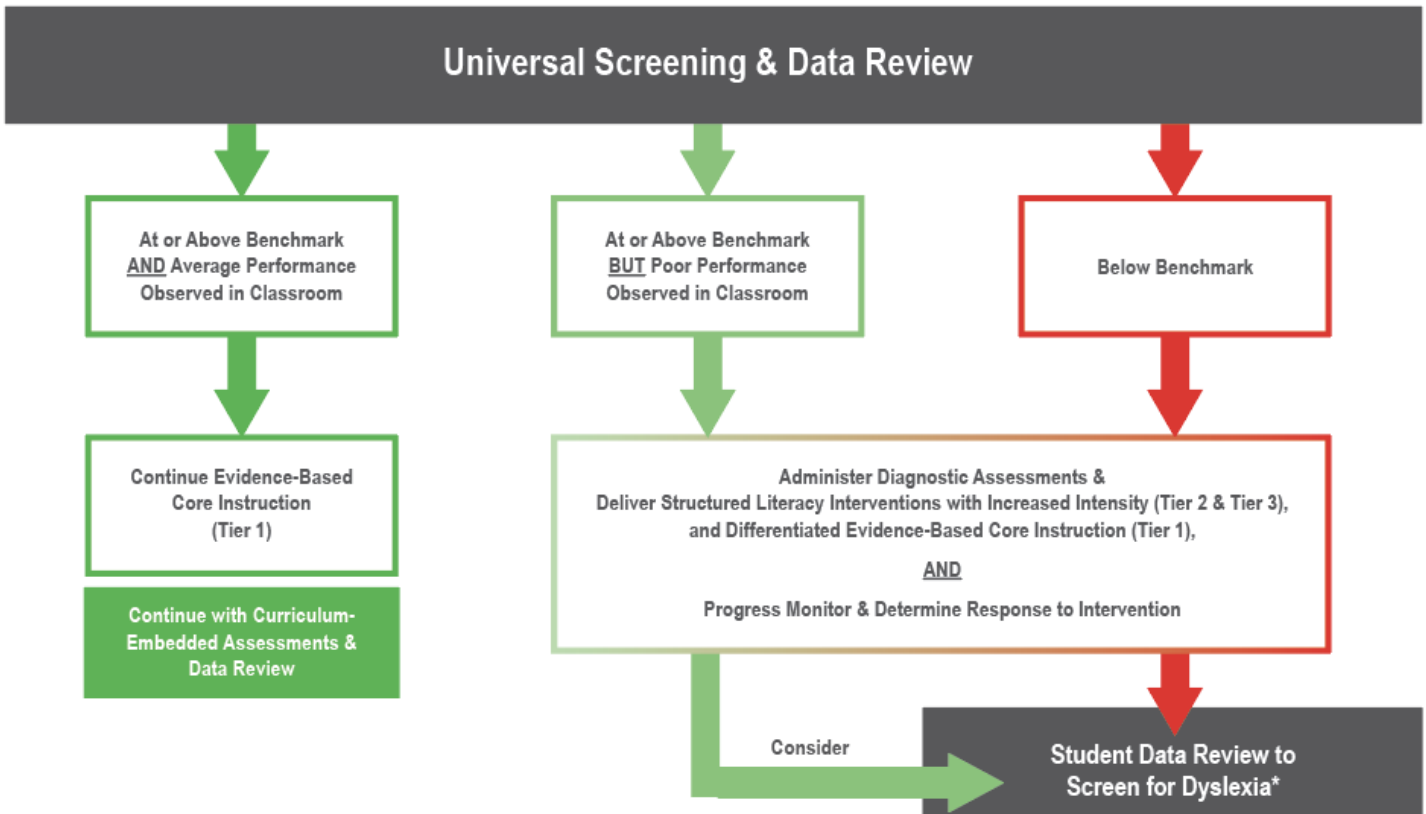
Directions: Evaluate the screening tool for evidence of each criterion below. If criteria are present, check "yes" and score as 1. Once evaluation is complete, note the total criteria present on the line below for comparison purposes.

Criterion	Evidence in Screening Tool	Criteria Present?
Screening Tool Qualities	Brief	Yes (1)
	Good predictive validity	Yes (1)
	Good classification accuracy	Yes (1)
	Easy to administer and score	Yes (1)
	Standardized scoring rules	Yes (1)
	Valid and reliable	Yes (1)
	Available in multiple, equivalent forms	Yes (1)
	Data management system allows for disaggregation by student, class, grade, and school	Yes (1)
	Training on how to administer is available online or in-person	Yes (1)

Criterion	Evidence in Screening Tool	Criteria Present at Predictive Grade Levels?			
		K	1	2	3
Phonemic Awareness	Initial Sound Fluency	Yes (1)			
	Phoneme Segmentation Fluency	Yes (1)	Yes (1)		
Rapid Automatized Naming	Letter Naming Fluency	Yes (1)	Yes (1)		
Phonics	Letter-Sound Fluency	Yes (1)	Yes (1)		
	Nonsense Word Fluency (Decoding in Isolation)		Yes (1)	Yes (1)	Yes (1)
	Word Recognition Fluency (Real Word Reading in Isolation)		Yes (1)	Yes (1)	Yes (1)
Fluency	Oral Reading Fluency		Yes (1)	Yes (1)	Yes (1)
Comprehension	Oral Vocabulary		Yes (1)	Yes (1)	Yes (1)
	Reading Comprehension (MAZE or Retell)			Yes (1)	Yes (1)
Phonological Memory	Nonword Repetition	Yes (1)	Yes (1)	Yes (1)	Yes (1)

Total Criteria Present _____

Screening for Dyslexia Flowchart



*Student Data Review to Screen for Dyslexia

Screen for Characteristics of Dyslexia in the Following Areas:

- ☐ Phonological/Phonemic Awareness
- ☐ Phonological Memory
- ☐ Rapid Automatic Naming
- ☐ Sound-Letter Identification
- ☐ Word Recognition Fluency (Real Word Reading)
- ☐ Word Recognition Fluency/Decoding (Nonsense Word Reading)
- ☐ Encoding (Spelling)
- ☐ Oral Reading Fluency (Accuracy & Rate)
- ☐ Oral Vocabulary vs Written Vocabulary
- ☐ Listening Comprehension vs Reading Comprehension

See the *Universal Screening & Early Dyslexia Identification* section of this handbook for more details.

A referral to the school district Child Study Team can be made at any point if a disability is suspected. If dyslexia is identified, a discussion regarding the impact of the reading disability on the student's learning and expected rate of improvement is warranted to determine if the student is eligible for special education supports & services under IDEA and/or Section 504 of the Rehabilitation Act of 1973, as amended.

Potential Indicators of Dyslexia Checklist

This checklist is designed to aid educators in identifying students with characteristics or potential indicators of dyslexia and to document any skill deficits confirmed during various assessments to inform intervention planning. Check all areas of consistent difficulty, based on observation, assessment history, progress monitoring data, and work samples. It is likely that many students will exhibit some of the behaviors on this checklist. A preponderance of checks related to one specific, foundational skill area or in skills identified at lower grade level bands suggests student data should be reviewed to screen for dyslexia. Adapted from *Basic Facts About Dyslexia & Other Reading Problems* by Louisa Cook Moats and Karen E. Dakin.

Student Name: _____ **Grade:** _____

Teacher Name: _____ **Date:** _____

Background Information & Data Review	
☐ Family history of dyslexia or reading/learning challenges	☐ Scored below benchmark on a universal screening measure
☐ Learned to talk later than expected	☐ Previously received or currently receives intervention supports
☐ Experiences difficulties in the classroom	☐ Progress monitoring data shows slow or poor rate of improvement

Pre-Kindergarten – Kindergarten	
☐ Is slow to learn and/or use new words in conversation	☐ Has difficulty identifying and/or producing words that rhyme
☐ Confuses the meanings of the words – *who, what, where, when*	☐ Has trouble recognizing the letters in own name
☐ Mixes up the sounds/syllables in spoken words (says *aminal* for *animal*)	☐ Has difficulty recalling names and/or sounds of letters
☐ Has difficulty articulating speech sounds	☐ Avoids or is confused by letters and word play activities
☐ Has trouble breaking words into separate speech sounds (such as *cat* = /c/ /ă/ /t/)	☐ Is disinterested in storytelling, read alouds, and/or books

Kindergarten – 1st Grade	
☐ Has trouble remembering sequences (days of the week, months, ABCs)	☐ Has trouble recognizing common, printed words automatically (family names, names on labels, signs, or objects, high frequency words in text)
☐ Has trouble recalling the names of letters quickly	☐ Has difficulty decoding words: reading errors show poor or no connection to the sounds of the letters (reads *slides* as *side* or *rabbit* as *bunny*)
☐ Has difficulty with phonemic awareness tasks, such as blending or segmenting the individual speech sounds in words	☐ Has difficulty encoding words: spelling errors show sound omissions, substitutions, additions, transpositions (spells *truck* as *chruk* or *no* and *on*)
☐ Has difficulty learning sound-letter correspondences	☐ Is disinterested in letter and/or print activities
☐ Has poor letter formation/handwriting	

1st Grade – 3rd Grade	
☐ Has difficulty using precise language (points or says *stuff* rather than identifying item names)	☐ Has difficulty keeping place while reading, often skipping over words/lines
☐ Has poor or no strategies for word attack; often guessing at words or relying heavily on context or pictures in a story to "read"	☐ Experiences reading comprehension difficulties arising from poor word recognition
☐ Has difficulty decoding words; often making single sound errors, omitting syllables, or skipping over prefixes and suffixes	☐ Demonstrates persistent difficulties with reversals and transpositions of letters, numbers, and words with similar visual appearance (such as *b* & *d*, *6* & *9*, *was* & *saw*)
☐ Has difficulty reading high frequency words even after instruction and practice (*when, went, they, their, been, to, does, said, what*)	☐ Has difficulty encoding words; often spelling phonetically without applying spelling rules or patterns or spelling the same word different ways on the same page
☐ Has difficulty with oral reading fluency; often reading is slow, choppy, inaccurate, and/or lacking appropriate expression)	☐ Is disinterested in reading/writing tasks
	☐ Demonstrates weaker written language skills as compared to oral language skills

4th Grade – 6th Grade	
☐ Has difficulty with oral reading fluency tasks; often reading rate is slow	☐ Avoids reading/writing tasks or reading for pleasure
☐ Has trouble reading real and nonsense word lists with accuracy	☐ Demonstrates weak reading and/or writing strategies
☐ Has trouble spelling	☐ Demonstrates weaker reading comprehension as compared to listening comprehension
☐ Has poor handwriting that impacts written output	

7th Grade – 12h Grade	
☐ Reads slowly and laboriously	☐ Has difficulty working at a pace to cope with grade-level classroom and homework expectations; often resulting in incomplete assignments
☐ Writes and/or spells poorly and with great effort	
☐ Lacks note-taking and/or study skills	☐ Demonstrates deficits in vocabulary and background knowledge due to problems in reading comprehension and reduced reading experience
☐ Has trouble with organization; often overwhelmed by multiple assignments	

Student Data Review to Screen for Dyslexia		
Age Appropriate Skills in:	**Area of Concern**	**Assessment Tool Used & Results**
Phonological/Phonemic Awareness		
Rapid Automatic Naming		
Phonological Memory		
Sound-Letter Identification		
Decoding/Word Recognition Fluency (Nonsense Word Reading)		
Word Recognition Fluency (Real Word Reading)		
Encoding (Spelling)		
Oral Reading Fluency		
Oral Vocabulary*		
Written Vocabulary		
Listening Comprehension**		
Reading Comprehension		

* Students with dyslexia may display stronger oral language skills than written language skills.

** Students with dyslexia may display stronger listening comprehension skills than reading comprehension skills.

6. Intervention: A Structured Literacy Framework for Struggling Readers

"Teaching reading IS rocket science!" —Louisa Moats, 1999

Both proponents of response to intervention models and proponents of cognitive neuropsychology agree that early intervention and the use of evidence-based intervention techniques are essential in efforts to assist struggling learners make progress in reading. As educators design intervention practices to meet the needs of struggling readers, especially those with or at risk for dyslexia, it will be important for key implications documented by researchers to be recognized and woven into the district or building level plans. This section on structured literacy interventions, can assist districts **in using evidence** when evaluating programs for teacher training and for implementation.

Theoretical Models of Reading

The National Reading Panel (2000) emphasized that phonemic awareness and phonics (decoding) should be included in all reading instruction that focuses on language comprehension such as vocabulary, fluency and reading and/or listening comprehension so that a comprehensive reading program is created. Gough and Tunmer, 1986 and Hoover and Gough, 1990 described reading as the product of word recognition (decoding) and language comprehension. They add that these components work together in a delicate, interdependent balance and that when there is a disconnection between these components, reading failure can occur. This model is referred to as the simple view of reading:

Decoding X Language Comprehension = Reading Comprehension

In alignment with the simple view of reading, Hollis Scarborough, a leading researcher in literacy, shares that reading is a multifaceted skill that is gradually acquired through years of instruction and practice. Scarborough's Reading Rope, ***Figure 1***, illustrates how the many skills required to comprehend texts are intertwined. Language comprehension skills become increasingly more strategic over time while word recognition skills become increasingly more automatic. These skills enable a student to fluently read connected text and to coordinate word recognition and text comprehension. The strands weave together over many years and enable a student to become a skilled reader.

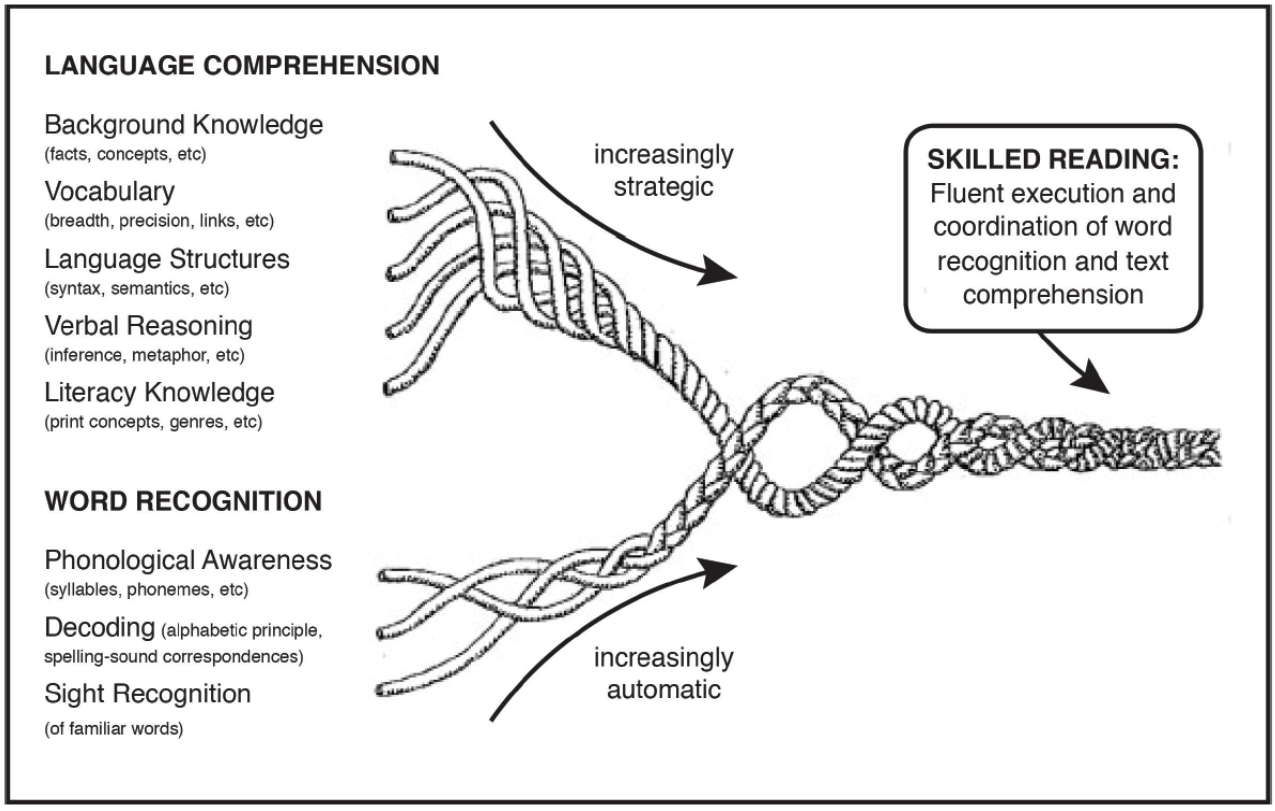


Figure 1 – Source: Scarborough, 2001

Philosophy of Structured Literacy

There has been widespread consensus in the dyslexia community since the 1990's, that providing intervention by a skilled teacher using direct, systematic and sequential instruction, focused on the structure of language will enable students with dyslexia to make the greatest progress in reading achievement. This type of intervention also often called multisensory structured language instruction, when provided with sufficient intensity by a teacher who has the appropriate level of competence in delivering instruction, monitoring progress and providing feedback to ensure consistent quality of instruction (Moats, 1994, 2004), will result in the highest level of achievement.

"Ninety percent of children with reading difficulties will achieve grade level in reading if they receive help by the first grade. Seventy five percent of children whose help is delayed to age nine or later continue to struggle throughout their school careers."

—Vellutino, Scanlon, Sipay, Small, Pratt, Chen & Denckla, 1996

The International Dyslexia Association's fact sheet titled *Effective Reading Instruction for Students with Dyslexia* explains that the most difficult problem for students with dyslexia is learning to read. Unfortunately, popularly employed reading approaches, such as guided reading or balanced literacy, are not in and of themselves, sufficient for struggling readers and not effective for dyslexic students. These approaches do not provide sufficient or appropriate instruction in decoding and the essentials of the structure of language. This fact sheet and position statement explains that "what does work is Structured Literacy, which prepares students to decode words in an explicit and systematic manner." IDA further shares that "this approach not only helps students with dyslexia, but there is substantial evidence that it is more effective for all readers."

For students with dyslexia, instruction in structured literacy plays an essential role to develop below grade level foundational reading skills of decoding, encoding and sight vocabulary. Structured literacy must be delivered in addition to grade level instruction for comprehension skills, vocabulary and content area knowledge. These important skills should be taught using accommodations, as needed, including differentiated materials and assistive technology to enable students to progress in these grade level standards while developing lower level foundational skills through structured literacy.

Definition of Structured Literacy

Structured literacy is a comprehensive approach to instruction that is explicit, systematic, cumulative, and multimodal. It is not a *program*. This type of intervention emphasizes the structure of language including the speech sound system (phonology), sound/symbol association, the writing system (orthography), the structure of sentences (syntax), the meaningful parts of word (morphology), the relationships among words (semantics), and the organization of spoken and written discourse. Multimodal instructional strategies involve the simultaneous use of visual, auditory, tactile-kinesthetic sensory systems and/or articulatory motor components while linking listening, speaking, reading, and writing skill development.

Components of Dyslexia Instruction - The What

Phonological awareness: Phonological awareness is a broad term referring to the understanding of the internal linguistic structure of words (onset and rime, syllables, phonemes). Phonological awareness can be broken down into phonological sensitivity (awareness of words, syllables, rhymes, onset and rime) and phoneme awareness (awareness of the individual phonemes in a word). A phoneme is the smallest unit of sound in a given language that can be recognized as being distinct from other sounds (Birsh, 2011). Examples of phonemes are: /ă/, /p/, /k/, /n/, /ch/, and /j/.

Many leading experts state that the importance of recognizing phonemic awareness as a foundation for decoding and encoding cannot be overemphasized. Students who exhibit difficulty developing phonemic awareness skills typically will have trouble acquiring the alphabetic principle and learning to decode words accurately. Updated research clarified that phonemic awareness must not be delayed until students master phonological sensitivity tasks as phonological sensitivity skills are not a prerequisite nor a causal factor in the development of phonemic awareness. Instruction in kindergarten should begin with phonemic awareness starting with isolating beginning phonemes, final phonemes and the medial phonemes in simple one-syllable words and then moving into complex one-syllable words with blends in first grade. Effective instruction integrates instruction in phoneme awareness, letter-grapheme knowledge, and handwriting. Blending and segmenting phonemic awareness tasks have been shown to have the biggest impact on students' reading and spelling skills. (IDA Fact Sheet Building Phoneme Awareness Know What Matters, 2022).

Sound-symbol association: Sound-symbol association, also commonly called phoneme-grapheme correspondence, is the ability to associate phonemes (sounds) with their graphemes (symbols - letter or letter combinations). When decoding, students must read/say the right sound when they see the letter with which it is associated. They must blend the sequential sounds and pronounce the whole word. When encoding, they must spell/write the correct letter when they hear the sound. They must segment the phonemes in words and write the associated graphemes to spell words. ***Table 1*** shows a few examples of sound-symbol associations for consonants in English.

Phoneme (Sound)	/ă/	/p/	/k/	/n/	/ch/	/j/
Grapheme (Symbol)	map	pot	cup kettle deck school oblique	net knight sign	cheer batch	judge wage gent, gym, gist

Table 1 – Source: Adapted from Moats, 1998

Experts state that there are 42-44 phonemes in the English language represented by graphemes consisting of letters or letter combinations from our 26 letter alphabet.

Syllable instruction: A syllable is a word or a part of a word with one vowel sound or pattern. ***Table 2*** shows the six basic syllable types in the English language with examples of each.

Syllable Type	Example
Closed	bat, will, trip, mash, bend
Vowel-consonant-e	rope, safe, lime
Open	he, go, my, flu
Consonant-le	middle, table
R-controlled	bird, star, her
Vowel digraph/diphthongs	beat, toad, sweet, saw, boil, snow

Table 2

Syllabication patterns govern how words are broken into parts (syllables). For example, one syllabication pattern is the vccv pattern which directs the reader to divide the word into syllables by "breaking" the word between consonants (e.g., pic/nic).

Orthography/Spelling: Orthography refers to the written spelling patterns and rules in a given language. For example, the sound /ch/ directly following a short vowel is spelled *-tch*. Students must be taught the regular and irregular orthographic patterns of a language in an explicit and systematic manner. ***Table 3*** illustrates the principles of English spelling. Orthography instruction should be integrated with phonology, sound-symbol knowledge, and morphology.

Principles of English Spelling
Words' language of origin and history of use can explain their spelling.
Words' meaning and part of speech can determine their spelling.
Speech sounds are spelled with single letters and/or combinations of up to four letters.
The spelling of a given sound can vary according to its position within a word.
The spellings of some sounds are governed by established conventions of letter sequences and patterns.

Table 3 – Source: Adapted from Moats, 2005

Morphology: Morphology is the set of rules that govern how morphemes, i.e., base words, prefixes, roots, and suffixes, can be combined to form words. Even the most obscure and complicated appearing words can be broken down into more manageable units and deciphered if the reader is aware of their derivation or roots (Shaywitz, 2006). A morpheme is the smallest unit of meaning in a language. Learning the frequently used morphemes in a systematic manner to automaticity not only helps students' spelling, but also provides strategies for decoding and for enhancing vocabulary (Henry, 2005). ***Table 4*** shows some examples of common morphemes.

Prefix	Base Element	Suffix
in-, im-	tract	-s, -es
mis-	port	-ment
pre-	struct	-ible, -able
sub-	rupt	-ness

Table 4

Grammar/Syntax: Syntax is the set of rules that govern the sequence and function of words in a sentence to convey meaning. Syntax tells us "what" goes "where" in a sentence. For example, in the English language, adjectives precede nouns. ***Table 5*** below lists other components of syntax:

Syntax, as a subset of grammar, considers:
Parts of speech
Rules for word order (i.e., active/passive)
Sentence length (use of phrases and clauses, cohesive devices)
Sentence types (declarative, interrogative, exclamatory, and imperative)
Sentence constructions (simple, compound, complex, compound/complex)

Table 5

Vocabulary: Vocabulary is defined as knowledge of words and word meanings in both oral and print language across receptive (understanding) and expressive (productive) forms (Lehr, Osborn & Hiebert, 2004). Vocabulary knowledge plays a significant role in comprehension. Explicit vocabulary instruction is particularly critical for struggling readers as they may not read extensively and have more difficulty using contextual cues to determine word meanings in text, and it remains a critical component of vocabulary acquisition even in the upper grades. ***Table 6*** shows some considerations for explicit instruction.

Explicit Vocabulary Instruction Should Consider:
Teaching words before encountering them in text as this will increase word comprehension by a factor of one-third (Jenkins, Matlock & Slocum, 1989)
Providing explicit, unambiguous and student-friendly definitions as well as contextual examples
Providing opportunities for use and practice in multiple settings
Providing illustrations and photographs about the word's use
Assessing a word's usefulness and frequency of use to determine the value of using instructional time to teach specific terms (Beck, McKeown & Kucan, 2002)

Table 6

Vocabulary instruction goes beyond the definition of individual words and should include developing a deep understanding of words and the relationships between words, such as shades of meaning (content, happy, glad, delightful, ecstatic), multiple meanings (bark - sound the dog makes, outer part of a tree), idiomatic expressions (horse of a different color) and word associations.

Text Structure: Text structure refers to the framework used to organize and convey information within a particular text. The ability to identify and analyze text structures helps readers comprehend the text more easily and retain it longer. Structured literacy approaches directly teach both narrative and expository text structures. Narrative texts typically have temporal and causal sequences and include the elements of "story grammar" (setting, characters, initiating event, internal response, plan attempts, climax, consequence/resolution). Expository text structures vary in key features depending on the purpose of the text (description, sequence, compare/contrast cause/effect and problem/solution). One text can include multiple structures. ***Table 7*** lists the types of expository text, functions and examples of signal words students should look for to identify the text structure. Graphic organizers specific to the text structure can help illustrate the major ideas and supporting details.

Expository Text Structure	Function	Signal Words
Description	To tell what something is	for example, such as, is like, including, to illustrate
Sequence	To list items or events or how to do or make something	first, next, then, before, later, previously, uses dates
Compare/ Contrast	To show likenesses and differences	however, still, similarly, although, in contrast, whereas
Cause/Effect	To explain or give reasons why something happens or exists	if/then, as a result, therefore, because, consequently, since, so, for this reason
Problem/ Solution	To state a problem and offer solutions	a solution is, if/then, because, so that, as a result, therefore, consequently, solve

Table 7 – Source: Adapted from Gillis & Eberhardt, 2020

Background Knowledge: Researchers have described different types of background knowledge that affect language comprehension, as well as reading comprehension. ***Table 8*** lists the types of background knowledge needed for inference making, critical thinking, and meaningful comprehension.

Types of Background Knowledge
General world knowledge/cultural knowledge
Specific topical knowledge (directly related to the text)
Prior knowledge and life experiences
Knowledge of text structure
Vocabulary knowledge

Table 8

Providing students with the background knowledge needed for listening or reading comprehension has been found to help all students, even those with low-average to below-average language skills, as well as multilingual learners (ML).

Reading Fluency: Fluency is the rapid, prosodic flow with which a skilled reader reads. Reading should sound as if a reader is speaking with appropriate speed, phrasing and intonation. Word level automaticity, which is the speed and accuracy with which words are identified; is the best predictor of comprehension (Hook & Jones, 2002). Poor reading fluency is known to hinder comprehension and overall reading achievement. The lack of fluency in poor readers is evidenced by their slow, halting, and inconsistent rate; poor phrasing; and inadequate intonation patterns (Hook & Jones, 2002). Some students who present a deficit with phonological processing will also present a deficit with rapid automatized naming and therefore will have trouble with acquiring fluent reading skills.

To develop word level automaticity, students must recognize larger word units (syllables, morphemes) automatically and ultimately read words as wholes rather than through the application of phonic word attack strategies (blending sound by sound). Interventions for developing word level automaticity include repeated practice with letters, words, and phrases. Repeated readings of short three word phrases are initially modeled by the teacher and then practiced by students. At the sentence level, application of appropriate phrasing should be addressed directly with students. The incorporation of a multisensory component of scooping under syntactic chunks may benefit some students as they read. Instruction should also include attention to the prosodic features in punctuation marks.

Example: Meg told Jim her kite was stuck in a tree.

At the connected text level, repeated reading involves the oral reading and rereading of the same passage of 50-200 words several times.

Teachers should also provide multiple examples and models of fluent oral reading so that background knowledge can be expanded and a framework for fluency can be established. Attention to prosody, the use of intonation, phrasing and rhythmic flow, will support readers' comprehension (Birsh, 2011).

Oral reading fluency (ORF) should be measured regularly. Measures of oral reading fluency need to be assessed individually so that a one-minute reading sample can be timed and evaluated for word reading rate and accuracy. Errors (inserted, skipped and/ or substituted words) need to be recorded so that the number of words read correctly per minute (wcpm) will be calculated by subtracting the number of errors from the total words read. The rate of accuracy can then also be calculated. ***Table 9*** shows national ORF norms at the 50th percentile.

Grade	Fall WCPM	Winter WCPM	Spring WCPM
1	–	29	60
2	50	84	100
3	83	97	112
4	94	120	133
5	121	133	146
6	132	145	146

Table 9 – Source: Hasbrouck and Tindal, 2017

Reading Comprehension: In addition to strategies for teaching vocabulary, text structure, and background knowledge cited in the previous section of this chapter, students with dyslexia and other reading disabilities need explicit instruction in research-based cognitive strategies to enhance comprehension of text. Too often, students will read a passage without understanding what they have read because they have not yet learned that reading is an active, thinking process. Through explicit instruction, students can learn strategies that help them address difficulties in focusing and maintaining attention, identifying and summarizing key information, as well as monitoring their understanding before, during and after reading.

Because dyslexia is a language based disability, difficulties with comprehension may arise for some students at the word, sentence and/or passage levels. Students may have difficulty understanding idioms, metaphors as well as figures of speech which could impact inference making. Students also may have difficulty understanding sentences due to unfamiliarity with sentence structure, difficulty determining appropriate referents (e.g., pronouns), as well as the number of meaning units within a sentence or passage. Multimodal language-based techniques can be used to enhance understanding, associations, and memory.

Delivery of Dyslexia Instruction - The How

While it is necessary that students are provided instruction in the content described above, it is also critical that this content is delivered in a manner that is consistent with research-based practices. Requirements for successful intervention are listed below:

- Must be evidence/data that the intervention is effective for students who have dyslexia;
- Must be implemented by a trained or certified instructor with a deep background in the structure of the language that underlies reading;
- Must be taught with fidelity;
- Must be sufficiently intensive (frequent sessions and extended time) to accomplish objectives; and
- Must include frequent assessment and progress monitoring.

Principles of effective intervention for students with dyslexia include all the following:

Explicit: Explicit instruction is a highly interactive "approach that involves direct instruction: The teacher demonstrates the task and provides guided practice with immediate corrective feedback before the student attempts the task independently" (Mather & Wendling, 2012). The teacher explains and demonstrates one language and/or print concept at a time, rather than leaving students to discover them through incidental encounters with information. A gradual release of responsibility model is used: I do (teacher models new skill or strategy), We do (teacher and students practice together), You do (students practice independently). For example, when introducing the sound-symbol association for the vowel team *ee*, the teacher begins by priming students' phoneme awareness for the target sound by asking "what sound do you hear in the middle of these words, *seed, feet, jeep*? Then, the teacher tells/shows students that the /ē/ sound in the word *jeep* is spelled *ee*. The teacher says "*ee, jeep*, /ē/" and students repeat. The teacher models how to blend sounds to read words with the *ee* pattern such as *week* and *street*. Then the teacher guides students to blend the sounds and read additional words together such as *deep, speech, reef,* and *queen*. For independent practice, the teacher gives students a list of words with the *ee* pattern to read on their own while monitoring and providing feedback.

Systematic and Cumulative: Systematic and cumulative instruction requires that the sequence of instruction begins with the easiest concepts (that the student does not know) and progresses to more difficult concepts. An example of a sequence for instruction is shown in the **Sample Scope and Sequence Chart** provided in this handbook. For example, single letter graphemes are taught before vowel teams, the concept of closed syllable is taught before the concept of vowel team syllables, etc. Lessons must cumulatively review all concepts that have been introduced in order to provide adequate practice to mastery and to bolster memory of the specific

sound-symbol association. Typically, a newly introduced sound-symbol association would be reviewed in follow up lessons in isolation, as well as in reading and spelling words with that pattern. Because instruction is cumulative, the content of lessons is controlled so that previously introduced concepts are systematically reviewed and advanced concepts unknown to the student are not introduced until prerequisite skills have been developed. It is important to consider the consistency of elements of instruction across grade levels and different teachers within a school, as the child progresses. Items such as scope and sequence of varying programs, different keywords for various sounds, and different markings for various syllable types, can be challenging for children who may have working memory, phonological processing, or orthographic mapping issues. Students who have these challenges may be the least likely to adapt to new programs, terminology, and techniques as they move from one grade/teacher to the next.

Multimodal: Using multimodal experiences, children learn language concepts by simultaneously engaging all learning pathways to the brain. In the example above, using explicit instruction to introduce the sound-symbol association for *ee*, instruction included the use of visual feedback (from seeing the letters that represent the sound), auditory feedback (from hearing the sound as it is said), kinesthetic feedback (from feeling the movements in the mouth as the sound is articulated) and tactile feedback (from the movements of muscles as the letters are traced and/or printed).

"Kinesthetic awareness involves sensitivity to muscle movement. Students' awareness of the position of the mouth, tongue, teeth, or lips and the activity of the vocal cords during the production of a sound assists the definitive learning of speech sounds. Students' awareness of how a letter feels when written in the air (sky writing) or on paper connects kinesthetic and visual information so that the letter shapes can be thoroughly learned."

—Birsh, 2011

Multisensory strategies often used in structured literacy lessons such as clapping syllables, skywriting words in the air, tracing letters in sand or shaving cream, or moving letter titles may increase student engagement in lessons (Stevens et al., 2021; Austin et al., 2023).

Diagnostic Teaching to Automaticity: Diagnostic teaching requires continually monitoring students' levels of mastery of individual concepts and adjusting accordingly. Structured literacy instruction typically begins with a placement test or an informal diagnostic assessment of skills and concepts to identify known and unknown concepts as a basis for instructional and/or intervention planning. Known concepts will be systematically included for review in future lessons. Unknown concepts will be introduced, usually one concept at a time, in order of difficulty. When a reading skill becomes automatic (direct access without conscious awareness), it is performed quickly in an efficient manner. (Berninger & Wolf, 2009). Teachers provide targeted prompt feedback that is specific and concise and monitor student performance throughout the lesson for errors, or even hesitation, to identify previously taught concepts that need more practice. Expert clinicians agree that when a structured literacy lesson is calibrated to the student's true level of mastery, 80% of student responses for spelling and 90% of student responses for reading or higher will be accurate. A hallmark of properly planned and implemented structured literacy lessons is students' consistent success.

The Components of Structured Literacy Intervention Checklist included in this handbook can be used to guide decisions about appropriate intervention programs. The *NJTSS-ER Tier 2 and 3 Intervention Analysis Tool* is also available for this purpose.

When Should Intervention Be Discontinued?

Students should have continuous access to evidence-based reading programs via tier 1 instruction as well as supplemental tier 2 or 3 intervention supports. As a student becomes proficient with reading and spelling tasks and begins to demonstrate the ability to perform satisfactorily in the classroom, educators can sometimes prematurely recommend discontinuation of tier 2 or 3 intervention. Students should not be removed from intervention until they have attained scores indicating expected grade-level benchmark performance and show evidence of maintaining a consistent rate of improvement that will enable them to continue to transfer concepts into classroom settings and meet grade-level benchmark expectations over time (i.e. no evidence of issues related to score regression following missed or reduced intervention support or difficulties recouping progress lost following school breaks).

"In general, when a child is just gaining momentum in reading is the time for an all out push and never the time for an abrupt halt to instruction."

—Shaywitz, 2006

Interventions with an individual student should continue with explicit individualized goals remaining a focus until results from reading assessments document mastery of previously taught phonological concepts for both reading and spelling. Teachers conducting the assessments should have a strong base of knowledge pertaining to the structure of the English language that underlies reading as well as an understanding of grade-level expectations for decoding words in isolation and context, spelling, and oral reading fluency.

The Important Role of the School Administrator

Taking knowledge to the level of organizing and implementing a model for effective assessment and instruction can be a very challenging task. School administrators accept a critical role in ensuring that schools are designed to meet the needs of students with dyslexia and other reading struggles by:

- Determining curriculum that allows for differentiated instruction and permits teachers to address the phonological/ orthographic deficits associated with dyslexia;
- Developing systems for analyzing assessment and progress monitoring data to ensure that instruction/intervention is effective and is appropriately sustained until deficits are overcome and students are fluent, automatic readers.
- Organizing professional development programs so that both new and seasoned educators receive information about evidence-based practices and research in the field of reading/dyslexia;
- Prioritizing the scheduling for intervention instruction so that well-trained teachers have uninterrupted instructional time with appropriate grouping of students, resources and opportunities to collaborate with colleagues who also teach their students; and
- Providing for ongoing coaching and mentoring in evidence-based practices.

The free *NJTSS-ER Team-Based Early Prevention* online training course, which includes discussion of the action plans, protocols, and tools available, can be used to support school administrators in the planning and implementation of a multi-tiered system of supports model focused on early reading skills development.

Knowledge and Practice Standards for Teachers of Reading

The *IDA Knowledge and Practice Standards for Teachers of Reading* define what all teachers of reading need to know and be able to do, in order to teach all students to read proficiently. Included in this handbook is a **Knowledge and Practice Standards Self-Study Checklist**. The intent of including this checklist is to provide a tool for professionals to use for self-study or in professional learning communities and other peer collaboration groups. Areas of strength can be identified to determine staff to serve as coaches, model classrooms, and mentors. Areas of need in content knowledge can be identified to create professional development opportunities for staff at differentiated levels.

References and Resources:

Austin, C., Stevens, L., Demchack, A. & Solari, E. (2023). Orton-Gillingham: Which Aspects are Supported by Research and Which Require Additional Research? *The Reading League Journal, 4 (3),* 5-15.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction. Solving problems in the teaching of literacy*. New York: Guilford Press.

Berninger, V. W. & Wolf, B. (2009). Teaching students with dyslexia and dysgraphia: Lessons from teaching and science. Baltimore, MD: Paul H. Brookes Publishing.

Birsh, J. R. (2011). *Multisensory teaching of basic language skills*, 3rd Edition. Baltimore, MD: Paul H. Brookes Publishing.

Building phoneme awareness: Know what matters. (2022). International Dyslexia Association.

Calhoon, M. B., Sandow, A., & Hunter, C. V. (2010). Reorganizing the instructional reading components: Could there be a better way to design remedial reading programs to maximize middle school students with reading disabilities' response to treatment. *Annals of Dyslexia*, 60, 57-85.

The Dyslexia Handbook: Procedures Concerning Dyslexia and Related Disorders, Revised (2014). Austin, Texas: Texas Education Agency.

Ehri, L. C., Nunes, S. R., Stahl, S. A., & Willows, D. M. (2001). Systematic phonics instruction helps students learn to read: Evidence from the national reading panel's meta-analysis. *Review of Educational Research*, 71(3) 393-447.

Elliott, J. G. & Grigorenko, E. L. (2014). *The dyslexia debate*. New York, NY: Cambridge University Press.

Frijters, J. C., Lovett, M. W., Sevcik, R. A., & Morris, R. D. (2013). Four methods of identifying change in the context of a multiple component reading intervention for struggling middle school readers. *Reading and Writing*, 26, 539–563.

Gillis, M.B. & Eberhardt, N. C. (2020). *Comprehension Knowledge to Practice*. Literacy How Professional Learning Series.

Gough, P. & Tunmer, W. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6–10.

Green, J. (1996). Effects of an individualized structured language program for middle and high school students. *Annals of Dyslexia*, 46.

Hasbrouck, J. & Tindal, G. (2017). *An update to compiled ORF norms* (Technical Report No. 1702). Eugene, OR. Behavioral Research and Teaching, University of Oregon.

Henry, M. K. (2010). *Unlocking literacy. Effective decoding and spelling instruction* 2nd Edition. Baltimore, MD: Paul H. Brookes Publishing.

Henry, M. K. (2005). A short history of the English language. In J. R. Birsh (ed.), *Multisensory teaching of basic language skills*, 3rd Edition. Baltimore, MD: Paul H. Brookes Publishing.

Hook, P. & Jones, S. (Winter, 2002). The Importance of Automaticity and Fluency for Efficient Reading Comprehension. *Perspectives on Language and Literacy,* 10-14.

Hoover, W. & Gough, P. (1990). The simple view of reading. *Reading and Writing: An Interdisciplinary Journa*l, 2, 127–160.

International Dyslexia Association. (2024). Structured literacy: Grounded in the science of reading. *Perspectives on Language and Literacy*.

Jenkins, J. R., Matlock, B. & Slocum, T. A. (1989). Two approaches to vocabulary instruction: The teaching of individual word meanings and practice in deriving word meaning from context. *Reading Research Quarterly*, 24, 215-235.

Lehr, F., Osborn, J., & Hiebert, E. H. (2004). *A focus on vocabulary*. Honolulu, HI: Pacific Resources for Education and Learning.

Lovett, M. W., Lacerenza, L., Borden, S. L., Frijters, J. C., Steinbach, K. A., & De Palma, M. (2000). Components of Effective Remediation for Developmental Reading Disabilities: Combining Phonological and Strategy-Based Instruction to Improve Outcomes. *Journal of Educational Psychology*, 92 (I.), 263-283.

Lovett, M. W., Borden, S. L., DeLuca, T., Lacerenza, L., Benson, N. J., & Brackstone, D. (1994). Treating the core deficits of developmental dyslexia: evidence of transfer of learning after phonologically- and strategy-based reading training programs. *Developmental Psychology*, 30 (6), 805-822.

Lowell, S. C., Felton R., & Hook, P. (2014). *Basic Facts about Assessment of Dyslexia: Testing for Teaching*. Baltimore, MD: International Dyslexia Association.

Mather, N. & Wendling, B. J. (2012). *Essentials of dyslexia assessment and intervention*. Hoboken, NJ: John Wiley & Sons.

McCardle, P. & Chhabra, V. (2004). *The voice of evidence in reading research*. Baltimore, MD: Paul H. Brookes Publishing.

Moats, L. C. & Kakin, K. E. (2008). *Basic facts about dyslexia and other reading problems*. Baltimore, MD: Paul H. Brookes Publishing.

Moats, L. C. (2004). Efficacy of a structured, systematic language curriculum for adolescent poor readers. *Reading and Writing Quarterly*, 20, 145-159.

Moats, L. C. (1994). The missing foundation in teacher education: Knowledge of the structure of spoken and written language. *Annals of Dyslexia*, 44, 81-101.

Moats, L. C. (Winter 2005/06). How spelling supports reading: And why it is more regular and predictable than you think. *American Educator*, 12-22, 42-43.

Moats, L. C. (1999). *Teaching reading is rocket science: What expert teachers of reading should know and be able to do*. Washington, DC: American Federation of Teachers.

Moats, L. C., Carreker, S., Davis, R., Meisel, P., Spear-Swerling, L., Wilson, B. (2010). Knowledge and Practice Standards for Teachers of Reading. International Dyslexia Association.

Moats, L.C. (1998). Teaching decoding. *American Educator*, 22 (1 & 2), 42-49, 95-96.

Morris, R. D., Lovett, M. W., Wolf, M., Sevcik, R. A., Steinbach, K. A., Frijters, J. C., & Shapiro, M. B. (2012). Multiple-component remediation for developmental reading disabilities: IQ, socioeconomic status, and race as factors in remedial outcome. *Journal of Learning Disabilities*, 45(2) 99–127.

National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: an evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.

Odom, S. L., Brantlinger, E., Gersten, R. Hoerner, R. H., Thompson, B., & Harris, K. R. (2005). Research in special education: Scientific Methods and Evidence- Based Practices. *Exceptional Children*, 21(2), 137-148.

Ritchey, K. D., & Goeke, J. L. (2006). Orton-Gillingham and Orton-Gillingham- Based Reading instruction: A review of the literature. *Journal of Special Education*, 40(3), 171-183.

Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory and practice. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (Vol. 1, pp. 97-110). New York: Guilford Press.

Shaywitz, S. E. (2006). *Overcoming Dyslexia: A New and Complete Science-based Program for Reading Problems at Any Level*. New York: A.A. Knopf.

Stevens, E. A., Austin, C., Moore, C., Scammacca, N., Boucher, A. N., & Vaughn, S. (2021). Current state of the evidence: Examining the effects of Orton-Gillingham reading interventions for students with or at risk for word-level reading disabilities. *Exceptional Children*, *87*(4), 397-417.

Vaughn, S. & Wanzek, J. (2014). Intensive Interventions in reading for students with reading disabilities: meaningful impacts. *Learning Disabilities Research and Practice*, 29(2), 46-53.

Wanzek, J., Wexler, J., Vaughn, S., & Ciullo, S. (2010). Reading interventions for struggling readers in the upper elementary grades: a synthesis of 20 years of research. *Reading and Writing*, 23(8): 889–912.

Wanzek, J., Vaughn, S., Scammacca, N. K., Metz, K., Murray, C. S., Roberts, G., & Danielson, L. (2013). Extensive reading interventions for students with reading difficulties after grade 3. *Review of Educational Research*, 83(2), 163-195.

Weisner, B. & Mathes, P. (2011). Using encoding instruction to improve the reading and spelling performances of elementary students at risk for literacy difficulties: A Best-Evidence synthesis. *Review of Educational Research*, 81(2), 170-200.

NJ Tiered System of Supports - Early Reading Resources:

Free NJTSS-ER online training courses and the tools mentioned in this chapter are available to support the planning and implementation of essential assessments and effective instruction within response to intervention or multi-tiered system of supports frameworks.

Topics related to effective instruction include:

- Research-Based Early Priority Reading Skills
- Tier 1 Instruction
- Tier 2 and 3 Intervention and Progress Monitoring

Sample Scope and Sequence Chart

Structured literacy instruction is systematic and cumulative. This sample scope and sequence illustrates what a progression of skills might typically look like in such programs. It is not, however, a comprehensive sample.

Level I

Group 1: *a* /ă/, *b, c, f, h, i* /ĭ/, *j, k, m, p, t*
Group 2: *g, o* /ŏ/, *r, l, n, th, u* /ŭ/, *ch, e* /ĕ/, *s, sh, d, w, wh, y* (consonant), *qu, v, x, z*
Glued Sounds: *all, ing, ong, ang, ung, ink, ank, onk, unk*
Suffixes: *-s* /s/ and /z/, *-ed* /d/, /ĕd/ and /t/
Bonus Letters: *ff, ll, ss, zz*
Concepts: digraph, blend, short and long vowel sound, trigraph
Vowel teams: *ai, ay, ee, ea, oi, oy, oo, ow, ie, ou, y* (vowel)
Syllable Types: closed (one and two syllables), open, and vowel-consonant-e

Level II

Closed syllable exceptions: *ind, ild, ost, olt, old*
r-Controlled sounds: *ar, or, ir, er, ur*
Suffixes: *-es, -er, -est, I-y, -y, -ful, -less, -ness, -en, -ment*
Prefixes: *un-, dis-, mis-, in-, non-, pre-, re-*
Concepts: diphthong, compound word, base word, present tense, past tense, singular, plural, contraction
Syllable Types: r-controlled, vowel team

Level III

Vowel Sounds: *ea* /ĕ/ and /ā/, *oe, c* (before *i, e, y), g* (before *i, e, y), igh, ew, au, aw, ue, ou, eu*
Suffixes: *-able, -ive, -ion*
Prefixes: *anti-, con-, de-, ex-, inter-, per-, pre-, pro-, semi-, sub-, super-*
Latin Base Elements: *cept, dict, duct, fort, ject, port, rupt, sist, spect, vert, flex, fic, fin, gen, mit, pos, plic, scrib, vis*
Syllable Types: consonant-le

Level IV

Vowel Sounds: *ei, eigh, ey, ar* (beggar), *or* (doctor), *wa* (want), *u* (push, pull), *ou* (country, cousin)
Silent Letters: *wr, kn, gn, mb, gh, stle, ps, pn, alk, ough, augh*
Additional Sounds: *ch* (Christmas), *ch* (Chicago), *ture, ti, si, ci*
Suffixes: *-ture, -ous, -al, -ic, -ure, -age, -an, -able, -ible, -ate, -ite, -ine, -ology*
Prefixes: *uni-, bi-, micro-, sy-, hyper-, hydro-, tele-, phone-, auto-*

Components of Structured Literacy Intervention Checklist

This rubric is designed to help educators evaluate intervention programs. It identifies the necessary components of structured literacy interventions and will help to identify areas that may need to be supplemented with additional evidence based instructional practices.

Intervention Name: **Date:**

Does the intervention program include all components and principles of structured literacy instruction?

Y	N	Phonemic Awareness
		Identifying Sounds in Words
		Segmenting Sounds in Words
		Blending Sounds in Words
		Manipulating Sounds in Words

Y	N	Sound-Symbol Association
		Connecting Sounds & Letters for Both Reading (visual) and Spelling (auditory) to Mastery
		Blending of Sounds & Letters into Words to Mastery
		Segmenting Whole Words into Individual Sounds to Mastery

Y	N	Syllable Instruction
		6 Basic Syllable Types: Identifying the Sound of the Vowel Within a Syllable
		Syllable Division Patterns: Enhancing Accuracy for Reading Unknown Words to Mastery

Y	N	Orthography
		Focusing on Spelling Patterns as well as Word Meanings, Parts of Speech and Word Origins
		Providing Explicit Instruction in Letter Formation

Y	N	Morphology
		Analyzing Roots, Base Elements, Prefixes, and Suffixes in Words

Y	N	Grammar/Syntax
		Focusing on Grammar & Sentence Variations
		Analyzing Mechanics of Language & Function of Word Order to Convey Meaning

Y	N	Vocabulary
		Teaching Words Explicitly in Multiple Settings
		Integrating Synonyms, Antonyms and Multiple Meanings into Discussions
		Providing Visual Representations for Concepts Identified During Discussions
		Discussing Idioms When Appropriate to Situations

Y	N	Fluency
		Integrating Accuracy, Rate and Prosody
		Using of Normative Data to Ensure Adequate Progress

Y	N	Reading Comprehension
		Establishing a Coherent Mental Model of the Text's Content to Derive Meaning
		Integrating Ideas Within Text and Between Texts
		Using Text Structure to Accomplish a Goal (i.e., explaining main idea or recalling details)
		Teaching Strategies Related to the Purposeful Use of Text Structure with Opportunities to Apply in New Situations
		Accessing Background Knowledge & Identifying Language in Text that May be Problematic (indirect meanings, figurative language, complex sentences, pronoun referents, new vocabulary)
		Using Graphic Organizers

Y	N	Delivery of Intensified Instruction
		Defines Training Standards and Fidelity of Implementation Measures
		Provides for Explicit Instruction in One Language Concept at a Time
		Sequences Systematic and Cumulative Instruction
		Provides Multimodal Instructional Practices
		Includes Assessments for Diagnostic Teaching (Pre/Post Tests, Mastery Checks)
		Establishes Guidelines for Student Grouping (Size, Homogenous Needs)

Notes

Knowledge and Practice Standards Self Study Checklist

Aligned to the IDA Knowledge and Practice Standards for Teachers of Reading, this checklist can assist teachers in assessing their current knowledge base about the science of reading in order to develop meaningful professional development plans.

Name: **Date:**

Rating Scale: This simple rating scale may help teachers evaluate the amount of knowledge they possess for each of the competencies and identify areas where they may benefit from professional development.

3 – I Know It Well Enough to Use It: I have sufficient understanding of and experience with this content knowledge and can apply it at a full professional level. I can generalize basic principles to effectively function in both predictable and new situations with my students.
2 – I Have Some Knowledge: I have a newly developing understanding of this content knowledge and am capable of applying it with coaching and support, in simple situations. I can identify basic principles but have limited or no applied experience using this with my students.
1 – I Have No Knowledge: I have no understanding of and/or experience with this content knowledge and will need to learn more.

Foundation Concepts of Literacy Acquisition

Rating	My Content Knowledge	My Ability to Apply This Content Knowledge in Practice
-	1. Understand the 5 language processing requirements of proficient reading and writing: phonological (speech sound) , orthographic (print), semantic (meaning), syntactic (sentence level), discourse (connected text level).	Explain the domains of language and their importance to proficient reading and writing.
-	2. Understand that learning to read, for most people, requires explicit instruction.	• Explain how most people learn to read, how reading acquisition differs from language acquisition, and how writing systems differ from oral language systems. • Know that the brain has to establish new neural circuits, linking language and visual regions, to become skilled at reading.
-	3.Understand the reciprocal relationship among phonemic awareness, decoding, word recognition, spelling and vocabulary knowledge.	Give practical examples showing how phonemic awareness affects attaining the alphabetic principle, decoding and spelling development, and storage and retrieval of spoken words, and that learning to read affects aspects of language processing. Including the extent of phonemic awareness and precision of phonological representations of words in our mental dictionaries.
-	4. Identify and explain aspects of cognition and behavior that affect reading and writing development.	• Give examples of tasks or tests that measure each general cognitive factor; explain how problems in these areas might be observed in classroom learning. • Identify how the following aspects of cognition and behavior affect reading and writing development: attention, automaticity, executive function, verbal memory, processing speed, graphomotor control.
-	5.Identify (and explain how) environmental, cultural, and social factors contribute to literacy development.	Explain major research findings regarding the contribution of environmental factors to the prediction of literacy outcomes (e.g., language spoken at home, language and literacy experiences, cultural values).
-	6. Explain major research findings regarding the contribution of linguistic and cognitive factors to the prediction of literacy outcomes.	Identify and explain major research findings regarding the contribution of linguistic and cognitive factors to the prediction of literacy outcomes.
-	7. Understand the most common intrinsic differences between good and poor readers (i.e., linguistic, cognitive, and neurobiological).	• Explain the defining characteristics of major types of reading difficulties (i.e., dyslexia, fluency deficits, specific reading comprehension difficulties, mixed reading difficulties). • Recognize the major types of reading difficulties when they manifest in a student's developmental history, test performance, and reading behavior.
-	8. Know phases in the typical development progression of oral language, phoneme awareness, decoding skills, printed word recognition, spelling, reading fluency, reading comprehension, and written expression.	Identify the most salient instructional needs of students who are at different points of reading and writing development.

Rating	My Content Knowledge	My Ability to Apply This Content Knowledge in Practice
-	9. Understand the changing relationships among the major components of literacy development in accounting for reading achievement.	Explain the importance of code-emphasis instruction in the early grades and language comprehension once word recognition skills are established; recognize that vocabulary and other aspects of oral language must be nurtured from the earliest grades through reading aloud and classroom dialogue.

Knowledge of Diverse Reading Profiles, Including Dyslexia

Rating	Content Knowledge	Application
-	1. Recognize the tenets of the (2003) IDA definition of dyslexia, or any accepted revision thereof.	Explain the reasoning or evidence behind key terms in the definition (e.g., neurobiological in origin, phonological component of language); distinguish evidence-based tenets from popular but unsupported beliefs and claims about dyslexia (e.g., dyslexia is a visual problem; people with dyslexia have unusual talents).
-	2. Know fundamental provisions of federal and state laws that pertain to learning disabilities, including dyslexia and other reading and language disability subtypes.	• Explain the most fundamental provisions of federal and state laws (IDEA, 504, etc.) pertaining to the rights of students with disabilities, especially students' rights to a free, appropriate public education, an individualized educational plan, services in the least restrictive environment, and due process. • Distinguish IEP goals and objectives that are clear, specific, appropriate to students' needs, and attainable.
-	3. Identify the distinguishing characteristics of dyslexia.	Cite research-based prevalence estimates for disorders of word recognition, reading fluency, reading comprehension, spelling, handwriting and written expression; cite research-based differences between good and poor readers, depending on the kind of reading disability, with regard to learning word-recognition and decoding skills as compared to listening and reading comprehension.
-	4. Understand how reading disabilities vary in presentation and degree.	• Recognize levels of instructional intensity, frequency, and duration appropriate for mild, moderate, and severe reading disabilities with the scope of instruction corresponding to the type of reading difficulties (e.g., dyslexia, specific reading comprehension) to attain catch-up growth and annual growth. Identify how to coordinate regular classroom instruction and other forms of intervention, including highly specialized settings. • Recognize the indicators of a primary disability in reading fluency, including slow processing speed, slow RAN, and nonautomatic word recognition (failure to read words by sight).
-	5. Understand how and why symptoms of reading difficulty are likely to change over time in response to development and instruction.	Recognize how the symptoms of dyslexia or other reading difficulties change as literacy develops and how instructional priorities and emphases should change accordingly.

Assessment

Rating	Content Knowledge	Application
-	1. Understand the differences among and purposes for screening, progress-monitoring, diagnostic, and outcome assessments.	State the major purposes for each kind of assessment and identify examples of each.
-	2. Understand the basic principles of test construction and formats (e.g., reliability, validity, criterion, normed).	Distinguish examples of valid and invalid assessment tools or strategies; demonstrate respect for and fidelity to standardized administration procedures.
-	3.Interpret basic statistics commonly utilized in formal and informal assessment.	• Interpret grade equivalents, age equivalents, normal curve equivalents, percentiles, risk classifications, fluency norms, and standard scores. • Recognize the most appropriate types of norm-referenced scores to report and use for interpretation of performance (e.g., percentiles and standard scores rather than grade or age equivalents); interpret grade versus age norms.

Rating	Content Knowledge	Application
-	4. Know and utilize in practice well-validated screening tests designed to identify students at risk for reading difficulties.	Learn standardized administration of one valid, reliable screening test, administer it to a student or a group of students, and interpret the instructional implications of the results/ A valid screening tool that flags students at risk for reading difficulties is likely to selectively, briefly, and efficiently sample subskills such as the following: Letter naming Phoneme isolation and identification, segmentation, blending, and/or manipulation Phonics correspondences (sound-symbol relationships) Spelling and phonetic accuracy of spelling attempts Word reading, real and/or nonsense words Oral reading fluency (timed reading of short passages) Reading comprehension
-	5. Understand/apply the principles of progress monitoring and reporting with CBMs, including graphing techniques.	• Administer, interpret, and graph or summarize the results of CBMs that directly assess student progress in reading, spelling, and writing and/or the relevant literacy subskills that are targeted for instruction. • Explain the advantages of CBM for progress monitoring (e.g., ease and speed of administration, sensitivity to incremental progress, availability of multiple equivalent forms).
-	6. Know and utilize in practice informal diagnostic surveys of phonological and phonemic awareness, decoding skills, oral reading fluency, comprehension, spelling, and writing.	Administer and interpret informal (e.g., not norm-referenced) diagnostic surveys and inventories for the purpose of pinpointing a student's strengths, weaknesses, and instructional needs in the following areas: Phonological sensitivity (in preschool) and phonemic awareness (in kindergarten and later) Accuracy and fluency of letter naming, letter formation, alphabet knowledge Phonics and application of introductory and advanced phonics to spelling and word reading Oral passage reading fluency and comprehension Silent passage reading comprehension and recall Listening comprehension and recall Morpheme recognition, interpretation, and spelling Automatic recognition of high-frequency words Writing performance (punctuation, capitals, syntax, organization, content, spelling, vocabulary)
-	7. Know how to read and interpret the most common diagnostic tests used by psychologists, speech-language professionals, and educational evaluators.	Understand and use relevant information from formal assessments administered by licensed examiners, including current versions of these instruments, such as the following: Clinical Evaluation of Language Fundamentals (CELF) Comprehensive Test of Phonological Processing (C-TOPP) Peabody Picture Vocabulary Test (PPVT) Rapid Automatic Naming Test (RAN) Test of Word Reading Efficiency (TOWRE) Woodcock-Johnson Tests of Cognitive Ability and Achievement (WJR)
-	8. Integrate, summarize, and communicate (orally and in writing) the meaning of educational assessment data for sharing with students, parents and other teachers.	Explicitly link information from screening, diagnostic surveys, progress monitoring and descriptive data to instructional decisions governing the content, entry point, pace, intensity, student grouping, and methods for literacy intervention.

Structured Literacy Instruction
A. Essential Principles and Practices of Structured Literacy Instruction

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1.Understand/apply in practice the general principles and practices of structured language and literacy teaching, including explicit, systematic, cumulative, teacher-directed instruction.	• Identify the principles and lesson elements of explicit and teacher-directed lessons for classroom instruction: explain, model, lead, provide guided practice, assess, review. • Cite the major consensus findings on reading instruction from the National Reading Panel, the National Early Literacy Panel, relevant IES Practice Guides, and other current consensus reports regarding the science of reading. • Identify the principles and lesson elements of explicit and teacher-directed lessons for individual or small-group instruction: explain, model, lead, provide guided practice, assess, review. • Identify the characteristics of systematic teaching that gradually and cumulatively build students' skills from easier to more difficult. • Explain the limits of whole-class instruction, and cite research indicating the merits of small-group instruction for homogeneously grouped students	• Plan and deliver lessons with a cumulative progression of skills that build on one another. • Provide sufficient practice with connected text. During the early grades, use decodable text aligned with phonics patterns that the student has been taught, and progress to less-controlled text as the student internalizes. • Differentiate instruction based on students' progress in each language and literacy domain. Group accordingly for lessons in each area of language and literacy (e.g., phonemic awareness, decoding, fluency, vocabulary, language comprehension and expression, written language). • Recognize and avoid intervention practices and program characteristics that contrast with or are not aligned with structured literacy practices
-	2.Understand/apply in practice the rationale for multisensory and multimodal language-learning techniques	• State the rationale for multisensory and multimodal techniques, with reference to brain science, cognitive science, and long-standing clinical practice using these methods. • Given a single-modality task, adapt it so that it becomes multisensory	Structure learning activities and tasks so they require the simultaneous use of two or three learning modalities (including listening, speaking, moving, touching, reading, and/or writing) to increase engagement and enhance memory.
-	3. Understand rationale for/adapt instruction to accommodate individual differences in cognitive, linguistic, sociocultural, and behavioral aspects of learning	• Identify logical adaptations of instruction for students with weaknesses in language, working memory, attention, executive function, or processing speed. • Respond adaptively and constructively to cultural norms and family/community literacy practices affecting student learning	Adapt task content, task presentation (amount/complexity of information, mode of presentation) and task requirements (accuracy, speed, length, manner of response) to ensure optimal rate of student success

Structured Literacy Instruction
A. Phonological and Phonemic Awareness

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1. Understand rationale for/identify, pronounce, classify, and compare all the consonant phonemes and all the vowel phonemes of English.	• Discuss why phonemic awareness is necessary for learners of alphabetic writing systems. • Explain the difference between phonological awareness, phonemic awareness, and phonics. • Identify phonemes that are more likely to be confused with each other because they share articulatory features and thus sound similar. • Identify phonemes in words in which the spelling does not transparently represent the phoneme (e.g., dogs, sure, ink).	• Explicitly teach articulatory features of phonemes and words during PA lessons by such techniques as modeling, using a mirror, describing the speech sound, or using a hand gesture or mouth picture to illustrate the way the speech sound is produced. • Deliberately choose wide (e.g., /m/, /z/) or narrow (e.g., /m/, /n/) phoneme contrasts during instruction, depending on the students' phase of phonemic-awareness development. • For students who may be relying on spelling or letter knowledge to perform a phonemic-awareness task, reinforce attention to sound by using words in phonemic awareness tasks whose spellings do not transparently represent the phonemes.
-	2. Understand/apply in practice considerations for levels of phonological sensitivity.	• Explain the general developmental progression of phonological sensitivity and provide examples of each. • Identify, count, and separately pronounce the syllables in multisyllabic words. • Blend and segment onset-rime units in one-syllable words. • Recognize and generate rhymes of words with one or more syllables (e.g., my/pie; mountain/fountain). • Identify the number of phonemes in a spoken word. • Isolate a given phoneme in a spoken word.	• Explicitly and accurately label the linguistic unit of focus in any phonological-sensitivity lesson (syllable, onset-rime, rhyming word). • Choose wide contrasts for beginning rhyme tasks (e.g., fan/seat vs. fan/pin). • Know activities that would help children acquire these early, basic phonological-sensitivity skills (e.g., rhyme recognition and rhyme production, syllable counting, first sound matching, first sound segmentation) in words with a simple onset that has only one phoneme, blending onset and rime.

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	3. Understand/apply in practice considerations for phoneme awareness difficulties.	• Identify reasons why students may experience difficulty with phonemic-awareness tasks (e.g., coarticulation effect). • Identify common allophonic variations (changes of speech sounds in natural speech), often resulting from coarticulation, that alter how certain phonemes are produced and sound.	• When introducing a phoneme, select word examples that minimize coarticulation effects. • Select key words to illustrate each phoneme that feature non distorted phonemes (no coarticulation effect). • For phonemic-awareness instruction, clearly focus on the speech sound, not the letter name for spelling a phoneme.
-	4. Know/apply in practice consideration for the progression of phonemic-awareness skill development, across age and grade.	• Identify the common progression of phonological and phonemic-awareness skills as related to student grade levels. • Plan to link phoneme knowledge with letter (grapheme) knowledge as the student progresses.	• Plan and deliver a scope and sequence of systematic phonological and phonemic-awareness instruction. • Select and implement PA activities that correspond with a student's level of PA development, proceeding to the next level when mastery is attained on the prior phase. • Know a variety of activities for each level of phonological and phonemic awareness.
-	5. Know/apply in practice considerations for the general and specific goals of phonemic awareness instruction.	Align PA instruction to reading and spelling goals, for example, making identification of a short vowel in spoken one-syllable words a prerequisite for learning the letter that represents that short vowel in print.	Routinely incorporate phonemic-awareness instruction into reading, spelling, and vocabulary instruction.
-	6. Know/apply in practice considerations for the principles of phonemic-awareness instruction: brief, multisensory, conceptual, articulatory, auditory-verbal.	Plan to provide brief (5–10 minute), distributed, multisensory phonemic-awareness activities during structured literacy classroom teaching and/or intervention for 15–20 weeks (or more, as needed, to reach curricular goals) in K–1 and for students who need remedial instruction after first grade	Use tactile and kinesthetic aids, such as blocks, chips, sound boxes, body mapping, finger tapping, and left-to-right hand motions in learning a variety of early, basic, and more advanced PA activities as appropriate.
-	7. Know/apply in practice considerations for the utility of print and online resources for obtaining information about languages other than English.	Compare a student's first language phonological system with Standard American English to anticipate which speech sounds in English are not in the student's native language or dialect and are likely to be challenging for the learner to distinguish and produce.	• Explicitly teach the phonemes of English that the EL or nonstandard dialect user may not have in his or her first language. • Provide practice distinguishing the new phoneme from similarly articulated phonemes (e.g., for children who speak Spanish, classifying spoken words in English as starting with /sh/ or with /ch/

Structured Literacy Instruction
C: Phonics and Word Recognition

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1.Know/apply in practice considerations for the structure of English orthography and the patterns and rules that inform the teaching of single- and multisyllable regular word reading.	• Define key terms (e.g., grapheme, phoneme, syllable, suffix), and identify examples of each. • Map regular words by phoneme-grapheme (or grapheme-phoneme) correspondences. • Sort single-syllable regular words according to written syllable type (closed, open, vowel-consonant-e, vowel team, r-controlled, consonant-le). • Divide two-syllable words using the most useful syllable division principles (VC/CV; V/CV; VC/V; VC/CCV; VCC/CV/ consonant-le). • Identify morphemes in common words, including prefixes, inflectional and derivational suffixes, roots, and combining forms. • Explain why the English writing system is, in fact, highly regular and that words that are not fully regular usually differ in one phoneme/grapheme correspondence and preserve morphological information.	• Choose accurate examples for linguistic and orthographic concepts. • Use appropriate and accurate terminology during structured literacy teaching. • Correct student errors in word reading and spelling by providing insight into the language and/or orthographic structures in those words. • Communicate to students that nearly all words can be read using knowledge of speech-to-print relationships and that those with an irregularity usually just differ in one grapheme
-	2. Know/apply in practice considerations for systematically, cumulatively, and explicitly teaching basic decoding and spelling skills.	• Identify where any given skill fits into a scope and sequence. • Order decoding concepts from easier to more difficult.	• Teach the system of correspondences in a logical progression (simple to complex). • Use student assessment data to guide the development of a scope and sequence/where to begin instruction. • Use assessment data to develop measurable, observable instructional goals and objectives. (Interventionists and specialists should develop these in line with IEP/504 expectations.)

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	3. Know/apply in practice considerations for organizing word recognition and spelling lessons by following a structured phonics lesson plan.	• Use a lesson framework that includes review of a previously learned skill or concept, introduction of a new skill or concept, supported practice, independent practice, and fluent application to meaningful reading and/or writing. • Describe or demonstrate each of the following word work activities and their purpose in relation to the lesson plan: word sorting, quick speed drills, sound (Elkonin) boxes with letters and graphemes, word building, word chaining, writing to dictation.	• Effectively teach all steps in an explicit phonics lesson. (For example, develop phonemic awareness, introduce sound/spelling correspondence, blend and read words, practice word chaining, build automatic word recognition, spell and write selected lesson words, and apply to decodable text reading.
-	4 Know/apply in practice considerations for using multisensory routines to enhance student engagement and memory.	Plan to incorporate multisensory learning (e.g., simultaneously employing two or three modalities, including looking, listening, speaking, touching, moving).	• Demonstrate fluent execution of at least two teacher-led sound-blending techniques cued by the hand or moveable objects (chips, tiles, etc.). • Fluently manage and manipulate tangible instructional materials, such as alphabet arcs, sound-symbol cards, and grapheme tiles. Employ signals, such as hand gestures, to cue student responses during phonemic-awareness and reading activities.
-	5. Know/apply in practice considerations for adapting instruction for students with weaknesses in working memory, attention, executive function, or processing speed.	Identify how instruction can be modified to increase attention, support memory, build fluency, or support strategy use by students	Adapt the pace, format, content, strategy, or emphasis of instruction to increase student success
-	6. Know/apply in practice considerations for teaching irregular words in small increments using special techniques.	• Distinguish among high-frequency regular/ irregular words. • Define sight words in relation to regular/ irregular words. • Place words on a continuum of fully predictable, partially or conditionally pattern-based, and unique (not belonging to a word family). • Identify which part of a given word would be unknown to a student on the basis of previous instruction. • Identify/describe the three factors to consider when determining how to introduce irregular words within a reading program (word frequency, word similarity, word meaning).	• Introduce high-frequency words (both regular and irregular) a few words at a time in tandem with teaching decoding and spelling patterns to support reading of connected text. • Provide frequent, distributed practice of high-frequency words until recognized and/or spelled accurately and automatically. • Teach truly irregular words through a multisensory approach, emphasizing spelling regularities, word origin, meaning, and/or pronunciation whenever possible to make sense of the word's spelling.
-	7. Know/apply in practice considerations for systematically teaching the decoding of multisyllabic words.	• Teach written syllable types in a logical sequence (e.g., closed, open, vowel-consonant-e, vowel team, consonant-le, r-controlled). • Identify the difference between syllable division in natural speech and syllable division in printed words. • Clearly distinguish morphemes from syllables while identifying word parts.	• Explicitly teach written syllable types and written syllable division principles to support the reading of multisyllable words. • Explicitly teach students how to isolate roots and affixes to support multisyllable word reading. • Teach the meaning of common affixes and roots. • Teach additional strategies for decoding longer words, such as identifying the pronounced vowels, suffixes, and prefixes, and flexing the decoded vowels (i.e., define, definition, definitive) if necessary.
-	8. Know/apply in practice considerations for the different types and purposes of texts, with emphasis on the role of decodable texts in teaching beginning readers.	• Describe how decodable texts differ from predictable and high-frequency word texts in structure and purpose. • Identify and define word types: wholly decodable words, irregular words (previously taught), and nondecodable words (not wholly decodable or previously taught). • Analyze a decodable text to identify word types (wholly decodable, introduced high-frequency words, nondecodable words), and list words identified by type; calculate percentage of each type of word present in the text.	• Effectively develop or select, and utilize, decodable texts to support developing readers in applying taught phonics concepts in context. • Select instructional-level texts for student reading that correspond to the content and purpose of students' reading skill lessons. • Discern texts that do not support decoding lessons because they contain too many untaught word patterns and high frequency words.

Structured Literacy Instruction
D: Automatic, Fluent Reading of Text

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1. Know/apply in practice considerations for the role of fluent word-level skills in automatic word reading, oral reading fluency, reading comprehension, and motivation to read.	• Explain why all component skills for reading development must become accurate and rapid to support more advanced reading skills (e.g., knowledge of letter names/sounds, phonemic awareness, decoding). • Explain how phoneme-grapheme mapping underpins the development of accurate, automatic word recognition. • Explain the interdependence of phonic decoding, word recognition, oral reading fluency, vocabulary, and silent reading comprehension.	• Select and use fluency-building routines and activities for both automatic application of literacy subskills and for text reading, as appropriate. • Identify relevant apps or computer games for building automaticity in word recognition. • Choose instructional materials to build automaticity in subskills/practice reading texts of appropriate difficulty.
-	2. Know/apply in practice considerations for varied techniques and methods for building reading fluency.	• Describe the role of and appropriate use of independent silent reading, assisted reading, repeated reading, and integrated fluency instruction to promote fluent reading of text. • Describe and role-play fluency-building techniques, including brief speed drills, phrase-cued reading, simultaneous oral reading, alternate oral reading, and repeated readings. • Identify and describe ways that repeated oral reading can be adapted to meet students' individual needs.	• Define and identify examples of text at a student's frustration, instructional, and independent reading levels; recognize how requirements for word accuracy in instructional and independent reading increase by grade. • Provide ample opportunities for student(s) to read connected text daily, with appropriate feedback on decoding errors. • Guide the student to correct his or her reading errors, even when contextually appropriate. • Incorporate fluency-building routines and activities into reading lessons, including brief speed drills, phrase-cued reading, simultaneous oral reading, alternate oral reading, and/or repeated readings. • Adapt the length of tasks, time limits, and scaffolds to enable student success and progress.
-	3. Know/apply in practice considerations for text reading fluency as an achievement of normal reading development that can be advanced through informed instruction and progress-monitoring practices.	• Identify reading subskills that may be appropriate for brief speed drills (e.g., letter naming, word reading, symbol-sound recall). • Identify and define the components of passage reading fluency (accuracy, rate, prosody). • Interpret CBMs, including oral-reading fluency norms, to develop fluency-building goals with students.	• Select, administer, and graph appropriate curriculum based measures of relevant reading subskills. • Effectively administer, score, and interpret an oral reading fluency curriculum-based measure (CBM). • Rate the prosodic quality of a student's oral reading. • Develop fluency goals and objectives with students and involve students in graphing progress toward those goals.
-	4. Know/apply in practice considerations for the role of fluent word-level skills in automatic word reading, oral reading fluency, reading comprehension, and motivation to read.	Locate and access assistive technology for students with serious limitations in reading fluency.	Support students in learning to use assistive technology, such as print-to-speech translators, apps, e-books, and audiobooks.

Structured Literacy Instruction
E. Vocabulary

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1 Know/apply in practice considerations for the role of vocabulary development and vocabulary knowledge in oral and written language comprehension.	• Identify and summarize the evidence that knowledge of word meanings is a major factor in language comprehension and expression. • Summarize the findings of the National Reading Panel, the National Early Literacy Panel, and current IES Practice Guides with regard to vocabulary instruction. • Identify and discuss the classroom indicators of students' vocabulary strengths and weaknesses, such as limited range of word use, confusion about multiple meanings of words, lack of understanding of idioms, slow word retrieval, and poor-quality definitions.	• Habitually include vocabulary-building activities and routines during all instruction. • Recognize when a particular vocabulary-building activity (e.g., morphemic analysis, contextual analysis) is more or less appropriate depending on the word being taught.

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	2. Know/apply in practice considerations for the sources of wide differences in students' vocabularies.	• Identify the intrinsic and extrinsic (environmental) factors that are causally related to vocabulary growth, including adult-child interaction patterns; school, socioeconomic, and community contexts; first language other than English; and neurodevelopmental differences in language processing. • Discuss the vocabulary gap in root word knowledge and the implications for vocabulary instruction.	• Include at least an informal assessment of student vocabulary in screening; refer for speech/language assessment when appropriate. • Choose reading materials (read aloud and student reading) that expand vocabulary knowledge.
-	3. Know/apply in practice considerations for the role and characteristics of indirect (contextual) methods of vocabulary instruction.	Cite and summarize evidence that supports teacher modeling, classroom conversation, reading aloud, wide independent reading, independent word learning strategies, and word play in building student vocabulary.	Promote a rich language environment by scaffolding high quality language in student dialogue, reading appropriate children's literature aloud, engaging students in classwide activities involving vocabulary, and modeling academic language use.
-	4. Know/apply in practice considerations for the role and characteristics of direct, explicit methods of vocabulary instruction.	• Identify how many words can be taught directly over the course of a school year, and develop a rationale for selecting those words, with modifications for ELs. • Identify and describe activities designed to teach meaningful relationships among words. • Link explicit instruction in prefixes, roots, and suffixes to build knowledge of word meanings. • Identify and describe vocabulary-building strategies that are particularly promising for use with ELs. • Explain or identify the difference between basic interpersonal communication skills and academic language proficiency for ELs.	• Plan and deliver lessons that involve evidence-based shared storybook practices, such as Dialogic Reading, that focus on vocabulary and language enrichment. • Know the shortcomings for vocabulary building of activities that require looking up words in a dictionary and writing a sentence with the word. • Prioritize words for explicit, in-depth teaching that are central to the meaning of a text or topic and likely to generalize to other contexts (Beck's Tier Two words). • Adopt and use a routine for introducing and providing practice with new word meanings. • Teach recognition of familiar morphemes, especially in Latin and Greek-derived words. • Teach word relationships, such as antonyms, synonyms, associations, multiple meanings, and shades of meaning. • Provide varied practice sufficient for students to use new vocabulary in speaking and writing. • Modify instruction for ELs by using visual and tactile kinesthetic supports, cognates, and additional spoken rehearsal and by teaching high-frequency words.

Structured Literacy Instruction
F. Listening and Reading Comprehension

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1. Know/apply in practice considerations for factors that contribute to deep comprehension.	Articulate a framework for comprehension instruction that addresses all major contributors to this domain, including background knowledge, vocabulary, verbal reasoning ability, sentence processing, knowledge of literary structures and conventions, and skills and strategies for close reading of text.	Plan and deliver comprehensive listening and/or reading comprehension lessons that address background knowledge, interpretation of vocabulary and academic language, and text structure using strategies that fit the text.
-	2. Know/apply in practice considerations for instructional routines appropriate for each major genre: informational text, narrative text, and argumentation.	• Contrast the characteristics of the major text genres, including narrative, informational, and argumentation. • • Identify text features that characterize each major genre, including logical organization, typical connecting or signal words, and style of language. • Match graphic organizers, titles, and topic sentences to various text structures (e.g., description, compare/contrast, reason/evidence, time sequence).	• Teach students the major differences between narrative and informational texts. • Teach and support students in using graphic organizers matched to specific informational text structures during reading and while planning written responses. • Teach students to recognize and interpret signal words associated with specific informational and narrative text structures. • Explicitly teach story grammar and use it to support comprehension and the retelling of narrative.

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	3. Know/apply in practice considerations for the role of sentence comprehension in listening and reading comprehension.	• Define and distinguish among phrases, dependent clauses, and independent clauses in sentence structure. • Know techniques of explicit instruction with sentences, such as sentence elaboration, sentence paraphrase, identifying the function of words within a sentence, and sentence combining. • Identify phrase, clause, and sentence structures in any text that may pose comprehension challenges, such as figurative language, double negatives, passive voice, embedded clauses, anaphora, and distance between subject and verb.	• Teach students how to construct and deconstruct simple, complex, and compound sentences. • Use techniques of explicit sentence manipulation, such as sentence elaboration, sentence paraphrase, identifying the function of words within a sentence, and sentence combining, to build syntactic awareness. • Teach students how to identify the basic parts of speech and to relate a word's meaning, spelling, and pronunciation to its grammatical role in a sentence. • Anticipate challenging language before text reading and prepare to decipher it with students. • During an oral reading of text, detect and provide appropriate feedback to students' confusions in comprehension.
-	4. Know/apply in practice considerations for the use of explicit comprehension strategy instruction, as supported by research.	• Identify and describe the comprehension strategies recommended by the National Reading Panel and current IES Practice Guides and for whom and in what contexts they are most likely to improve comprehension. • Given a specific text, plan whether and how key strategies might be taught, for example, summarization, question generation, question answering, graphic representation, visualization, guided highlighting, and so forth.	Select and employ specific strategies before, during, and after text reading, as appropriate to the text and the stated purposes for reading.
-	5. Know/apply in practice considerations for the teacher's role as an active mediator of text comprehension processes.	• Understand levels of comprehension processing, including the surface code (the literal meanings of words), the text base (the meanings underlying the words), and the mental model (the main ideas and details and their connections to each other and to the context). • Given a specific text, identify the cohesive devices (pronoun referents, word substitutions, transition words) that are important for comprehension. • Given a specific text, generate queries designed to help students construct a mental model of the text's meanings.	• Choose high-quality texts for shared reading or reading aloud. • Before teaching a text, plan questions that are designed to facilitate inference-making and higher-order reasoning; during reading, use questions strategically to help students clarify, interpret, and build meanings as they read. • After reading, ensure that students have understood and can communicate the big ideas or enduring meanings of the text, using a variety of response modes (oral, written, artistic). • Plan appropriate adaptations and accommodations that may include the use of technologies to facilitate note-taking, question answering, completion of graphic organizers, or summarization.

Structured Literacy Instruction
G. Written Expression

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	1. Understand the major skill domains that contribute to written expression.	• Compare and contrast the demands of written composition and text comprehension to explain the additional challenges of writing. • Describe the not-so-simple model of writing development. • Recognize and explain the interdependence of transcription skills and written composition and of reading and writing. • Cite the evidence that writing in response to reading helps both reading comprehension and quality of writing. • Know grade and developmental expectations for students' writing in the following areas: mechanics and conventions of writing, composition, revision, and editing processes.	• Teach both foundational writing skills and composition in writing lessons, devoting grade-appropriate instructional time to each major component. • Use shared and supported composition modes while students are learning the skills of transcription (e.g., students compose orally with teacher transcribing).

Rating	Content Knowledge	Application	Practicum or Fieldwork Expectations
-	2. Know/apply in practice considerations for research-based principles for teaching letter formation, both manuscript and cursive.	• Identify and rehearse techniques for building handwriting control and legibility, including modeling basic strokes, using verbal descriptions of motor patterns, using numbered arrows, and using appropriate writing implements, posture supports, and paper. • Identify and rehearse techniques for building writing fluency.	• Use multisensory techniques (e.g., saying and writing together) to teach letter formation. • Group letters for practice that require similar motor patterns, and explicitly teach those basic pencil strokes. • Model letter formation with visual, motor, and verbal support, lead supervised practice, and provide extended practice with feedback. • Adapt instruction and writing materials for left-handed students. • Build fluency in letter formation, copying, and transcription through frequent, distributed practice and brief timed activities.
-	3. Know/apply in practice considerations for research-based principles for teaching written spelling and punctuation.	• Recognize and explain the influences of phonological, orthographic, and morphemic knowledge on spelling, so instruction will focus on language structures rather than rote memorization. • Identify students' levels of spelling development and orthographic knowledge according to a developmental framework. • Identify a progression for teaching punctuation that is related to instruction on phrase and sentence structure and sentence types. • Analyze student writing samples and spelling tests to refine instructional targets (e.g., development of phonological awareness, knowledge of spelling rules, awareness of inflectional morphemes).	• Select instructional targets that match students' levels of spelling development and that follow a scope and sequence of spelling concepts. • Explicitly teach spelling concepts (explain concept, lead practice with feedback, support independent practice). • Use or develop practice activities that help students generalize learned words and patterns into writing. • Identify helpful apps and other technology that support practice or that would be appropriate for accommodations and modifications.
-	4. Know/apply in practice considerations for the developmental phases of the writing process.	• Identify the specific subskills of each phase of the writing process so each can be explicitly taught (e.g., planning involves selecting a format, having ideas, and having a goal; drafting requires transcription skill and text/word generation; reviewing requires facility with word choice, sentence editing, mechanics, audience awareness, and so forth). • Identify research-based instructional practices to support planning, drafting, and revision.	• Devote sufficient instructional time to planning, including definition of the goal and expectations, brainstorming of ideas, and anticipation of text format, length, and style. • Support transcription with written notes, word banks, graphic organizers, and talking. • Support editing and revision with personal or group conferencing, proofreading checklists, and peer-to-peer collaboration. • Build a student writing folder and publish selected works in displays or collections.
-	5. Know/apply in practice considerations for the appropriate use of assistive technology in written expression.	• Provide examples of specific assistive technology (types of devices/programs) appropriate to students with varying written expression needs (e.g., poor spelling vs. difficulties with organization/composition). • Critically evaluate specific assistive technology devices/programs and their utility for a specific student	• Select and provide access to keyboarding and word processing instruction as appropriate. • Implement assistive technology for writing; make adjustments depending on individual students' needs.

Adapted from: International Dyslexia Association. (2018, April). Knowledge and Practice Standards for Teachers of Reading

7. Comprehensive Evaluation for Dyslexia

"Assessment is a systematic approach to collecting, analyzing, and reviewing data to improve learning." —Alexander W. Astin, 1991

Following universal screening, diagnostic assessment, and intervention progress monitoring, a comprehensive evaluation of the students reading skills and response to intervention may be necessary. This chapter provides a framework for comprehensive evaluation that will identify students' areas of strength and areas for ongoing intervention support. This comprehensive data review is necessary for dyslexia screening and an important component of an evaluation for a student who has been referred to the Child Study Team to determine if special education services are warranted when dyslexia or other reading disability is suspected.

As noted earlier, a referral to the school district Child Study Team can be made at any point if a disability is suspected. If dyslexia is identified, a discussion regarding the impact of the reading disability on the student's learning and expected rate of improvement is warranted to determine if the student is eligible for special education supports & services under IDEA and/or Section 504 of the Rehabilitation Act of 1973, as amended.

Who can identify and diagnose dyslexia?

"A diagnosis of dyslexia begins with the gathering of information gained from interviews, observations and testing. This information is collected by various members of a team that includes the classroom teacher(s), speech/language pathologist, educational assessment specialist(s), and medical personnel (if co occurring difficulties related to development, health or attention are suspected).

The task of relating and interpreting the information collected should be the responsibility of a professional who is thoroughly familiar with the important characteristics of dyslexia at different stages in the development of literacy skills. This professional should also have knowledge of the influence of language development and behavior on literacy learning."

— Sawyer & Jones (IDA Fact Sheet), 2009

Data Analysis: The First Step in Identification

A comprehensive evaluation of student data can identify the factors contributing to a student's ongoing reading difficulties. It should determine if a student's profile fits the definition of dyslexia, rule out or rule in other common causes of reading difficulties, and also suggest the need for additional testing or referral to a specialist. It should provide information about a student's areas of strength and weakness for the purpose of goal setting and IEP planning.

Background Information

It is important to obtain information about a student's birth history, family history, attainment of developmental milestones including speech and language development, educational history, including early education, as well as information regarding languages spoken in the home and home literacy experiences.

This information should be obtained from parents, teachers, and any specialists who have worked with the student.

Family History: When evaluating for dyslexia, it is important to be aware of the strong heritability of literacy problems. Dyslexia runs in families and is common among siblings. It is reported that up to 40% of individuals with a first degree relative with developmental dyslexia will present with a similar reading disability (Fischer & Francks, 2006; Lyytinen, Ahonen, Eklund, Guttorm, Kulju, Laakso, Leiwo, Leppänen, Lyytinen, Poikkeus, Richardson, Torppa & Viholainen, H., 2004).

A family history of dyslexia or reading struggles would indicate that a student is at-risk for dyslexia.

Speech and Language Development History: A history of delayed speech or language acquisition significantly places a student at risk for reading and writing difficulties. Some students with dyslexia may often have had early speech and language delays, but their higher-level language skills may be intact by the time they start school.

Medical History: Information about attainment of developmental milestones, and any past diagnoses that could impact learning should be reviewed.

School and Intervention History: Past and current academic performance in all subject areas, as well as progress monitoring data showing rates of improvements made in any previous interventions, should be reviewed. In addition, teacher feedback concerning classroom performance should be collected.

Specific Areas to Assess and Analyze to Identify Dyslexia

The following areas are recommended to be assessed as part of a comprehensive evaluation specific to the identification of dyslexia:

- *Cognitive Function*
- *Oral Language Skills (including Listening Comprehension)*
- *Phonological Awareness (including Phonemic Awareness)*
- *Word Recognition*
- *Decoding*
- *Orthography/Spelling (Encoding)*
- *Automaticity/Fluency Skills*
- *Reading Comprehension*
- *Written Expression*
- *Functional Assessment*

Due to the typically uneven pattern of strengths and weaknesses in students with dyslexia, when looking at test results, composite scores should be interpreted with caution. Using only composite scores may mask important information about a student's individual skill profile. A more precise picture can be obtained by also using subtest scores. In addition, useful information can be obtained by examining patterns of a student's responses.

Cognitive Function: Until recently, an intelligence test was considered to be an integral part of a dyslexia assessment, as the criteria for the diagnosis was based on a discrepancy model (difference between IQ and reading skill). Research has demonstrated that intelligence is not the best predictor of how easily a student will develop written language skills, and in fact, oral language abilities (listening and speaking) are the best predictors of reading and spelling ability acquisition (Sawyer & Jones, 2009). To rely solely on the discrepancy model to determine dyslexia is ignoring modern science that has proven the central role of a phonological deficit in diagnosing dyslexia (Shaywitz, 2003). This deficit is a primary cause of dyslexia in students who, for a variety of technical reasons, may or may not have a discrepancy between IQ and reading skill.

Researchers have identified additional cognitive abilities that, when deficient, may further exacerbate difficulty in learning to read and spell. Two of these cognitive abilities are processing speed and memory span/working memory.

Students with dyslexia can exhibit speed-related deficits measured with processing speed tasks. These timed tasks may measure speed of input or perception, speed of output, or speed of integrating perceptual, cognitive, and output processes. A student's cognitive processing speed appears to impact automaticity of word recognition and reading rate (Mather & Wendling, 2012).

Memory span and working memory also affect reading achievement. Memory span involves the ability to listen to information and then repeat it back verbatim in a short time period. Research has postulated that one of the reasons some poor readers have shorter memory spans is that they articulate words more slowly due to inefficiency in accessing phonological information. Working memory involves the capacity to hold information in immediate awareness while manipulating the information in some way. Researchers hold differing views of the role working memory plays in reading. "As it relates to dyslexia, it appears that verbal working memory tasks and phonological working memory tasks, such as reversing the sounds in a word, cause the most difficulty" (Mather & Wendling, 2012).

A note about twice exceptional students (2e) - Even though arguments against diagnosing dyslexia on the basis of a performance discrepancy have much validity, information on IQ and a discrepancy between ability and achievement is particularly important for identifying students who are both academically talented and have a learning disability. This is because the relatively high achievement of many of these students (compared to that of their chronological age peers) often masks a disability unless that achievement is compared to the student's ability (Brody & Mills, 1997).

Oral Language Skills: Oral language refers to the ability to listen to and understand speech as well as to express thoughts through speech. Since oral language is the foundation for learning and the primary means through which learning occurs, a comprehensive evaluation should include assessment in both receptive and expressive language skills. In addition, knowledge of language milestones is important in recognizing students who are at risk for reading problems. Oral language is made up of low-level skills, such as recognizing and making the sounds within our speech, and higher-level skills, such as understanding meaning by listening to someone speak or expressing thoughts in sentences. Students with dyslexia typically have adequate or better higher-level language skills. Indicators of higher level oral language skills include being able to understand an age-appropriate story and spoken directions, to carry on a conversation, and to understand and use words that are age appropriate. To document adequate higher-level language skills, an evaluation should include measures of listening comprehension and oral vocabulary both receptively and expressively. Language comprehension abilities, at a minimum, encompass "receptive vocabulary, grammatical understanding, and discourse comprehension" (Catts, Adlof, & Weismer, 2006).

Table 1 describes the five basic language domains as part of a continuum from low-level language skills (phonology) to higher-level language skills. A thorough language evaluation will consider each of these domains.

Although students with dyslexia often have strong higher-level language skills, they characteristically have problems (a deficit) in low-level language skills, particularly phonological processing. This deficit in phonological processing limits the ability to learn to read and spell using the sounds of language. A child with dyslexia may use his/her good higher-level language skills (e.g., verbal reasoning ability), to compensate for weaknesses in low level skills, like phonemic awareness.

Receptive and Expressive Language Domains

	Oral Language		Written Language	
	Receptive: Listening	**Expressive: Speaking**	**Receptive: Reading**	**Expressive: Writing**
Phonology	The ability to identify and distinguish phonemes while listening (phonological processing, phonological awareness, phonemic awareness)	The ability to appropriately use phonological patterns (speech sounds) when speaking	The ability to understand and make the sound-to-letter associations for reading (phonics/decoding)	The ability to understand and make the sound-to-letter associations for spelling (phonics/ encoding)
Morphology	The ability to understand the meanings of morphemes when listening (grammar)	The ability to appropriately use morphemes (grammar) when speaking	The ability to decode morphemes in words and understand grammar	The ability to include morphemes in word spellings; use appropriate grammar
Syntax	The ability to understand sentence structure elements when listening	The ability to appropriately use sentence structure elements when speaking	The ability to understand sentence structure when reading	The ability to use correct sentence structure in writing
Semantics	The ability to understand words and their meanings in context (listening vocabulary)	The ability to use words and word combinations to express thoughts/meaning when speaking	The ability to understand words and their meanings in context (reading vocabulary)	The ability to use words and combinations of words meaningfully and in context to express thoughts/meaning in a coherent and cohesive manner
Pragmatics	The ability to understand the social aspects of spoken language including conversational exchanges/ discourse	The ability to use socially appropriately spoken language, including production of cohesive and relevant messages during conversations	The ability to understand point of view, needs of the audience, character/author perspective, etc.	The ability to convey a point of view and intended message (1) for a specific audience, (2) taking on the perspective of characters/narrator/author, (3) for a specific type of writing style (expository, descriptive, persuasive and narrative)

Table 1 – Source: Adapted from a Language in Brief chart on the American Speech-Language-Hearing Association (ASHA) website

Some individuals with dyslexia may have word retrieval problems and/or difficulty pronouncing certain multisyllabic words. A child with dyslexia may exhibit difficulty remembering, recalling or producing sound combinations. Words may be difficult to produce due to exact sound combinations in a word or due to word meaning/semantic cues. Sometimes children may confuse, delete or add sounds or misuse words when connecting thoughts (i.e., distinct vs. extinct; pacific for specific). Some students may have difficulty finding the word they want to say and instead talk around it using vague words such as "thing" or "stuff". Interventions with a speech-language pathologist will focus on teaching word meanings as well as strategies for recalling specific words.

Typically, if a student has average level oral language skills but much difficulty developing written language (reading and spelling) skills, this is an indicator of dyslexia (Sawyer & Jones, 2009). However, since language development and language skills exist on a continuum, dyslexia can be present with other language problems (Mather & Wendling, 2012).

Phonological Awareness: Once the phonological system has been acquired for basic listening and speaking, students begin to develop phonological awareness, which is the awareness of individual words in sentences or syllables in words. Other aspects of phonological awareness include the ability for rhyming, alliteration and onset-rime (word families). At the most complex level of phonological awareness is phonemic awareness which includes the ability for blending, segmenting, and manipulating individual sounds (phonemes) in words. In addition to assessing these skills, a nonword repetition task should be administered. This type of task measures how well a student can represent a new and unfamiliar phonological sequence in memory. This information is essential for understanding how a student will fare when attempting to sequence the sounds in unfamiliar words. Spelling and decoding difficulties resulting from a deficit in the phonological component of language are a hallmark of dyslexia.

Word Recognition: Word recognition, also called word reading or word identification, is the ability to read single printed words. Tests of word recognition, including phonetically regular and irregular words, require that students read individual words printed in a list. The student is not able to use context cues, such as the meaning of a sentence, to figure out the word. Tests of word recognition that score both accuracy and the time it takes for the student to read the words (fluency) are particularly useful. Students with dyslexia may become accurate following appropriate intervention but are still very slow when reading words (Sawyer & Jones, 2009).

Decoding: Decoding is defined as "efficient word recognition" (Hoover & Gough, 1990), or the ability to sound out words based on phonics rules and the ability to quickly and accurately read familiar and unfamiliar words in list form or connected text. Decoding "involves a narrow scope of knowledge (e.g., letters, sounds, words) and processes (decoding) that, once acquired, will lead to fast, accurate word recognition" (Kamhi, 2009). Students with dyslexia have difficulty with these word attack skills particularly with learning phoneme/ grapheme (sound/letter) correspondences. It is particularly important to assess pseudoword reading to get a true indication of a student's ability to internalize and apply decoding skills to unfamiliar words.

Orthography/Spelling (Encoding): Orthography incorporates all the symbols in a writing system, including numbers, punctuation, letters and letter patterns. Some students with dyslexia have difficulty recalling letters and letter patterns. Spelling or encoding is the opposite of decoding but is even more difficult. It requires separating (segmenting) the individual sounds in a spoken word, recalling the different ways each sound might be spelled, choosing/recalling the letters or letter patterns associated with the sound, writing the letter(s) for that sound, and repeating the same sequence for the next sound in the word. Spelling stresses a student's short and long-term memory and is complicated by a student's ease or difficulty in writing letters legibly and in proper order/sequence. Spelling is usually the most severe weakness among students with dyslexia and the most difficult to remedy (Sawyer & Jones, 2009).

A student's orthographic awareness skills can be assessed by formal and informal measures. Tasks such as asking the young student to write his/her name, write the alphabet or recognize letters and asking students beyond this level to read/spell regular and irregular words provide information about how a student matches sounds with letters/letter patterns when writing (Mather & Wendling, 2012). The type of spelling errors a student makes on formal and informal measures should be analyzed to determine which phonics and orthographic patterns the student does not know.

Automaticity/Fluency Skills: Students with dyslexia often have slow speed in processing information (visual or auditory) which can be measured using naming speed tasks (also called rapid automatic naming) as well as other tests of more general processing speed available in frequently used standardized tests. Naming speed, particularly letter naming, is one of the best early predictors of reading difficulties and thus often used as part of screening measures for young children. Slow naming speed results in problems with developing reading fluency. It also makes it difficult for students to do well on timed tests. Students with both the naming speed deficit and the phonological processing deficit are considered to have a "double deficit." Students with the double deficit have more severe difficulties than those with only one of the two (Sawyer & Jones, 2009).

Reading Comprehension: Reading comprehension is different from oral language/ listening comprehension because it relies on the student's ability to decode text and is only attained when a student can successfully comprehend the intended meaning from the text. Measuring reading comprehension can be complicated as reading comprehension tests vary significantly in their processing demands and how they measure this complex ability. Therefore, consideration should be given to using multiple reading comprehension measures when evaluating a student at risk for dyslexia. Reading comprehension should be assessed at the sentence level as well as the passage level. Good reading comprehension tests should provide different types of passages that contain both familiar and unfamiliar information about a variety of topics (Farrall, 2012). It is important to assess oral and silent reading comprehension as well as listening comprehension skills.

It is important to evaluate a student's silent reading comprehension versus oral reading comprehension to obtain information as to which style results in better performance, which will provide better guidance for classroom strategies. Oral reading allows for analysis of word reading errors, a student's ability to self-monitor/self-correct for errors and reading speed. Some students may do better when reading orally because they may be able to "hear" their errors, recognize when the text doesn't make sense and then self-correct. However, other students may do better when reading silently as they have the opportunity to read information over if not being timed. It may also be beneficial to use reading comprehension measures which do not allow students to refer back to the text to answer questions and then compare a student's performance to measures that do allow text reference to determine the student's ability to identify and recall key information with and without look-back support. Further, asking about a student's familiarity with the content within the text assists in determining whether any aspect of the student's comprehension is attributable to background knowledge rather than reading comprehension.

It is particularly important to use a variety of comprehension measures with high functioning students with dyslexia. Students with dyslexia often have strong higher-level oral language skills which enable them to get the main idea of a passage, or correctly guess answers, using contextual clues or prior knowledge, thus, "masking" their difficulty with reading words. Also, reading comprehension tasks usually require the student to read only a short passage to which they may refer when finding the answers to questions. For these reasons, students with dyslexia may earn an average score on reading comprehension tests, but still have much difficulty reading and understanding long reading assignments in their grade-level texts (Sawyer & Jones, 2009).

Typically, students with dyslexia score lower on tests of reading comprehension than on listening comprehension tasks. A lower reading comprehension score may be due to several factors, such as, missing important information, misunderstanding the content due to word reading errors, and/or difficulty connecting presented ideas due

to time lapses caused by fluency weaknesses that impact working memory. By including an assessment of listening comprehension, the evaluator is able to determine if there is a gap between what a student is cognitively capable of comprehending and what he/she can comprehend through independent reading. This will provide a more complete picture of a student's strengths and weaknesses.

Written Expression: Written expression is a highly complex process that depends on the integration of many different skills. Many students with dyslexia also have writing difficulties. An assessment of written language should include measures of handwriting legibility and fluency, spelling in a list and in context, mechanics, syntax, vocabulary and paragraph writing (Farrall, 2012). Analyzing the student's informal writing samples can add valuable information to an evaluation. If handwriting/graphomotor or visual motor weaknesses are observed, a referral to an occupational therapist may be warranted.

Functional Assessment: A review of a student's functional reading and writing abilities can provide information regarding his/her ability to apply learned skills to different settings (i.e., school, home, structured versus unstructured setting), to different tasks (i.e., independent assignments, homework, studying for tests), different subject areas (i.e., reading, math, science) and under different conditions (i.e., individual versus group instruction, listening versus speaking, oral versus silent reading). This information can guide assessment, support test data, and assist with planning for intervention.

Functional assessments can be obtained via:

Diagnostic/trial teaching
- Observation of student
- Review of classwork and quiz/test performance
- Parent/teacher checklists

Co-occurring Conditions

All learning disabilities may co-occur with other disorders, including attention, language, executive function and behavior issues, and each is distinct in how it impacts learning and development of literacy skills. Dyslexia is often seen with some of the following common concurrent conditions:

- Attention-Deficit Hyperactivity Disorder
- Auditory Processing Disorder
- Dyscalculia
- Dysgraphia
- Disorder of Written Expression
- Other Speech and Language Disorders
- Emotional Disorders, such as Anxiety and/or Depression

Due to the complex nature of reading deficits, it is likely a student may benefit from further testing. This might include vision, hearing, fine motor/handwriting, attention/executive function, emotional adjustment, comprehensive speech language and/or social communication.

A note about concurrent math difficulties - Mathematics can be viewed as a language, similar to literacy. Math requires an understanding of numerical symbols rather than letter symbols, and there are specific rules for math calculations that are similar to rules governing decoding and encoding. Some students with dyslexia may also show difficulty with math concepts such as number sense, number facts, calculation and mathematical reasoning (Barnes, Martinez-Lincoln & Raghubar, 2017).

Dyslexia and Specific Learning Disability in Special Education

A thorough comprehensive evaluation of student data should provide the documentation necessary to determine eligibility under the Individuals with Disabilities Education Act (IDEA) or the Section 504 of the Rehabilitation Act of 1973.

According to N.J.A.C. 6A:14-3.5(c)12, *"Specific learning disability" corresponds to "perceptually impaired" and means a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.*

A specific learning disability can be determined when a severe discrepancy is found between the student's current achievement and intellectual ability in one or more of the following areas:

1. *Basic reading skills;*
2. *Reading comprehension;*
3. *Oral expression;*
4. *Listening comprehension;*
5. *Mathematical calculation;*
6. *Mathematical problem solving;*
7. *Written expression; and*
8. *Reading fluency.*

A specific learning disability may also be determined by utilizing a response to scientifically based interventions methodology as described in N.J.A.C. 6A:14-3.4(h)6.

Dyslexia falls under Specific learning disability; it is not its own eligibility category. A student with dyslexia will typically present with primary weaknesses in basic reading skills and/or reading fluency and may show secondary consequences in reading comprehension. Written expression may also be impacted due to weaknesses with spelling and writing fluency.

The OSEP DEAR COLLEAGUE LETTER on IDEA/IEP Terms (October 23, 2015) clarifies that "there is nothing in IDEA that would prohibit the use of the terms dyslexia, dyscalculia, and dysgraphia in IDEA evaluations, eligibility determinations, or IEP documents."

"Multidisciplinary teams need the information, opportunity, and time to consider and integrate assessment findings in order to engage in a team evaluation that informs identification, eligibility, services, and instruction."

—National Joint Committee on Learning Disabilities, 2011

The Role of the Multidisciplinary Team in Comprehensive Assessment

Through the Child Study Team, NJ provides for the assessment of students who present with difficulty acquiring reading skills. This multidisciplinary team is composed of specialists who have earned higher educational degrees and who administer standardized tests designed to identify areas of strength and weakness. In addition, the school-based Child Study Team has the opportunity to collaborate with teachers, therapists and family members in order to develop a full picture of a student's performance in multiple settings.

Additional assessments administered by team members should be relevant to the particular student and the presenting concerns. Interpretation and analysis of each student's testing results is essential so that the underlying etiology of literacy difficulties and remedial services can be identified. It is imperative that all members of the multidisciplinary team have a strong base of knowledge about the neurobiology of dyslexia and all aspects of reading acquisition. This knowledge is imperative for conducting a comprehensive evaluation.

The School Psychologist: It is critical that school psychologists understand the progression of literacy development, so they are able to identify the phase at which students are functioning (Joseph, Wargeline & Ayoub, 2016). School psychologists have the training, knowledge and skills to identify a student's unique pattern of strengths and weaknesses. To be relevant, cognitive assessment should result in sound recommendations for the educational programming of a student. These recommendations will not surface without a comprehensive cognitive evaluation. School psychologists are trained to use norm-referenced standardized tests, and their analysis of how cognitive testing results relate to reading achievement is essential.

The Learning Disabilities Teacher-Consultant (LDT-C): It cannot be overstated how essential it is for LDT-Cs to have a thorough base of knowledge pertaining to the structure of language, how students learn to read, why some students struggle to learn to read and what effective instructional practices should be implemented to remediate students' specific areas of weakness. LDT-Cs' evaluations should result in complete interpretations of results that identify the student's current levels of performance and how the student's performance impacts their mastery of reading skills.

Reporting of standardized scores alone is not adequate for making an interpretation of results. An analysis of performance on subtests (i.e., phonological awareness, rapid naming, nonsense word reading) is essential for identifying needs and planning interventions. After evaluating a student, LDT-Cs should look for patterns in test results to identify the profile of dyslexia. Typically, students with dyslexia will have difficulty spelling and reading single words, with particular difficulty decoding nonsense or unfamiliar words. Reading comprehension is often superior to decoding individual words, and oral reading is inaccurate and labored. Evidence in the evaluation results should demonstrate a phonological/orthographic weakness with other higher-level language functions relatively unaffected (Shaywitz, 2003). LDT-Cs can play an important role as a teacher mentor/coach and ensure that students are progressing at expected rates.

The Social Worker: Social workers play an important role in supporting families' needs and with identifying key factors which impact a student's progress in school. Social workers' interviews with family members should identify genetic and familial background that can help explain underlying neurobiological challenges that result in difficulty with mastering the phonological code. In addition, emotional and environmental factors that may play a factor in a student's progress should be investigated.

The Speech-Language Pathologist/Specialist (SLP/SLS): Speech-language pathologists/ specialists play an important role in the development of literacy skills of students due to the connection between spoken and written language. Students with reading and writing skill deficits may present with a history of speech and language delay and exhibit ongoing difficulty with using language strategically to communicate, think and learn. SLPs/SLSs have the skills to diagnose oral and written language disorders across different age and grade levels, and to intervene at the level of need. Their collaboration with teachers, administrators, and CST members is essential to early identification and to fostering literacy acquisition in general education settings where students are at risk or experiencing reading and writing disorders.

References and Resources:

American Speech-Language-Hearing Association. (2001). *Roles and responsibilities of speech-language pathologists with respect to reading and writing in children and adolescents* [Guidelines]. Available from ASHA.

Astin, A. (1991). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. Portland: Oryx Press and the American Council on Education.

Barnes, M., Martinez-Lincoln, A. & Raghubar, K. (2017). Mathematical learning disabilities. *Perspectives on Language and Literacy*, 43:1, 10-17.

Brody, L. E. & Mills, C. J. (1997). Gifted children with learning disabilities: a review of the issues. *Journal of Learning Disabilities*, 30(3), 282-286.

Catts, H. W. (2009). The narrow view of reading promotes a broad view of comprehension. *Language, Speech, and Hearing Services in Schools*, 40, 178-173.

Catts, H. W., Adlof, S. M. & Weismer, E. (2006). Language deficits in poor comprehenders: a case for the simple view of reading. *Journal of Speech, Language and Hearing Research*, Apr; 49 (2), 278-293.

Compton, D. L., Miller, A. C., Elleman, A. M., & Steacy, L. M. (2014). Have we forsaken reading theory in the name of "quick fix" interventions for children with reading disability? *Scientific Studies of Reading*, 18:1, 55-73.

Farrall, M. L. (2012). *Reading assessment: Linking language, literacy and cognition*. Hoboken, NJ: John Wiley & Sons.

Fisher S. E., Francks C. (2006). Genes, cognition and dyslexia: Learning to read the genome. *Trends in Cognitive Science*, 10:250–257.

Fisher, D. and N. Frey. (2009). *Background knowledge: The missing piece of the comprehension puzzle*. Portsmouth, NH: Heinemann.

Hoover, W. & Gough, P. (1990). The simple view of reading. *Reading and Writing: An Interdisciplinary Journal*, 2, 127–160.

Joseph, L. M., Wargeline, L. & Ayoub, S. (2016). Preparing school psychologists to effectively provide services to students with dyslexia. *Perspectives on Language and Literacy*, 42:4, 15-24.

Kamhi, A. G. (2009). The case for the narrow view of reading. *Language, Speech, and Hearing Services in Schools*, 40, 174-177.

Kilpatrick, David A., (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Hoboken, NJ: John Wiley & Sons.

Lowell, Susan C. (2017). *Dyslexia assessment: What is it and how can it help? Fact sheet*. Baltimore, MD: The International Dyslexia Association.

Lyytinen, H., Ahonen, T., Eklund, K., Guttorm, T., Kulju, P., Laakso, M.-L., Leiwo, M., Leppänen, P., Lyytinen, P., Poikkeus, A.-M., Richardson, U., Torppa, M. & Viholainen, H. (2004). Early development of children at familial risk for dyslexia—follow-up from birth to school age. *Dyslexia*, 10: 146–178.

Mather, N. & Wendling, B. J. (2012). *Essentials of dyslexia assessment and intervention*. Hoboken, NJ: John Wiley & Sons.

National Joint Committee on Learning Disabilities (2011). *Comprehensive assessment and evaluation of students with learning disabilities: A paper prepared by the National Joint Committee on Learning Disabilities*.

Sawyer, D. J. & Jones, K. M. (2009). *Testing and evaluation: Fact sheet*. Baltimore, MD: The International Dyslexia Association.

Shaywitz, S. (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems at any leve*l. New York: Alfred A. Knopf.

8. Accommodations, Modifications and Assistive Technology

"For a dyslexic reader, accommodations represent the bridge that connects him to his strengths and, in the process, allows him to reach his potential." —Sally Shaywitz, 2006

Students with dyslexia frequently experience barriers to fully participate in classroom activities. Whether the difficulties arise from struggles with reading, written expression, or other obstacles, providing students with accommodations and modifications will increase their opportunities to participate and thrive in academic and extracurricular settings.

Accommodations and Modifications

An accommodation is a change in timing, formatting, setting, scheduling, response and/or presentation that allows students to complete the same assignment or test as other students. Accommodations do not alter the content of assignments or change what an assignment or test is designed to measure; rather, accommodations are meant to provide equal access to the curriculum and an equal opportunity for students to show what they know. For example, students who struggle to read a worksheet may be provided with an electronic version that can be read aloud, so that they can listen to the content, and not get bogged down trying to decipher the words on the page. In this way, accommodations enable students to utilize their strengths while compensating for their weaknesses.

Using needed accommodations is not a "crutch" nor is it "cheating"; it does not provide an unfair advantage, and it does not prevent students from learning how to master skills that they are lacking. Rather, accommodations provide a mechanism to work around struggles and utilize strengths, providing even greater opportunities for learning. Students who use audio or text-to-speech formats, for example, are exposed to more vocabulary, more background information, and more complex content than they would be without access to accommodations.

Modifications are changes to tasks, assignments, and assessments that alter content and expectations. Modifications can change the scope or the level of difficulty of assignments. Students who struggle to read, for example, may be assigned an abridged version of a book that their classmates are reading in the original.

Accommodations are said to level the playing field while modifications change the field on which students play. It is important to ensure that the accommodations and modifications provided to students are tailored to meet their unique, individual needs, and implemented during core instruction, as well as during intervention periods. Selecting and monitoring the effectiveness of an accommodation and/or modification should be an ongoing process.

Accommodations and modifications are not meant to take the place of intensive, evidence-based instruction or intervention to develop skills, but rather are effectively used when the goal of the task or assignment is for students is to acquire content-based knowledge or produce content-based outputs.

For many students with disabilities and for many without the key to success in the classroom lies in having appropriate adaptations, accommodations, and modifications made to the instruction and other classroom activities.

—Center for Parent Information and Resources

Assistive Technology

One way to accommodate students with dyslexia is through the use of Assistive Technology (AT). IDEA 2004 defines AT as any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability (Individuals with Disabilities Education Act, Sec. 602 (1). For many students with dyslexia, AT is a crucial accommodation that allows them to learn what their non-disabled peers are learning by providing them with equal access to the curriculum and equal opportunities to demonstrate what they know.

AT is not meant to be a replacement for learning the skills needed to alleviate reading, writing and other deficits, nor is it meant to be used as a substitute for evidence based remedial instruction; rather, AT is designed to be used when the goal of a task is to acquire information or demonstrate knowledge that a student is unable to accomplish without such support.

AT is a bridge between students' area(s) of weakness and their actual abilities and skills. AT can assist students in a variety of ways including: enabling access to material at their grade through the use of text-to speech software and audiobooks; enabling students to express their thoughts through the use of dictation, (e.g., speech-to-text software), keyboards and word processing or word prediction software, correct spelling and grammar through electronic spelling and grammar checkers; as well as enabling students to create notes through the use of recording devices such as recording pens. In all

these cases, the AT is used as a tool to compensate for the adverse impact of dyslexia on learning and demonstrating knowledge.

Accommodations, Assistive Technology and the Law

The legal cornerstone for providing AT and AT services can be found in federal law. Students with disabilities, like all students, must have the opportunity to fully participate in our public schools. Three federal laws – the Individuals with Disabilities Education Act (IDEA), Title II of the Americans with Disabilities Act of 1990 (ADA), and Section 504 of the Rehabilitation Act of 1973 – address the obligations of public schools, including charter schools, to meet the needs of students with disabilities.

For students with dyslexia, as with any student with a disability, consideration of the need for AT devices, supports and services is a necessary component of developing an appropriate Individualized Education Program (IEP) or a 504 Plan. On a case-by-case basis, the provision of school-purchased AT devices, supports and training in a student's IEP or 504 plan is required if it is determined that the child requires those services in order to equally access the curriculum.

Considerations for Effective AT Implementation

To assist in determining a student's AT needs, AT evaluations may be conducted in the student's customary environment by professionals familiar with available technologies. For example, to determine if audio or text-to-speech technologies are necessary, a student may be asked to read a grade-level passage and to answer comprehension questions. Next, the student should be asked to listen to a grade-level passage and answer comprehension questions. If the student's ability to comprehend print material is enhanced by listening, then audio or text-to-speech technology may be warranted. *Quality Indicators for Assistive Technology: A Comprehensive Guide to AT Services* includes a comprehensive list of criteria for review when considering the appropriateness of AT for individual students.

"…software cannot be fully effective unless the children who need it have adequate time and support to use it well."

—Wise & Raskind, 2007

AT services are also critical to students' effective use of AT. These services include:

- selecting the programs or devices to effectively meet students' needs;
- acquiring the devices and software programs; and
- providing students, teachers, and parents instruction in the use, implementation and integration of the technology into all appropriate settings.

Students may also need AT to fully and effectively participate in elective courses or extracurricular activities in which they participate. For example, students who struggle to read and who want to participate on their school's debate team may need print material provided to them in an accessible format. School-provided AT may be made available in the child's home, or in other settings, (if the IEP/504 team determines that the student requires AT to gain equal access or as an accommodation to receive a free and appropriate public education (FAPE). School systems should develop policies, procedures, or operating guidelines in accordance with all applicable regulations and laws, that support the team's and/or district's ability to address and provide for the use of AT in all needed settings.

Common Accommodations for Dyslexia

In addition to AT, many lists of possible accommodations are available online and in print, such as within IDA's *Dyslexia In the Classroom - What Every Teacher Needs to Know*. However, it is essential to remember that accommodations must match an individual's need and that individual needs are different and can change depending on the demands of the situation and student progress. Extensive accommodations are available to students with IEPs and 504 plans and students who are multilingual learners, for state assessments.

Below are examples of areas to consider when determining appropriate accommodations and/or modifications for students with dyslexia:

- **Note taking** – Does the student struggle to listen and take notes at the same time? Is keeping up with the pace of note taking in the classroom too difficult? Can the student read his/her own notes and are the notes accurate? Would receiving a copy of class notes meet the student's needs?

- **Accessing grade level text** – Does the student struggle to accurately and fluently read grade level text? Does this adversely impact comprehension? Would audio or text-to-speech formats meet the student's needs?

- **Acquiring information from text** – Does the student struggle to identify essential information in text due to the quantity or length of information, even with audio or text-to-speech accommodations? Would providing outlines or text with important information highlighted meet the student's needs?

- **Composing a written response** – Does the student have the knowledge and ideas for composing a response, but struggles with writing due to handwriting issues, spelling or putting thoughts on paper? Would using a graphic organizer, a spell and grammar check, a keyboard, word prediction software, or dictation software and/or scribe meet the student's need?

- **Storing and remembering information** – Does the student struggle with study skills strategies? Does the student have difficulty integrating information from multiple sources to identify essential material to focus on in preparation for assessments? Would a study guide meet the student's needs? Would flash cards that break concepts into smaller parts help with studying and recall? Would teaching students mnemonic devices to help remember essential material meet the student's needs?

- **Organizational skills** – Does the student struggle with organizational skills? Does the student misplace or have difficulty finding classwork, assignments, books, homework and worksheets? Does the student have difficulty recording homework assignments? Would a single binder system or accordion folder meet the student's needs? Would allowing the student to take a picture of the homework assignment meet the student's needs? Would a checklist and schedule of "to dos" help? Would color coding materials (books, folders, binders) help the student bring the needed items to class? Would a rubric be helpful for longer assignments?

- **Amount of work** – Does the student get overwhelmed by being presented with too much material at once? Would being presented with one page at a time, rather than an entire workbook meet the student's needs? Would fewer problems per page be helpful?

- **Extraneous stimuli** – Does the student get easily distracted by visual stimuli on a full worksheet or page? Does the student have difficulty filling out computer scantrons? Would a blank sheet of paper covering sections of the page not being worked on at the time meet the student's needs? Would providing answers directly on the test, rather than transferring answers to a scantron or answer sheet help? Would line markers aid reading, and windows displaying individual math problems be helpful? Would using larger font sizes and increasing spacing help make tasks easier?

- **Variations in time** – Does the student need additional time to complete tasks? Would adapting the time allotted for learning and task completion provide the student with equal access or an equal opportunity to show what he/she knows?

- **Written directions** – Is the student overwhelmed by the amount of information contained in directions? Does the student have difficulty completing multi-tasked directions? Would a checklist or having directions broken down into single steps or read aloud meet the student's needs?

Additional AT Resources

The following are several organizations and tools that can be used to assist in finding AT resources:

Assistive Technology Center (ATC) is New Jersey's online resource for information and equipment. ATC helps people with disabilities, their families, teachers and employers identify and learn to use the technology that will be most effective in meeting their goals. ATC provides Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) certified staff; thorough assessments; support options for nearly every budget; trials of equipment before purchase; training and support.

Bookshare is an organization that provides free accessible books to qualified students.

Center for Applied and Special Technology (CAST) is a nonprofit education research and development organization that works to expand learning opportunities for all individuals through Universal Design for Learning.

Georgia Project for Assistive Technology (GPAT) outlines the assistive technology considerations for students with disabilities and provides resource guides and a checklist for AT considerations.

Learning Ally is an organization that provides human narrated audio books to qualified members.

National Assistive Technology in Education Network (NATE) brings together information from the many fields and disciplines that are involved in assistive technology services in educational settings.

National Center on Accessible Educational Materials provides resources and technical assistance on implementing AEM and the National Instructional Materials Accessibility Standard (NIMAS).

National Instructional Materials Access Center is a federally-funded, searchable online file repository of source files, such as print textbooks, in the NIMAS format. Authorized users can access K-12 NIMAS-format files that can then be converted to accessible content for students with disabilities.

New Jersey Student Learning Assessment (NJSLA) and New Jersey Graduation Proficiency Assessment (NJGPA) Accessibility Features and Accommodations (AF&A) Manual is a comprehensive policy document that provides guidance to districts and decision-making teams to ensure that the state assessments provide valid results for all participating students. Use this manual to understand how to assign and deliver these accommodations and accessibility features to students.

Quality Indicators for Assistive Technology Services (QIAT) is a website including work done to date to develop a comprehensive set of quality indicators for effective AT services by school districts.

Innovations in Special Education Technology (ISET) is a division of the Council for Exceptional Children that offers a variety of information about AT and special education instructional technology.

Wisconsin Assistive Technology Initiative Development Team (WATI) assists early intervention agencies, school districts, and their partners to provide assistive technology by making training and technical assistance available through the development of new and updated materials related to the provision of assistive technology tools, and services.

References and Resources:

Beigel, Andrew R. *Assistive Technology Assessment: More Than the Device*. LD Online.

Elkind, K. & Elkind, J. (2007). Text-to-Speech Software for Reading. *Perspectives on Language and Literacy*, Volume 33, No. 3, Summer Edition, 11-16.

Shaywitz, S. E. (2006). *Overcoming Dyslexia: A New and Complete Science-based Program for Reading Problems at Any Level*. New York: A.A. Knopf.

Wise, B. & Raskind, M. H. (2007). Technology and Reading Difficulties. *Perspectives on Language and Literacy*, Volume 33, No. 3, Summer Edition, 7-8.

9. New Jersey Dyslexia Legislation

Chapter 105

An Act concerning professional development for public school employees and supplementing chapter 6 of Title 18A of the New Jersey Statutes.

Be It Enacted by the Senate and General Assembly of the State of New Jersey:

C.18A:6-130 Professional development opportunities related to reading disabilities.

1. The Department of Education shall provide professional development opportunities related to reading disabilities, including dyslexia, to school district personnel. The professional development shall be made available to general education, special education, basic skills, and English as a second language teachers, instructional support staff, administrators, supervisors, child study team members, and speech-language specialists. The professional development opportunities shall be designed to account for the various manners in which different school district personnel interact with, or develop instructional programs for, students with reading disabilities.

C.18A:6-131 Required instruction.

2. The State Board of Education shall, as part of the professional development requirement established by the State board for public school teaching staff members, require certain teaching staff members to annually complete at least two hours of professional development instruction on the screening, intervention, accommodation, and use of technology for students with reading disabilities, including dyslexia. The professional development requirement established pursuant to this section shall apply to general education teachers employed in grades kindergarten through 3, special education, basic skills, and English as a second language teachers, reading specialists, learning disabilities teacher consultants, and speech-language specialists. A board of education may make the professional development opportunities available to other instructional or support staff as the board deems appropriate.

3. This act shall take effect immediately and shall first be applicable to the first full school year beginning after the effective date of this act.

Approved August 7, 2013

Chapter 131

An Act concerning special education and supplementing chapter 46 of Title 18A of the New Jersey Statutes.

Be It Enacted by the Senate and General Assembly of the State of New Jersey:

C.18A:46-55 Regulations incorporating definition of dyslexia.

1. The State Board of Education shall promulgate regulations that incorporate the International Dyslexia Association's definition of dyslexia into chapter 14 of Title 6A of the New Jersey Administrative Code.

2. This act shall take effect immediately.

Approved August 9, 2013

Chapter 210

An Act concerning reading disabilities among public school students and supplementing chapter 40 of Title 18A of the New Jersey Statutes.

Be It Enacted by the Senate and General Assembly of the State of New Jersey:

C.18A:40-5.1 Definitions relative to reading disabilities.

1. As used in this act: "Potential indicators of dyslexia or other reading disabilities" means indicators that include, but shall not be limited to, difficulty in acquiring language skills; inability to comprehend oral or written language; difficulty in rhyming words; difficulty in naming letters, recognizing letters, matching letters to sounds, and blending sounds when speaking and reading words; difficulty recognizing and remembering sight words; consistent transposition of number sequences, letter reversals, inversions, and substitutions; and trouble in replication of content.

C.18A:40-5.2 Distribution of information on screening instruments.

2. a. The Commissioner of Education shall distribute to each board of education information on screening instruments available to identify students who possess one or more potential indicators of dyslexia or other reading disabilities pursuant to section 3 of this act. The commissioner shall provide information on the screening instruments appropriate for kindergarten through second grade students and on screening instruments that may be suitably used for older students. A board of education shall select and implement age-appropriate screening instruments for the early diagnosis of dyslexia and other reading disabilities.

b. The commissioner shall develop and distribute to each board of education guidance on appropriate intervention strategies for students diagnosed with dyslexia or other reading disabilities.

C.18A:40-5.3 Screening for dyslexia, other reading disabilities.

3. a. A board of education shall ensure that each student enrolled in the school district who has exhibited one or more potential indicators of dyslexia or other reading disabilities is screened for dyslexia and other reading disabilities using a screening instrument selected pursuant to section 2 of this act no later than the student's completion of the first semester of the second grade.

b. In the event that a student who would have been enrolled in kindergarten or grade one or two during or after the 2014-2015 school year enrolls in the district in kindergarten or grades one through six during or after the 2015-2016 school year and has no record of being previously screened for dyslexia or other reading disabilities pursuant to this act, the board of education shall ensure that the newly-enrolled student is screened for dyslexia and other reading disabilities using a screening instrument selected pursuant to section 2 of this act at the same time other students enrolled in the student's grade are screened for dyslexia and other reading disabilities or, if other students enrolled in the student's grade have previously been screened, within 90 calendar days of the date the student is enrolled in the district.

c. The screening shall be administered by a teacher or other teaching staff member properly trained in the screening process for dyslexia and other reading disabilities.

C.18A:40-5.4 Comprehensive assessment for the learning disorder.

4. In the event that a student is determined through the screening conducted pursuant to section 3 of this act to possess one or more potential indicators of dyslexia or other reading disabilities, the board of education shall ensure that the student receives a comprehensive assessment for the learning disorder. In the event that a diagnosis of dyslexia or other reading disability is confirmed by the comprehensive assessment, the board of education shall provide appropriate evidence-based intervention strategies to the student, including intense instruction on phonemic awareness, phonics and fluency, vocabulary, and reading comprehension.

5. This act shall take effect immediately and shall first apply to the 2014-2015 school year; provided, however, that the Commissioner of Education shall take any anticipatory actions that the commissioner determines to be necessary and appropriate to effectuate the purposes of this act prior to the 2014-2015 school year.

Approved January 17, 2014

10. Glossary

academic vocabulary	words traditionally used in academic dialogue and text
accuracy	ability to recognize words correctly
alphabetic principle	ability to associate sounds with letters and use those sounds to form words
automaticity	ability to perform a skill easily with little attention, effort, or conscious awareness
background knowledge	connections formed between the text and the information and experiences of the reader
benchmark	predetermined level of performance on a screening test that is considered representative of proficiency or mastery of a certain set of skills
classification accuracy	extent to which a screening tool is able to accurately classify students into “at risk” and “not at risk” categories
connected text	words that are linked as in sentences, phrases, and paragraphs
controlled text	reading materials in which a high percentage of words can be identified using their most common sounds and use sound-letter correspondences that students have been taught
cumulative instruction	approach that builds upon previously learned concepts
decoding	process of using sound-letter correspondences to sound out words or nonsense words
encoding	process of using sound-letter correspondences to spell
explicit instruction	direct, structured, systematic approach to teaching that includes both instructional design and delivery procedures
expressive language	language that is spoken
fidelity of implementation	degree to which instruction follows the intent and design of the program
fluency	ability to read a text accurately, quickly, and with proper expression and comprehension
grapheme	letter or letter combination that corresponds to a single phoneme
guided practice	approach in which students practice newly learned skills with the teacher providing prompts and feedback
high frequency words	small group of words (300-500) that account for a large percentage of the words in print, can be phonically regular or irregular
IQ-discrepancy approach	model assessing whether there is a significant difference between a student’s scores on a test of general intelligence and scores obtained on an achievement test; also called severe discrepancy model
metacognitive skills	strategies that help students to “think about their thinking” before, during, and after they read
nonsense words	pronounceable letter patterns that are not real words; also called pseudowords
norm	standard of performance on a test that is derived by administering the test to a large sample of students

morpheme	smallest meaningful unit of a language
morphology	study of words, how they are formed, and their relationship to other words in the same language
onset-rime awareness	awareness of the two separate elements in syllables, the consonant sounds before the vowel sound (onset) and the vowel sound and any consonant sounds that follow (rime); a subcategory of phonological awareness
orthographic processing	use of the visual system to form, store, and recall words
orthography	conventional spelling system/writing system of a language
phoneme	smallest unit of sound within spoken words
phonemic awareness	awareness of individual sounds/phonemes in spoken words; a subcategory of phonological awareness
phonics	system for approaching reading by focusing on sound-letter correspondence
phonological awareness	awareness of sounds in spoken words including syllables, onset-rimes and individual phonemes
phonological processing	use of the sounds of one's language to process spoken and written language
phonology	study of how sounds are organized and used in natural languages
prosody	reading with expression, proper intonation and phrasing
rapid automatized naming	quickly accessing presumably rote information (numbers, letters, colors, objects); also called rapid naming
receptive language	language that is heard
reliability	consistency with which a tool classifies students from one administration to the next
scope and sequence	blueprint that provides an overall outline of an instructional program including the range of teaching content and the order or sequence in which it is taught
semantics	study of the meaning of morphemes, words, phrases and sentences
sight word	word immediately recognized "on sight" regardless of whether it is phonically regular or irregular
sound-letter identification	a phoneme (sound) associated with a letter or letters (grapheme); also called sound-letter correspondence
syllable	word part that contains a vowel sound in spoken language
syllabication	act of breaking words into syllables
syntax	way in which words are put together to form phrases, clauses, or sentences
validity	extent to which a tool accurately measures the underlying construct that it is intended to measure

Appendix A: Screening for Dyslexia Flow Chart

Universal screening assessments are administered to all students (K- 3) at various points in the beginning, middle, and end of the school year, regardless of the student's performance in the classroom. Diagnostic assessments are administered to students who demonstrate poor performance in the classroom or who have not yet reached grade-level benchmark expectations on universal screening assessments. Diagnostic assessment data are used for intervention planning. Progress monitoring assessments are administered to students receiving interventions. Data are used to measure students' response to intervention and rates of improvement.

To screen students for characteristics of dyslexia, analyze data in the following areas: phonological and phonemic awareness; phonological memory; rapid automatic naming; sound letter identification; word recognition fluency, or real word reading; word recognition fluency and decoding, or nonsense word reading; encoding, or spelling; oral reading fluency; oral vocabulary versus written vocabulary; and listening comprehension versus reading comprehension. Details are included in the Universal Screening and Early identification section of this handbook.

This is the flow of recommended steps in the screening process:

If a student is at or above benchmark and average performance is observed in the classroom, then continue evidence-based core instruction (Tier 1). Further, continue with curriculum-embedded assessment and data review.

If a student is at or above benchmark but poor performance is observed in the classroom, then administer diagnostic assessments and deliver structured literacy interventions with increased intensity (Tier 2 and Tier 3) and differentiated evidence-based core instruction (Tier 1), as needed. Additionally, if intervention is provided, administer progress monitoring to determine the student's response to intervention. Include these data when screening the student for characteristics of dyslexia.

If a student is below benchmark, then administer diagnostic assessments and deliver structured literacy interventions with increased intensity (Tier 2 and Tier 3) and differentiated evidence-based core instruction (Tier 1). Additionally, administer progress monitoring to determine the student's response to intervention. Include these data when screening the student for characteristics of dyslexia.

> If progress monitoring data confirms a consistently appropriate rate of improvement, then continue structured literacy interventions and progress monitoring. However, if the student's rate of improvement is not maintained or declines over time, refer the student to the child study team for a comprehensive evaluation, which would include the data from the universal screening, diagnostic assessments, and progress monitoring, while continuing structured literacy interventions.
>
> Conversely, if progress monitoring data confirms a slow or poor rate of improvement, refer the student to the child study team for a comprehensive evaluation, which would include the data from the universal screening, diagnostic assessments, and progress monitoring, while continuing structured literacy interventions.

It is important to note that a referral to the school district's child study team can be made at any point if a disability is suspected. If dyslexia is identified, a discussion regarding the impact of the reading disability on the student's learning and expected rate of improvement is warranted to determine if the student is eligible for special education support and services under IDEA and or section 504 of the Rehabilitation Act of 1973, as amended.