

Shifting to the Science of Reading

A Discussion Guide for School and District Teams





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Introduction

[Ohio's Plan to Raise Literacy Achievement](#) calls for district and school leaders to support a partnership between families and educators in the use of assessments and standards-aligned curricular materials to implement evidence-based literacy practices and instruction to meet the needs of all learners. Equitable systems that help all learners thrive are grounded in access, opportunity, collaboration and resources efficiently matched to student needs. Implementation of Ohio's Plan to Raise Literacy Achievement requires the effort of teams of educators, families and community members working collaboratively at multiple levels to support improving student literacy outcomes.

To build educator capacity to deliver instruction that is aligned to the science of reading and the foundational components of Ohio's Plan to Raise Literacy Achievement will require leaders to provide intensive, sustained, embedded, collaborative and instructionally focused professional learning and coaching. This discussion guide can be used to guide conversations within district, building and teacher-based teams as you shift to instruction aligned with the science of reading.

Shifting to the Science of Reading

District and building leaders need a solid understanding of how students learn to read, why some have gaps, and what can be done to support all students to be readers. Research from education, cognitive science, psychology, communication science and linguistics inform the knowledge base commonly referred to as the **science of reading**. Reading science includes how the brain learns to read, the skills that are essential for reading and research on how best to teach the essential skills. Reading instruction that is explicit and systematic is effective for all students and essential for those who are at risk or who are already experiencing difficulties with reading.

As you consider shifts in your instructional approaches to align with the science of reading, consider the following information about effective literacy instruction and practices in kindergarten through grade 5 and grades 6-12.

Kindergarten-Grade 5

THE KEY EARLY LITERACY SKILLS

Research supports instruction in **vocabulary, phonemic awareness, phonics, fluency** and **comprehension** in K-5 classrooms. Many students come into kindergarten with oral language which serves as the basis for learning to read. Instruction in learning new words is a constant focus as students move from kindergarten to fifth grade. Kindergarten students should be supported to attend to the individual sounds or phonemes in spoken English. They learn to map those sounds to printed letters and letter combinations called graphemes. Once accurate word-level reading is achieved, students build the fluency in reading connected text that is necessary, but not sufficient, for reading comprehension. Instruction in these five essential early literacy skills serves as the backbone for a comprehensive schoolwide literacy plan.

ELEMENTS OF EFFECTIVE K-5 LITERACY INSTRUCTION

Effective instruction is standards-based and addresses the shifts in literacy instruction required through [Ohio's Learning Standards](#). These shifts include:

- Students practicing regularly with **complex text** and its **academic language** through independent and scaffolded opportunities, as well as being read to by another person
- Reading, writing, speaking and listening grounded in **evidence from the text**, including both literacy and informational texts
- **Building knowledge** through content-rich nonfiction
- Learning to decode accurately and fluently through **explicit and systematic foundational skill instruction** in phonemic awareness, phonics, fluency and handwriting



Table 1. Elements of K-5 Literacy Instruction

Accurate and Fluent Decoding (English Language Arts Standards for Foundational Skills)	Read, Write, Speak and Listen to Build Vocabulary, Knowledge and Motivation (Integration of English Language Arts, History/Social Studies, World Languages and Cultures and Fine Arts Standards)
<p>Explicit and systematic instruction that is differentiated to meet the needs of all learners, including learners with diverse linguistic backgrounds and disabilities, and provides ample time for practice in:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Print concepts <input type="checkbox"/> Phonemic awareness <input type="checkbox"/> Phonics <input type="checkbox"/> Fluency <input type="checkbox"/> Handwriting 	<p>Integrated content instruction is designed to build vocabulary and knowledge in specific content as determined by the local education agency whereby:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Texts are intentionally selected to build specific knowledge and vocabulary across content areas <input type="checkbox"/> Teachers read aloud challenging texts <input type="checkbox"/> In second grade and higher, students read texts at grade level, with scaffolded instructional supports to access complex texts <input type="checkbox"/> Vocabulary instruction is explicit and connected to texts <input type="checkbox"/> Writing instruction is connected to texts <input type="checkbox"/> Discussion of texts builds language comprehension, provides vocabulary practice and connects to learning standards <input type="checkbox"/> Comprehension strategy instruction is embedded in lessons focused on learning curricular content

EXPLICIT AND SYSTEMATIC READING INSTRUCTION

Reading instruction works best when it is taught directly and explicitly. Teaching methods that focus only on student development or maturation, creating a literacy-rich environment or fostering a love of reading, are insufficient and often leave many students without basic literacy competencies. Explicit instruction supports students with direct models and **scaffolds** to correctly perform the skills that lead to reading comprehension.

Table 2. Explicit Literacy Practices versus Non-Explicit Literacy Practices

Skill Area	Explicit Literacy Practices	Non-Explicit Literacy Practices
Phonological Awareness	Emphasis on the sounds in spoken language distinct from and prior to phonics instruction; phoneme awareness used as the starting point for print	Letters used as the starting point for print; reading treated as a visual skill; confusion of phonemic awareness and phonics
Phonics & Spelling	Intentional instruction in letter-sound combinations; sequenced from easier to harder for reading and spelling; application of word reading in print	Emphasis on whole to part (analytic) incidentally as students make mistakes in text or by analogy (word families); mini lessons responding to student errors
Vocabulary & Oral Language	Oral language as the reference point for print; books used for reading aloud are more challenging than those students read independently; scripted teacher dialogue	Nondirective questioning and discussion
Reading Fluency	Young students read text that is controlled to include only those phonics patterns that have been explicitly taught; fluency-building only after accuracy; high degree of teacher-student interaction with immediate corrective feedback	Emphasis on the use of leveled or predictable texts that are not controlled for decoding difficulty; error response focuses on picture cues or the use of context to determine words; miscue analysis
Reading Comprehension	Background knowledge, text structure and strategies overtly modeled and practiced in a planned progression	Activities such as choral reading



Grades 6-12

THE KEY ADOLESCENT LITERACY SKILLS

Research in secondary literacy supports instruction in **advanced word study, vocabulary, reading fluency, reading comprehension and increasing motivation** (Roberts, et. al., 2008). These skills represent what some call the “big ideas” of adolescent literacy. Many students come to middle and high school without the word recognition skills that support them in reading grade-level text with a level of automaticity that supports reading comprehension. Other students who are accurate and fluent readers may lack background knowledge, vocabulary and reading comprehension strategies that allow them to gain meaning from text. Instruction in these essential literacy components and state standards serves as the backbone for building-level improvement plans. All secondary students need proficiency in these essential skills, in addition to writing, to access complex text across content areas.

ELEMENTS OF EFFECTIVE 6-12 LITERACY INSTRUCTION

Effective literacy instruction is standards-based and addresses the shifts in literacy instruction required through [Ohio’s Learning Standards](#). These shifts include:

- Students practicing regularly with complex text and its academic language through independent and scaffolded opportunities
- Reading, writing and speaking grounded in evidence from the text, including both literary and informational texts
- Building knowledge through content-rich informational text

In addition, Ohio’s Learning Standards for literacy in the content areas reinforce these literacy shifts for teachers in all secondary subject areas, including history, social studies, science and technical subjects including mathematics. [The Standards for Literacy in History/Social Studies, Science and Technical Subjects in Grades 6-12](#) emphasize the role that content-area teachers have in students’ literacy development and the value of literacy in supporting learning in content areas. These standards outline the specificity needed to prepare students for successful postsecondary experiences as they encounter complex text across content areas.

EXPLICIT AND SYSTEMATIC READING INSTRUCTION

Reading instruction works best when it is taught directly and explicitly. Teaching methods that focus only on student development or maturation, creating a literacy-rich environment or fostering a love of reading, are insufficient and often leave many students without basic literacy competencies. Explicit instruction supports students with direct models and **scaffolds** to correctly perform the skills that lead to reading comprehension.

Table 2. Explicit and Non-Explicit Literacy Practices Checklist

Essential Skill Area	If these non-explicit practices are currently used...	...consider making these adjustments to a more explicit instructional approach
Phonics and Advanced Word Study	<ul style="list-style-type: none"> • Taught whole to part (analytic) incidentally as students make mistakes in text or by analogy (word families) • Focus on utilizing context to determine meaning of multisyllabic words • Mini lessons responding to student errors 	<ul style="list-style-type: none"> • Intentional instruction in letter-sound combinations and connection between sound and print • Sequenced from easier to harder for reading and spelling • Application of word reading in print • Attention to word origin and morphology
Vocabulary and Oral Language	<ul style="list-style-type: none"> • Modeling reading aloud from the leveled books students will read • Nondirective questioning and discussion 	<ul style="list-style-type: none"> • Oral language as the reference point for print • Books used for reading aloud are more challenging than those students read independently • Scripted teacher dialogue



Text Reading Fluency	<ul style="list-style-type: none"> • Use of leveled or predictable texts that are not controlled for decoding difficulty • Error response focuses on picture cues or the use of context to determine words • High degree of independent silent reading • Miscue analysis 	<ul style="list-style-type: none"> • Young students read text that is controlled to include only those phonics patterns that have been explicitly taught • Fluency building only after accuracy • High degree of teacher-student interaction with immediate corrective feedback
Reading Comprehension	<ul style="list-style-type: none"> • Emphasis on teacher modeling (think aloud) • Activities such as choral reading and guided reading • Student book choice 	<ul style="list-style-type: none"> • Background knowledge, text structure and strategies overtly modeled and practiced in a planned progression

District Leadership Teams

Pre-Kindergarten-Grade 12

ROLE AND FUNCTION

The purpose of the district leadership team is to use district-level data to design and evaluate a district improvement plan that will be implemented in each building. The team should view challenges and potential actions through a PreK-12 lens. Primary areas of consideration for the district leadership team include funding, professional learning, policy, staffing and community engagement. District planning for literacy improvement should be integrated within any state-required improvement plans and local literacy development.

The district leadership team is not just about creating a vision of the work but must also monitor its own effectiveness as a team. The district leadership team considers district-level data and the needs articulated by each building leadership team, then allocates resources to remove barriers to implementation of evidence-based practices at the building level. Clear communication is essential between the district team and the building teams. District teams must have a plan for collecting information from the building staff, from families and from the community and for communicating the district’s vision, improvement plan and accountability data to all stakeholders.

Effective district leadership teams engage in the following actions to improve reading outcomes:

1. Receive training and coaching in collaborative problem solving, effective reading instruction, assessment, multi-tiered system of support
2. Collaborate in the identification and selection of high-quality instructional materials
3. Create a comprehensive assessment system that is implemented within and across buildings
4. Use assessment data in the collaborative problem-solving process to design, implement and evaluate a district improvement plan aligned to the state plan for improving literacy
5. Coordinate the delivery of district-wide professional development and coaching
6. Communicate district school improvement goals and actions to buildings and hold them accountable for aligning building plans to these
7. Align district policies and budget to reading improvement plans
8. Align district policies and resources to support family engagement to support literacy, and
9. Gather information from and communicate with building teams and the community.

SAMPLE DISCUSSION QUESTIONS

1. What is the district’s vision, mission and beliefs? How do literacy improvement efforts align with those?
2. What goals for district improvement have been set around academic achievement and literacy? What is currently being implemented to meet those goals?



3. Why is it important to have a shared understanding of the body of evidence referred to as the science of reading? How can teachers be supported by expanding their knowledge of the science of reading?
4. What structures or systems are currently in place to support the enhancement of teacher knowledge aligned to best practices in effective literacy instruction?
5. What professional learning have educators and administrators engaged in around effective literacy instruction? The [District and Building Leadership Team Self-Assessment of Professional Learning Topics](#) tool provides a checklist of professional learning topics to determine what has been completed and what needs completed.
6. How can the district measure the impact of its vision for reading instruction on student outcomes, and what student data should the district collect to inform its ongoing efforts?

Building Leadership Teams

Kindergarten-Grade 5

ROLE AND FUNCTION

The Building Leadership Team is the driving force behind literacy improvement. Team members have the most direct contact with the educators implementing improvement processes and practices. The purpose of the building leadership team is to share collaborative responsibility in guiding the development and implementation of building improvement plans and ensure the improvement process yields sustainable improvements in student reading outcomes.

The primary role of the building leadership team is to use building data in the collaborative problem-solving process to develop, implement and evaluate the building improvement plan. The building leadership team is responsible for developing the capacity of the school to implement and sustain literacy improvement by coordinating and guiding design of the three tiers of instructional supports and removing barriers to implementing instruction. This team is also responsible for developing family engagement strategies that are aligned with district goals and integrated in the building improvement plan.

The building leadership team analyzes universal screening data to measure the effectiveness of the system. The goal is for 100% of students to meet grade level benchmarks, but an indicator of a healthy Tier 1 system is when at least 80% of students achieve or are above the benchmark through differentiated core instruction. If fewer than 80% of students are performing at or above benchmark on universal screeners at each grade level, the building leadership team will plan for grade level universal instructional changes that should include professional development for teachers and use of high-quality instructional materials. Adult implementation data should also be analyzed to determine necessary systemic changes.

SAMPLE DISCUSSION QUESTIONS

1. How will the foundational skills be taught explicitly and systematically with a sequential scope and sequence to prepare students to decode accurately and fluently? Are there sufficient connected texts (decodable texts) for students to practice reading phonics patterns to fluency, including students who may need additional practice opportunities?
2. How are text sets leveraged to build students' language skills, vocabulary and background knowledge while also ensuring equity in access to rigorous content?
3. In grades 2 and up, how do students regularly engage with challenging, grade level complex texts (including content rich nonfiction) to build knowledge and vocabulary? How will reading, writing, speaking and listening be grounded in evidence from the text? How are read alouds of a variety of complex, challenging texts used to build knowledge, vocabulary, and reading comprehension skills for young children?
4. How will intervention be scheduled, planned, implemented and progress monitored? When is it time to release a student from the intervention or change the intervention approach or intensity?



5. How do teams, including both general education teachers and intervention specialists, collaborate to plan and evaluate instruction?
6. Are at least 80% of students meeting grade level expectations in literacy with core instruction alone? If not, what changes need to be made in core instruction (time, what is taught, quality of instruction)? What instructional materials and professional learning are needed to improve core instruction?
7. How are families engaged in supporting literacy development?

Grades 6-12

ROLE AND FUNCTION

The purpose of the building leadership team is to guide the development and implementation of building improvement plans and ensure sustainable improvements in student literacy outcomes.

This team draws on data to select strategies and resources, including assessments and interventions, that support student literacy across content areas. The building leadership team is responsible for developing capacity through professional learning and coaching to implement and sustain literacy improvement. Their focus should include improving all three tiers of instructional supports and removing barriers to implementing necessary instructional strategies and resources.

Building leadership teams also serve a critical role in ensuring clear lines of communication between district-level teams and teacher-based teams, and educators and caregivers.

Effective secondary building leadership teams engage in the following actions to improve literacy outcomes:

1. Receive training and coaching in collaborative problem-solving, effective reading instruction, assessment, the schoolwide literacy model and multi-tiered system of supports
2. Implement the district's comprehensive assessment system
3. Use assessment data in the collaborative problem-solving process to design, implement and evaluate a building-level improvement plan aligned to the district plan
4. Analyze and guide the implementation of all three tiers, including analyzing, implementing and purchasing instructional materials
5. Coordinate the delivery of schoolwide professional learning and coaching
6. Communicate building literacy improvement goals and actions to the staff and community and share building needs with the district team
7. Align building policies and budget to the building-level improvement plan
8. Engage caregivers and community members in reciprocal communication

SAMPLE DISCUSSION QUESTIONS

1. How is each teacher in the building, including all content teachers, utilizing effective instructional strategies and resources to promote literacy in their classrooms?
2. How does the building's master schedule allow for students to access rigorous core instruction in addition to targeted and intensive intervention in literacy skills when needed?
3. What process is used to screen students for reading difficulties?
4. How are diagnostic assessments used to identify the specific underlying causes of student reading difficulties? How is this information used to connect students with the appropriate intervention, based on a reader profile?
5. What steps are taken and resources used to monitor progress for students receiving reading interventions? What indicators must be met to release a student from the intervention or change the intervention approach or intensity?
6. How are staff professional learning needs identified? Is coaching used to promote the implementation of professional learning? How? Are walkthroughs used to measure the implementation of professional learning in classrooms? How?



7. What communication plan(s) ensure that the work of teacher-based teams and district-level teams are coordinated?
8. How are budget priorities for the building aligned with the reading plan?

Teacher-Based Teams

Kindergarten-Grade 5

ROLE AND FUNCTION

Teacher-based teams are needed to implement two critical functions of a multi-tiered system of support: 1. Using collaborative problem-solving to assess system needs, analyze data and plan support at all three tiers of instruction in each grade 2. Using individual student data in the collaborative problem-solving process to design, implement and evaluate interventions for individual students who receive intensive reading intervention.

The first critical function of teacher-based teams, performed by grade-level or multi-grade level planning teams, is to analyze student and system-level issues so instruction can be aligned to student needs. It is the responsibility of this team to contextualize the building improvement plan for the needs of students in their grade level. Specifically, teacher-based teams use universal screening data to design, implement and evaluate instruction in core instruction (Tier 1) and targeted intervention (Tier 2).

The second critical function of teacher-based teams, performed by student-level teams, is to use student screening, diagnostic and progress monitoring data in the collaborative problem-solving process to design, implement and evaluate instruction designed to catch students up to grade level. Student-level teams plan the individualized instructional support that characterizes intensive intervention (Tier 3). A key role is coordination of instruction across universal, supplemental and intensive instruction, particularly as different personnel are involved in providing those levels of support.

DISCUSSION QUESTIONS

1. How is core instruction differentiated to ensure sufficient guided practice with literacy skills?
2. How do teachers share the strategies they are using in core instruction, based on professional learning and using high quality, grade level, instructional materials?
3. What additional support / professional learning do the teachers need to appropriately teach grade level standards (that can be communicated to the building leadership team)?
4. How is the literacy block structured at each grade level to ensure that both word recognition and language comprehension are taught explicitly, aligned with the changing emphasis of big ideas of reading?
5. What is the formal process for determining students' intervention or differentiated tier one instructional needs, using screening, diagnostic, and classroom data?
6. How can the data be used to determine the reader profile of struggling readers for the purpose of interventions, and also determine the starting point of the instruction in interventions (for example, short vowels or digraphs)?
7. What is the documented process for determining when students will enter or exit the interventions?
8. How is progress monitoring data used to determine if a student growth is accelerating sufficient to close the gap in literacy skills and meet the grade level benchmark? What changes need to be made in the intervention to intensify instruction if there is not accelerated growth?
9. What is the interventions platform being used in Tier 2 and Tier 3 based on the reader profile of students? How are the necessary skills being taught explicitly and systematically with sufficient practice to ensure mastery?



Grades 6-12

ROLE AND FUNCTION

Effective teacher-based teams (TBTs) promote collaboration among staff and consistency within the building. Teacher-based teams can be formed by members of a content or disciplinary department, grade-based or across departments. They collaborate to assess system needs, analyze data and plan for the use of evidence-based instructional strategies within and across all content areas. They also use student data to implement and evaluate reading interventions. Teacher-based teams maintain processes for communication to flow to and from building and district leadership, and to and from families and the community.

All core subject areas should be involved in teacher-based teams. It is important to consider how to select common evidence-based literacy practices and to implement them in each subject area or discipline, in addition to discipline-specific practices.

Team membership for this purpose should include the following:

- All general and special education teachers at each grade level in the relevant content area
- Building principal or assistant principal
- Paraprofessionals
- Related services personnel
- Building, district and regional coaches

SAMPLE DISCUSSION QUESTIONS

1. How are literacy instructional strategies and resources implemented across content areas? What are the common approaches or strategies shared by all educators?
2. How are intervention periods designed to provide targeted support to each student based on their reading difficulties, rather than general homework help?
3. What is the process for developing an intervention schedule that provides all students with the support they need while not removing them from core instruction?
4. What protocols are in place to ensure that teacher-based team meetings help members to focus on the student needs indicated by student assessment data?
5. What mechanisms are in place to help team members support one another by providing formative feedback? This could include things like common professional learning, peer coaching or observation protocols.
6. How are teacher-based team members supported to understand how to access, analyze and use data to inform decisions about student intervention and instruction?
7. What is the team's approach to support individual students based on the needs indicated by assessment data?
8. What mechanisms are in place to ensure consistent and clear communication to district/building leadership teams, caregivers and other stakeholders who play a part in promoting student success?

Additional Resources

For more information on operationalizing Ohio's Plan to Raise Literacy Achievement and the science of reading in your school or district, see [Implementing Ohio's Plan to Raise Literacy Achievement: Resources for School Leaders](#) and [Literacy Academy on Demand](#).