

WHAT IS AN “EVIDENCE-BASED” INTERVENTION?

(from section 8101(21)(A) of the ESEA)

“...the term ‘evidence-based,’ when used with respect to a State, local educational agency, or school activity, means an activity, strategy, or intervention that – demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes based on –

1. **strong evidence** from at least one well-designed and well-implemented experimental study;
2. **moderate evidence** from at least one well-designed and well-implemented quasi-experimental study; or
3. **promising evidence** from at least one well-designed and well-implemented correlational study with statistical controls for selection bias; or
4. **demonstrates a rationale** based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes; and includes ongoing efforts to examine the effects of such activity, strategy, or intervention.”

Reading

Evidence-based practices from [practice guides](#) published by What Works Clearinghouse

Grades	Evidence-Based Practices	ESSA Tiers
PK	Build children’s knowledge of letters and sounds .	1
PK	Use shared book reading to develop children’s language, knowledge of print features, and knowledge of the world.	1
PK–3	Develop awareness of the segments of sounds in speech and how they link to letters.	1
PK–3	Teach students to decode words, analyze word parts, and write and recognize words.	1
PK–3	Ensure that each student reads connected text every day to support reading accuracy, fluency, and comprehension.	2
PK–3	Teach students academic language skills , including the use of inferential and narrative language, and vocabulary knowledge.	4
K–2	Leveled Literacy Intervention (LLI) is a short-term, supplementary, small-group literacy intervention designed to help struggling readers achieve grade-level competency. The intervention provides explicit instruction in phonological awareness, phonics, fluency, vocabulary, reading comprehension, oral language skills, and writing. LLI helps teachers match students with texts of progressing difficulty and deliver systematic lessons targeted to a student’s reading ability. The developer recommends using Fountas & Pinnell Benchmark Assessment System (BAS) to determine the appropriate independent and instructional levels for each student. The program is intended to be delivered 30 minutes a day, 5 days a week, for 12–18 weeks. The developer recommends that teachers use the LLI Primary Systems with groups of three students. <i>Reading Achievement - Tier 1 Strong Reading Fluency - Tier 3 Promising</i>	1 & 3
K–3 RTI	Screen all students for potential reading problems at the beginning of the year and again in the middle of the year. Regularly monitor the progress of students at risk for developing reading disabilities.	3
K–3 RTI	Provide time for differentiated reading instruction for all students based on assessments of students’ current reading level.	3
K–3 RTI	Provide intensive, systematic instruction on up to three foundational reading skills in small groups to students who score below the benchmark score on universal screening. Typically, these groups (tier 2) meet between three and five times a week, for 20 to 40 minutes.	3

K–3 RTI	Monitor the progress of tier 2 students at least once a month . Use these data to determine whether students still require intervention. For those students still making insufficient progress, schoolwide teams should design a tier 3 intervention plan.	4
K–3 RTI	Provide intensive instruction on a daily basis that promotes the development of the various components of reading proficiency to students who show minimal progress after reasonable time in tier 2 small group instruction (tier 3).	4
K–3	Teach students how to use reading comprehension strategies .	3
K–3	Teach students to identify and use the text’s organizational structure to comprehend, learn, and remember content.	3
K–3	Guide students through focused, high-quality discussion on the meaning of text.	4
K–3	Select texts purposefully to support comprehension development.	3
K–3	Establish an engaging and motivating context in which to teach reading comprehension.	3
4–9	Build students' decoding skills so they can read complex multisyllabic words.	1
4–9	Provide purposeful fluency-building activities to help students read effortlessly.	1
4–9	Routinely use a set of comprehension-building practices to help students make sense of the text. <div> Part 3A. Build students’ world and word knowledge so they can make sense of the text. Part 3B. Consistently provide students with opportunities to ask and answer questions to better understand the text they read. Part 3C. Teach students a routine for determining the gist of a short section of text. Part 3D. Teach students to monitor their comprehension as they read. </div>	1
4–9	Provide students with opportunities to practice making sense of stretch text (i.e., challenging text) that will expose them to complex ideas and information.	2
5–12	Provide explicit vocabulary instruction.	3
5–12	Provide direct and explicit comprehension strategy instruction .	3
5–12	Provide opportunities for extended discussion of text meaning and interpretation.	3
5–12 Supports growth mindset, independent reading, student choice, goal setting, and collaborative learning opportunities.	Increase student motivation and engagement in literacy learning.	3
5–12	Make available intensive and individualized interventions for struggling readers that can be provided by trained specialists.	3

Writing

Evidence-based practices from [practice guides](#) published by What Works Clearinghouse

Grades	Evidence-Based Practices	ESSA Tiers
1–6	Teach students to use the writing process for a variety of purposes.	1
1–6	Teach students to become fluent with handwriting, spelling, sentence construction, typing , and word processing.	2
1–6	Provide daily time for students to write.	4
1–6	Create an engaged community of writers .	4
5–12	Explicitly teach appropriate writing strategies using a Model-Practice-Reflect instructional cycle.	1
5–12	Integrate writing and reading to emphasize key writing features .	2
5–12	Use assessments of student writing to inform instruction and feedback.	4

Content Area Literacy *and* English Language Learners

Evidence-based practices from [practice guides](#) published by What Works Clearinghouse

Grades	Evidence-Based Practices	ESSA Tiers
PK	Intentionally plan activities to build children’s vocabulary and language .	1
K–12	Ask deep explanatory questions. Use instructional prompts that encourage students to pose and answer “deep-level” questions on course material. These questions enable students to respond with explanations and supports deep understanding of taught material.	3
K–5	Screen for reading problems and monitor progress. Conduct formative assessments with English learners using English language measures of phonological processing, letter knowledge, and word and text reading .	3
K–5	Provide focused, intensive small-group interventions for English learners determined to be at risk for reading problems.	3
K–5	Provide extensive and varied vocabulary instruction . Provide high-quality vocabulary instruction throughout the day.	3
K–5	Schedule regular peer-assisted learning opportunities . Ensure that teachers of English learners devote approximately 90 minutes a week to instructional activities in which pairs of students at different ability levels or different English language proficiencies work together on academic tasks in a structured fashion.	3
K–5	Develop academic English. Ensure that the development of formal or academic English is a key instructional goal for English learners, beginning in the primary grades.	4
PK–8	Teach a set of academic vocabulary words intensively across several days using a variety of instructional activities.	1

PK–8	Integrate oral and written English language instruction into content-area teaching.	1
PK–8	Provide small-group instructional intervention to students struggling in areas of literacy and English language development.	2
PK–8	Provide regular, structured opportunities to develop written language skills .	4

Math

Evidence-based practices from [practice guides](#) published by What Works Clearinghouse

Grades	Evidence-Based Practices	ESSA Tiers
PK	Provide intentional, small-group instruction to build children’s understanding of mathematical ideas and skills.	1
PK	Engage children in conversations about mathematical ideas and support them in using mathematical language.	2
PK–K	Teach number and operations using a developmental progression.	2
PK–K	Teach geometry, patterns, measurement, and data analysis using a developmental progression.	4
PK–K	Use progress monitoring to ensure that math instruction builds on what each child knows.	4
PK–K	Teach children to view and describe their world mathematically .	4
PK–K	Dedicate time each day to teaching math, and integrate math instruction throughout the school day.	4
Elementary RTI	Systematic Instruction: Provide systematic instruction during intervention to develop student understanding of mathematical ideas.	1
Elementary RTI	Mathematical Language: Teach clear and concise mathematical language and support students’ use of the language to help students effectively communicate their understanding of mathematical concepts.	1
Elementary RTI	Representations: Use a well-chosen set of concrete and semi-concrete representations to support students’ learning of mathematical concepts and procedures.	1
Elementary RTI	Number Lines: Use the number line to facilitate the learning of mathematical concepts and procedures, build understanding of grade-level material, and prepare students for advanced mathematics.	1
Elementary RTI	Word Problems: Provide deliberate instruction on word problems to deepen students’ mathematical understanding and support their capacity to apply mathematical ideas.	1
Elementary RTI	Timed Activities: Regularly include timed activities as one way to build fluency in mathematics .	1
K–8	Help students recognize that fractions are numbers and that they expand the number system beyond whole numbers. Use number lines as a central representational tool in teaching this and other fraction concepts from the early grades onward.	3

K–8	Help students understand why procedures for computations with fractions make sense.	3
K–8	Build on students’ informal understanding of sharing and proportionality to develop initial fraction concepts.	4
K–8	Develop students’ conceptual understanding of strategies for solving ratio, rate, and proportion problems before exposing them to cross-multiplication as a procedure to use to solve such problems.	4
K–8	Professional development programs should place a high priority on improving teachers’ understanding of fractions and of how to teach them.	4
4–8	Assist students in monitoring and reflecting on the problem-solving process .	1
4–8	Teach students how to use visual representations .	1
4–8	Expose students to multiple problem-solving strategies .	2
4–8	Help students recognize and articulate mathematical concepts and notation .	2
4–8	Prepare problems and use them in whole-class instruction.	4
1–8 RTI	Screen all students to identify those at risk for potential mathematics difficulties and provide interventions to students identified as at risk.	3
1–8 RTI	Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review .	3
1–8 RTI	Interventions should include instruction on solving word problems that is based on common underlying structures.	3
1–8 RTI	Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas.	3
1–8 RTI	Interventions at all grade levels should devote about 10 minutes in each session to building fluent retrieval of basic arithmetic facts .	3
1–8 RTI	Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8.	4
1–8 RTI	Monitor the progress of students receiving supplemental instruction and other students who are at risk.	4
1–8 RTI	Include motivational strategies in tier 2 and tier 3 interventions.	4
6–12	Teach students to intentionally choose from alternative algebraic strategies when solving problems.	2
6–12	Use solved problems to engage students in analyzing algebraic reasoning and strategies .	4
6–12	Teach students to utilize the structure of algebraic representations .	4
K–12	Create a classroom environment that sparks initial curiosity and fosters long-term interest in math and science. Teachers can foster girls’ long-term interest in math and science by choosing activities connecting math and science activities to careers in ways that do not reinforce	3

Supports career readiness standards	existing gender stereotypes and choosing activities that spark initial curiosity about math and science content.	
K–12	Teach students that academic abilities are expandable and improvable . Teachers should explicitly teach students that academic abilities are expandable and improvable in order to enhance girls’ beliefs about their abilities.	3
K–12	Teachers should provide students with prescriptive, informational feedback regarding their performance.	3
K–12	Interleave worked example solutions with problem-solving exercises . Have students alternate between reading already worked solutions and trying to solve problems on their own.	3
K–12	Space learning over time. Arrange to review key elements of course content after a delay of several weeks to several months after initial presentation.	3
K–12	Use quizzing to promote learning. Use quizzes to re-expose students to key content .	3

Arts Education

Review of study published by What Works Clearinghouse

3-8	<p>Increase elementary and middle school students’ arts educational experiences through school-community arts partnerships and arts-integration professional development. Arts educational experiences improve school engagement, college aspirations, and arts-facilitated empathy. Steps to carry out the recommendation:</p> <ol style="list-style-type: none"> 1. Engage in strategic arts planning and designate a campus-level arts liaison to coordinate and facilitate efforts. 2. Participate in teacher and principal arts-integration professional development. 3. Select a diverse array of programs so that each of the arts disciplines and formats (in particular, dance, music, theater, and visual arts) is provided at least once over the course of the academic year. Programs could occur at the school or offsite, on field trips, during and after regular school hours. 	1
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Out-of-School Learning

Evidence-based practices from [practice guides](#) published by What Works Clearinghouse

Grades	Evidence-Based Practices	ESSA Tiers
K–12	<p>Adapt instruction to individual and small group needs.</p> <ol style="list-style-type: none"> 1. Use formal and informal assessment data to inform academic instruction. 2. Use one-on-one tutoring if possible; otherwise, break students into small groups. 3. Provide professional development and ongoing instructional support to all instructors. 	3
K–12	Assess program performance and use the results to improve the quality of the program.	4
K–12	Maximize student participation and attendance.	4

Middle Grades & High School	<p>Provide academic support and enrichment to improve academic performance. Help students to improve academic performance and re-engage in school. This should be implemented in conjunction with other recommendations.</p> <ol style="list-style-type: none"> 1. Provide individual or small group support in test-taking skills, study skills, or targeted subject areas such as reading, writing, or math... 2. Provide extra study time and opportunities for credit recovery and accumulation through after school, Saturday school, or summer enrichment programs. Summer programs, after school, or Saturday school sessions may offer students personalized opportunities to improve academic skills... 	3
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Discipline *and* SEL

Evidence-based practices from [practice guides](#) published by What Works Clearinghouse

Grades	Evidence-Based Practices	ESSA Tiers
PK	Regularly provide intentional, engaging instruction and practice focused on social-emotional skills .	1
PK	Strengthen children's executive function skills using specific games and activities.	2
PK–6	Identify the specifics of the problem behavior and the conditions that prompt and reinforce it. Every teacher experiences difficulty at one time or another in trying to remedy an individual student’s behavior problem that is not responsive to preventative efforts. Because research suggests that the success of a behavioral intervention hinges on identifying the specific conditions that prompt and reinforce the problem behavior (i.e., the behavior’s “antecedents” and “consequences”), we recommend that teachers carefully observe the conditions in which the problem behavior is likely to occur and not occur. Teachers then can use that information to tailor effective and efficient intervention strategies that respond to the needs of the individual student within the classroom context.	3
PK–6	<p>Modify the classroom learning environment to decrease problem behavior. Many effective classroom-focused interventions to decrease students’ problematic behavior alter or remove factors that trigger them. These triggers can result from a mismatch between the classroom setting or academic demands and a student’s strengths, preferences, or skills. Teachers can reduce the occurrence of inappropriate behavior by revisiting and reinforcing classroom behavioral expectations; rearranging the classroom environment, schedule, or learning activities to meet students’ needs; and/or individually adapting instruction to promote high rates of student engagement and on-task behavior.</p> <ol style="list-style-type: none"> 1. Revisit, re-practice, and reinforce classroom behavioral expectations. 2. Modify the classroom environment to encourage instructional momentum. 3. Adapt or vary instructional strategies to increase opportunities for academic success and engagement. 	3
PK–6 Supports PBSIS & Bucketfilling Programs	<p>Teach and reinforce new skills to increase appropriate behavior and preserve a positive classroom climate. It is recommended that teachers actively teach students socially- and behaviorally-appropriate skills to replace problem behaviors using strategies focused on both individual students and the whole classroom. In doing so, teachers help students with behavior problems learn how, when, and where to use these new skills; increase the opportunities that the students have to exhibit appropriate behaviors; preserve a positive classroom climate; and manage consequences to reinforce students’ display of positive “replacement” behaviors and adaptive skills.</p> <ol style="list-style-type: none"> 1. Identify where the student needs explicit instruction for appropriate behavior. 2. Teach skills by providing examples, practice, and feedback. 3. Manage consequences so that reinforcers are provided for appropriate/positive behavior and withheld for inappropriate behavior. <ol style="list-style-type: none"> a. Research shows that rewards (such as approval, praise, recognition, special privileges, points, or other reinforcers built into the classroom management plan) are most effective in encouraging students’ appropriate behavior when teachers follow simple guidelines... 	3

PK-6	Draw on relationships with professional colleagues and students' families for continued guidance and support. Social relationships and collaborative opportunities can play a critical role in supporting teachers in managing disruptive behavior in their classrooms. We recommend that teachers draw on these relationships in finding ways to address the behavior problems of individual students and consider parents, school personnel, and behavioral experts as allies who can provide new insights, strategies, and support.	3
PK-6	Assess whether schoolwide behavior problems warrant adopting schoolwide strategies or programs and, if so, implement ones shown to reduce negative and foster positive interactions. Classroom teachers, in coordination with other school personnel (administrators, grade-level teams, and special educators), can benefit from adopting a schoolwide approach to preventing problem behaviors and increasing positive social interactions among students and with school staff. This type of systemic approach requires a shared responsibility on the part of all school personnel, particularly the administrators who establish and support consistent schoolwide practices and the teachers who implement these practices both in their individual classrooms and beyond. ***If warranted, adopt a packaged intervention program for SEL that fits well with identified behavior problem(s) and the school context... (e.g., <i>Second Step</i> and <i>Promoting Alternative Thinking Strategies</i>)	3
PK-12 Leader in Me	Leader in Me is a CASEL SElect program, and a comprehensive evidence-based PK-12 model that equips students, educators, and families with the leadership and life skills needed to thrive, adapt, and contribute in a dynamic world. Educators, students, and families partner together to build capacity for interpersonal skills and leadership competencies through the 7 Habits . LIM's highly effective practices include <ul style="list-style-type: none"> • Creating a physical environment that communicates the worth and potential of all community members • Teaching students how to set, track, and achieve goals in a Leadership Notebook • Holding student-led -conferences, where students take ownership for learning and lead the conference • Inviting participation in classroom and school leadership roles, including during student-led leadership events • Engaging students in their communities through service learning opportunities • Engaging families in the process throughout their child's academic journey, including through caregiver workshops and student-led activities 	2
K-11 Classroom Management	Implement the Good Behavior Game as a classroom management strategy to improve social skills, minimize disruptive behaviors, and create a positive learning environment. Teachers place students into teams and reward them for demonstrating appropriate behaviors and following classroom rules. <i>Teacher Practice, K-3 - Tier 3, Promising Writing Conventions, 1-2 - Tier 3, Promising Writing Productivity, 1-2 - Tier 3, Promising</i>	1
2-12 Restorative Practices Supplemental Resources: A Guide for Teachers & A Framework to Guide Practice	Use restorative practices to proactively improve relationships among students and staff and build a sense of community in classrooms and schools. Address severe misbehavior through a restorative approach to help students realize the impacts of their actions. Steps to carry out the recommendation: <ol style="list-style-type: none"> 1. Given the constraints on teachers' time, emphasize restorative practices that can be woven into the school day. 2. Ensure that school leaders understand and can model restorative practices, including by providing mandatory professional development, books and other materials, and coaching on restorative practices. 3. Ensure that leaders at the district level can coordinate this work. 4. Establish a mechanism for school staff to meet at least once per month as a professional learning community on restorative practices. 5. Set, and update, clear expectations regarding the use of restorative practices. 6. Implement data collection systems to collect accurate information on all types of behavioral incidents and remedies. 	2
Middle Grades & High School Supports PLCs	Provide rigorous and relevant instruction to better engage students in learning and provide the skills needed to graduate and to serve them after they leave school. <ol style="list-style-type: none"> 1. Provide teachers with job-embedded professional development: school-based coaches, Professional Learning Communities (PLCs), grade-level team leaders, professional consultants 	3

and coaching	<ol style="list-style-type: none"> Students should have the opportunity to see the relevance of their academic work by applying academic skills to work-world problems. Host career days and offer opportunities to visit postsecondary campuses. Provide students with extra assistance and information about the demands of college. 	
6–12 Supports Peer Mentoring	<p>Engage students by offering SEL curricula and programs that connect schoolwork with college and career success and that improve students’ capacity to manage challenges in and out of school.</p> <ol style="list-style-type: none"> Directly connect schoolwork to students’ options after high school. Provide curricula and programs that help students build supportive relationships and teach students how to manage challenges. Regularly assess student engagement to identify areas for improvement, and target interventions to students who are not meaningfully engaged. 	1
6–12 Provides inspiration for action steps related to attendance goals	<p>Monitor the progress of all students, and proactively incentivize and intervene when students show early signs of attendance, behavior, or academic problems.</p> <ol style="list-style-type: none"> Organize and analyze data to identify students who miss school, have behavior problems, or are struggling in their courses. Intervene with students who show early signs of falling off track. If data show high rates of absenteeism, take steps to incentivize/help students, parents, and school staff understand the importance of attending school daily. Monitor progress and adjust interventions as needed. 	4
6–12 Supports the implementation of attendance tracking systems and tools like SmartPass	<p>Provide intensive, individualized support to students who have fallen off track and face significant challenges to success.</p> <ol style="list-style-type: none"> For each student identified as needing individualized support, assign a single person to be the student’s primary advocate. Develop a menu of support options that advocates can use to help students. Support advocates with ongoing professional learning opportunities and tools for tracking their work. 	2
6–12	<p>For schools with many at-risk students, create small, personalized communities to facilitate monitoring and support.</p> <ol style="list-style-type: none"> Decide whether the small communities will serve a single grade or multiple grades. Create teams of teachers that share common groups of students. Identify a theme to help build a strong sense of identity and community and to improve student engagement. Develop a schedule that provides common planning time and ample opportunities for staff to monitor and support students. 	2

<div> <div>Chronic Absenteeism</div> <div>Evidence-based practices from Phyllis Jordan’s 2019 “Attendance Playbook: Smart Solutions for Reducing Chronic Absenteeism”</div> </div>		
Tier I strategies rely on schoolwide steps to encourage attendance among all students through effective messaging and engagement, removing barriers to good attendance, and improving school climate.		
Grades	Evidence-Based Practices	ESSA Tiers
K-12	Nudging Parents & Students	1

K-12	Home Visits	3
K-12	School-Based Health Services	3
K-12	A Safer Walk to School	3
K-12	Breakfast for All	3
6-12	Relevant-and Culturally Relevant Instruction	3
Tier II interventions target students at greater risk of chronic absenteeism, those who are close to or already missing 10 percent of the school year.		
7-12	Early Warning Systems	2
K-12	Mentoring Programs	1 & 3
Elementary	Addressing Asthma	3
Tier III approaches work with the most troubled students, often involving not just schools but other agencies dealing with health, housing, and social services, and typically requiring case management customized to individual students' challenges.		
Elementary	Interagency Case Management	3
K-12	Housing: Using Data and the Human Touch	3