

A Guide to Selecting and Applying Evidence-Based Practices to

Reading

USDE guidance defines four levels of evidence for evaluating the strength of evidence indicating the effectiveness of a given program or intervention. These range from “Strong Evidence” to “Demonstrates a Rationale.” Throughout this guide, these levels of evidence will be referred to as “Tier 1,” “Tier 2,” etc. as shown in the table below.

Tier	Level of Evidence	Description
1	Strong Evidence	Supported by one or more well-designed and well-implemented randomized control experimental studies .
2	Moderate Evidence	Supported by one or more well-designed and well-implemented quasi-experimental studies .
3	Promising Evidence	Supported by one or more well-designed and well-implemented correlational studies .
4	Demonstrates a Rationale	Practices that have a well-defined logic model or theory of action , are supported by research, and have some effort underway to determine their effectiveness.

The Tables below are organized into four areas of activity:

1. Program Planning
2. Classroom Strategies
3. Professional Development
4. Extended Learning Settings
5. Eligible Interventions

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Reading Programs/Interventions and Levels of Evidence

1. Program Planning

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Implement a specific set of core in-school strategies and practices to support reading.</p> <p><i>Implementation of a set of specific instructional and classroom practices is effective in closing the reading achievement gap. Strategies include, but are not limited to:</i></p> <ul style="list-style-type: none"> • direct, explicit instruction in phonics, vocabulary, and fluency in the primary grades; • explicit instruction in reading comprehension strategies in the upper grades (e.g., inferencing, questioning, and visualizing); • one-on-one tutoring in phonics, especially when provided by teachers; and • explicit vocabulary instruction for English learners. 	<p>PreK-3 4-5 6-8 9-12</p>	<p>Tier 1, Strong</p> <p>Source: <i>School-Based Strategies for Narrowing the Achievement Gap</i>. Arlington, VA: Hanover Research (2017).</p> <p>https://www.wasa-oly.org/WASA/images/WASA/1.0%20Who%20We%20Are/1.4.1.6%20SIRS/Download_Files/LI%202017/May-%20School-Based%20Strategies%20for%20Narrowing%20the%20Achievement%20Gap.pdf</p>
<p>Focus on basic cognitive and linguistic processes, intervention, assessment, and professional development.</p> <p><i>To become successful readers, students at risk of reading difficulty and/or reading disability require support in basic cognitive and linguistic processes such as oral language skills and vocabulary, as well as interventions with increased intensity at kindergarten and grade 1. Other practices, such as universal screening, progress monitoring, and professional development in research-based instructional practices improve outcomes for these students.</i></p>	<p>PreK-3 4-5</p>	<p>Tier 1, Strong</p> <p>Source: Connor, C.M., Alberto, P.A., Compton, D.L., O'Connor, R.E. (2014). <i>Improving Reading Outcomes for Students with or at Risk for Reading Disabilities: A Synthesis of the Contributions from the Institute of Education Sciences Research Centers</i> (NCSE 2014-3000). Washington, DC: National Center for Special Education Research, Institute of Education Sciences, U.S. Department of Education.</p> <p>https://ies.ed.gov/ncser/pubs/20143000/pdf/20143000.pdf</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Implement a comprehensive instructional system with district-level and school-level supports.</p> <p><i>Secondary students who are struggling readers require a systemic approach to literacy instruction that will help them build content knowledge while improving their reading skills. Effective elements of the system include:</i></p> <ul style="list-style-type: none"> • <i>prioritized, critical content instruction for students regardless of literacy levels;</i> • <i>embedded reading strategy instruction within and across classes;</i> • <i>intensive, accelerated literacy intervention that builds mastery of entry-level literacy skills and provides explicit strategy instruction; and</i> • <i>therapeutic interventions that support mastery of language underpinnings related to the curriculum content.</i> 	<p>6-8</p>	<p>Tier 3, Promising</p> <p>Source: McPeak, L., Trygg, L. (2007). <i>The Secondary Literacy Instruction nad Intervention Guide: Helping School Districts Transform in to Systems that Produce Life-Changing Results for All Children</i>. Mill Valley, CA: Stupski Foundation.</p> <p>https://rti4success.org/sites/default/files/secondary_literacy_instruction_intervention_guide.pdf</p>
<p>Support English learners' understanding of subject matter (i.e., history, science, literature) using specific practices.</p> <p><i>English learners require long-term, specific, explicit instruction in language development and reading skills. Effective practices include:</i></p> <ul style="list-style-type: none"> • <i>redesign all classes for explicit language development, with a focus on comprehension, vocabulary development, and advanced grammatical structures needed to comprehend and produce academic language; and</i> • <i>design lessons around carefully structured language objectives for integrating subject matter content, focusing on content-related reading and writing skills.</i> 	<p>6-8 9-12</p>	<p>Tier 1, Strong</p> <p>Source: <i>Effective Interventions for Long-Term English Learners</i>. Arlington, VA: Hanover Research (2017).</p> <p>https://portal.ct.gov/-/media/SDE/ESSA%20Evidence%20Guides/Effective Interventions for Long-Term English Learners</p>

2. Classroom Strategies

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Design and provide specific and systematic phonemic awareness and phonics instruction.</p> <p><i>To become successful readers, all young students require:</i></p> <ul style="list-style-type: none"> • <i>focused and explicit phonemic awareness instruction on one or two skills rather than a combination of three or more;</i> • <i>phonemic awareness instruction in small groups rather than individually or in whole classroom settings; and</i> • <i>systematic phonics instruction (a series of lessons versus intermittent instruction) to impact children's growth in reading.</i> <p>Note: <i>The research panel identified these practices for students in grades K-2 only.</i></p>	<p>K-2</p>	<p>Tier 1, Strong</p> <p>Source: Langenberg, D. et al. (2000) <i>Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction</i>. Washington, DC: National Institute of Child Health and Human Development.</p> <p>https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/report.pdf</p>
<p>Develop prekindergarten and kindergarten students' language skills and comprehension in listening and reading.</p> <p><i>To become successful readers, students in grades PreK-3 benefit from the following language development practices:</i></p> <ul style="list-style-type: none"> • <i>active engagement in defining new words;</i> • <i>focusing on the meaning of texts during pre-reading;</i> • <i>making connections between prior knowledge and texts; and</i> • <i>focusing on world knowledge and higher-order thinking.</i> 	<p>PreK-3</p>	<p>Tier 3, Promising</p> <p>Source: Chiang, H., Walsh, E., Shanahan, T., Gentile, C., Maccarone, A., Waits, T., Carlson, B., Rikoon, S., Rimdzius, T. (2017). <i>An Exploration of Instructional Practices that Foster Language Development and Comprehension: Evidence from PreKindergarten through Grade 3 in Title I Schools</i>. Washington, DC: NCEE.</p> <p>https://ies.ed.gov/ncee/pubs/20174024/</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Support English learners' literacy instruction in grades 6-12.</p> <p><i>To improve learning outcomes, English learners in grades 6-12 benefit from the following instructional practices:</i></p> <ul style="list-style-type: none"> • <i>explicit vocabulary instruction;</i> • <i>direct and explicit comprehension strategy instruction; and</i> • <i>individualized interventions by trained literacy specialists.</i> 	<p>6-8 9-12</p>	<p>Tier 1, Strong</p> <p>Source: <i>Instructional Strategies to Support Underrepresented Students</i>. Arlington, VA: Hanover Research (2017).</p> <p>https://portal.ct.gov/-/media/SDE/ESSA%20Evidence%20Guides/Instructional_Strategies_to_Support_Underrepresented_Students</p>
<p>Develop early literacy skills in K-3 students who lag behind their peers.</p> <p><i>Students in grades K-3 who are reading below grade level require a specific set of practices to improve reading outcomes. Practices include:</i></p> <ul style="list-style-type: none"> • <i>dedicated time each day for explicitly guiding students' reading activities; and</i> • <i>dedicated time each day for targeted and purposeful instruction in one or more of the core elements of literacy foundations.</i> 	<p>K-3</p>	<p>Tier 2, Moderate</p> <p>Source: <i>Early Skills and Predictors of Academic Success</i>. Arlington, VA: Hanover Research (2016).</p> <p>https://portal.ct.gov/-/media/SDE/ESSA%20Evidence%20Guides/Early_Skills_and_Predictors_of_Academic_Success</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Target language skills in prekindergarten and kindergarten.</p> <p><i>Early vocabulary development is a critical precursor to literacy achievement. Young students in PreK and Kindergarten benefit from the following practices:</i></p> <ul style="list-style-type: none"> • <i>building vocabulary;</i> • <i>support in developing syntax; and</i> • <i>building discourse abilities.</i> <p>Note: <i>This research provides evidence for grades Pre K and Kindergarten in high poverty schools.</i></p>	<p>PreK-K</p>	<p>Tier 2, Moderate</p> <p>Source: Hemphill, L., Tivnan, T. (2008). "The Importance of Early Vocabulary for Literacy Achievement in High-Poverty Schools." <i>Journal of Education for Students Placed at Risk</i>, 13, pp. 426-451.</p> <p>https://www.researchgate.net/publication/248940899_The_Importance_of_Early_Vocabulary_for_Literacy_Achievement_in_High-Poverty_Schools</p>
<p>Provide reading instruction for special education adolescent readers.</p> <p><i>Adolescent readers who struggle with reading and/or receive special education services benefit from a specific set of instructional practices, including word study, fluency and vocabulary building, and reading comprehension strategies.</i></p>	<p>4-5 6-8</p>	<p>Tier 1, Strong</p> <p>Source: Scammacca, N.; Robers, G.; Vaughn, S.; Edmonds, M.; Wexler, J.; Reutebuch, C.K.; Torgesen, J. (2007). <i>Interventions for Adolescent Struggling Readers: A Meta-Analysis with Implications for Practice</i>. Portsmouth, NH: Center on Instruction.</p> <p>https://eric.ed.gov/?id=ED521837</p>

3. Professional Development

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Instructional coaching is an effective model of school-based professional development.</p> <p><i>The effects of instructional coaching are not thought to be immediate but transform pedagogy over time.</i></p>	<p>K-6</p>	<p>Tier 2, Moderate</p> <p>Source: Teemant, A. (2014). "A Mixed-Methods Investigation of Instructional Coaching for Teachers of Diverse Learners." <i>Urban Education</i>, 49(5), pp. 574-604.</p> <p>https://portal.ct.gov/-/media/SDE/ESSA%20Evidence%20Guides/A_Mixed-Methods_Investigation_of_Instructional_Coaching_for_Teachers_of_Diverse_Learners</p>
<p>Provide mentors for novice teachers.</p> <p><i>Reading achievement is higher among students taught by teachers with one to three years of experience who are mentored by retired teachers.</i></p>	<p>1-5</p>	<p>Tier 2, Moderate</p> <p>Source: DeCesare, D.; McClelland, A.; Randel, B. <i>Impacts of the Retired Mentors for New Teachers Program</i>. Washington, DC: NCEE (2017).</p> <p>https://ies.ed.gov/ncee/edlabs/regions/central/pdf/REL_2017225.pdf</p>
<p>Create an environment that supports in-school collaboration time.</p> <p><i>Provide opportunities for teachers to collaborate in a manner that is well planned; provide opportunities for hands-on experiences; encourage teachers to purposefully and constructively direct their professional growth, and contribute to the growth of their colleagues.</i></p>	<p>K-3 4-5 6-8 9-12</p>	<p>Tier 4, Demonstrates a Rationale</p> <p>Source: <i>Teachers Know Best: Teachers' Views on Professional Development</i>. Bill and Melinda Gates Foundation (2014).</p> <p>https://ies.ed.gov/ncee/edlabs/regions/central/pdf/REL_2017225.pdf</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Provide opportunities for effective teacher learning.</p> <p><i>Professional learning should be continuous and job-embedded, use a variety of data sources to plan and assess the professional learning, and include teachers in decision-making about their own professional learning.</i></p>	<p>K-3 4-5 6-8 9-12</p>	<p>Tier 4, Demonstrates a Rationale</p> <p>Source: <i>The State of Teacher Professional Learning: Results from a Nationwide Survey</i>. Washington, DC: NEA (2016).</p> <p>https://dashboard.learningforward.org/wp-content/uploads/sites/12/2017/08/the-state-of-teacher-professional-learning-2017.pdf?_ga=2.217100630.1391316811.1507743272-701925348.1507743272</p>

4. Extended Learning Settings

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Implement strategies that support parents and families in promoting reading.</p> <p><i>The collective practices include create literacy-friendly home environments for conducting ongoing and engaging conversations with their children; set and convey high expectations for children's learning; make reading enjoyable; use parents' home language.</i></p>	<p>PreK-3</p>	<p>Tier 4, Demonstrates a Rationale</p> <p>Source: Reade, A. <i>Supporting Your Child's Literacy Development at Home</i>. Washington, DC: NCIL (2017).</p> <p>https://improvingliteracy.org/brief/supporting-your-childs-literacy-development-home</p>
<p>Use formal and informal assessment data to inform academic instruction.</p> <p><i>Identify and use assessments that gather the appropriate information for determining and/or adapting instruction.</i></p>	<p>K-3 4-5 6-8</p>	<p>Tier 4, Demonstrates a Rationale</p> <p>Source: <i>Structuring Out-of-School Time to Improve Academic Achievement</i>. Washington, DC: NCEE (2009).</p> <p>https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/ost_pg_072109.pdf</p>
<p>Use one-on-one tutoring if possible; otherwise, break students into small groups.</p> <p><i>Support summer learning by providing individualized instruction based on students' academic needs and conduct assessments of progress.</i></p>	<p>K-3 4-5 6-8</p>	<p>Tier 4, Demonstrates a Rationale</p> <p>Source: <i>Structuring Out-of-School Time to Improve Academic Achievement</i>. Washington, DC: NCEE (2009).</p> <p>https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/ost_pg_072109.pdf</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Provide professional development and ongoing instructional support to all instructors.</p> <p><i>Use experienced teachers to deliver instruction, provide ongoing coaching for novice teachers assigned to deliver instruction, and monitor the quality of instruction to identify additional professional learning needs of teachers.</i></p>	<p>K-3 4-5 6-8</p>	<p>Tier 4, Demonstrates a Rationale</p> <p>Source: <i>Structuring Out-of-School Time to Improve Academic Achievement</i>. Washington, DC: NCEE (2009).</p> <p>https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/ost_pg_072109.pdf</p>

5. Eligible Interventions*

*The curricula listed in the table below are considered “Evidence-Based Interventions” and are therefore eligible for support with Federal Funds. This list is for informative purposes only. Inclusion in this list does not represent an endorsement on the part of the State of Oklahoma or any of its agencies, nor is this list to be considered exhaustive.

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Literacy Express</p> <p><i>Preschool curriculum for children aged three to five, primarily intended to improve language development and early literacy.</i></p>	<p>PreK</p>	<p>Tier 1, Strong</p> <p>What Works Clearinghouse Intervention Report: Literacy Express (ed.gov)</p>
<p>Reading Recovery</p> <p><i>A short-term tutoring intervention that provides on-on-one tutoring to first-grade students who are struggling in reading and writing.</i></p>	<p>1</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: Reading Recovery (ed.gov)</p>
<p>READ 180</p> <p><i>A reading program designed for struggling readers who are reading two or more years below grade level. It combines online and direct instruction, student assessment, and teacher professional development.</i></p>	<p>4-10</p>	<p>What Works Clearinghouse Intervention Report: READ 180® (ed.gov)</p>
<p>Sound Partners</p> <p><i>Phonics-based tutoring program for students grades K-3 with below-average reading skills. Designed to be used by tutors without professional training, consists of scripted lessons in phonics skills.</i></p>	<p>K-1</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: What Works Clearinghouse Intervention Report: Adolescent Literacy, Sound Partners (ed.gov)</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Success for All</p> <p><i>A whole-school reform model for students in Pre-K through 8th grade, including a literacy program, quarterly assessments, social-emotional development, computer-assisted tutoring tools, family support teams, a facilitator who works with school personnel, and extensive training for intervention teachers.</i></p>	<p>K-4</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: Success for All® (ed.gov)</p>
<p>Daisy Quest</p> <p><i>Interactive, computer-based program for children age 3-7. Focuses on phonological awareness.</i></p>	<p>PreK</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: DaisyQuest for Preschool Children (ed.gov)</p>
<p>Earobics</p> <p><i>An interactive software that provides students in Pre-K through 3rd grade with individual, systematic instruction in early literacy skills.</i></p>	<p>PK-3</p>	<p>What Works Clearinghouse Intervention Report: Earobics (ed.gov)</p>
<p>Intelligent Tutoring for Structure Strategy (ITSS)</p> <p><i>Web-based supplemental program for students in grades K-8 targeting literacy skills needed to understand factual texts. Teaches students to 1) make comparisons, 2) present problems and solutions, 3) link causes and effects, 4) present sequences, 5) describe people, places and things.</i></p>	<p>4-7</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: : WWC 2020009 Web-Based Intelligent Tutoring for the Structure Strategy Intervention Report</p>
<p>Stepping Stones to Literacy</p> <p><i>Supplemental curriculum designed for Pre-K and Kindergarteners who have trouble reading. Program consists of twenty-five daily lessons.</i></p>	<p>PreK-K</p>	<p>Tier 1, Strong</p> <p>What Works Clearinghouse Intervention Report: Stepping Stones (ed.gov)</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Lindamood Phoneme Sequencing</p> <p><i>Promotes an understanding of the relationship between pronunciation, sound, and mouth movement. Based on sequence of phonics, reading, and spelling activities.</i></p>	<p>K-3</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Evidence Snapshot: WWC Lindamood Phoneme Sequencing® (LiPS®) (ed.gov)</p>
<p>Fast ForWord</p> <p><i>A computer-based reading program intended to help students develop and strengthen cognitive skills necessary for successful reading and learning.</i></p>	<p>K-10 (studies refer to use with students K-3)</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: Fast ForWord (ed.gov)</p>
<p>Cooperative Integrated Reading and Composition (CIRC)</p> <p><i>Comprehensive reading and writing program. Includes story-related activities, direct instruction in reading comprehension, and integrated reading and language arts activities. Includes teacher instruction, team practice, peer assessment, team/partner recognition. Spanish language version available for grades 2-5.</i></p>	<p>2-6</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: WWC Cooperative Integrated Reading and Composition® (CIRC®)</p>
<p>Start Making a Reader Today (SMART)</p> <p><i>Volunteer tutoring program designed as low-cost, easy-to-implement intervention. Volunteer tutors go into schools with at least 40% free and reduced lunch counts and read one-on-one with students twice a week.</i></p>	<p>1-2</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: Start Making a Reader Today® (SMART®) (ed.gov)</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Read Naturally</p> <p><i>An elementary and middle school supplemental reading program designed to improve reading fluency. Can be used in a variety of settings, including classrooms, resource rooms, or computer or reading labs.</i></p>	<p>2-6</p>	<p>Tier 2, Moderate</p> <p>What Works Clearinghouse Intervention Report: Read Naturally (ed.gov)</p>
<p>Doors to Discovery</p> <p><i>A preschool literacy curriculum using eight thematic units of activities to help children build fundamental early literacy skills in oral language, phonological awareness, concepts of print, alphabet knowledge, writing, and comprehension.</i></p>	<p>PreK</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Doors to Discovery™ (ed.gov)</p>
<p>Lexia Reading</p> <p><i>A computerized reading program that provides phonics instruction and gives students independent practice in basic reading skills.</i></p>	<p>K-1</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Lexia Reading (ed.gov)</p>
<p>Headsprout Early Reading</p> <p><i>An online supplemental early literacy curriculum consisting of eighty 20-minute animated episodes designed to teach phonemic awareness, phonics, fluency, vocabulary, comprehension.</i></p>	<p>PreK</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Headsprout® Early Reading (ed.gov)</p>
<p>Early Intervention in Reading (EIR)</p> <p><i>Program designed to provide extra instruction to students at risk of failing. Teachers are trained for 9 months using workshops and an Internet-based professional development program.</i></p>	<p>1</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Early Intervention in Reading® (ed.gov)</p>

Evidence-Based Practice and Rationale	Grade Band	Level of Evidence and Source
<p>Spelling Mastery</p> <p><i>Designed to explicitly teach spelling skills to students in grades 1-6, including phonemic, morphemic, and whole-word strategies.</i></p>	<p>2-4</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Spelling Mastery (ed.gov)</p>
<p>Accelerated Reader</p> <p><i>A computerized supplementary reading program that provides guided reading instruction to students in grades K-12. Quiz performance allows teachers to monitor student progress and to identify students who may need additional reading assistance.</i></p>	<p>K-8</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Accelerated Reader™</p>
<p>Project CRISS</p> <p><i>A professional development program for teachers that aims to improve reading, writing, and learning for students in grades 3-12. The implementation of Project CRISS does not require a change in the curriculum or materials being used in the classroom, but instead calls for a change in teaching style to focus on three primary concepts derived from cognitive psychology and brain research.</i></p>	<p>3-12</p>	<p>Tier 3, Promising</p> <p>What Works Clearinghouse Intervention Report: Project CRISS® (CReating Independence through Student-owned Strategies)</p>