

# Improving Reading Comprehension in Kindergarten Through 3rd Grade



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The goal of this practice guide is to offer educators specific evidence-based recommendations that address the challenge of teaching reading comprehension to students in kindergarten through 3rd grade. The guide provides practical, clear information on critical topics related to teaching reading comprehension and is based on the best available evidence as judged by the authors.

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Assisting Students Struggling with Reading: Response to Intervention (RtI) and Multi-Tier Intervention in the Primary Grades <i>(February 2009)</i>		◆	
Effective Literacy and English Language Instruction for English Learners in the Elementary Grades <i>(December 2007)</i>		◆	
Improving Reading Comprehension in Kindergarten Through 3rd Grade <i>(September 2010)</i>		◆	
Reducing Behavior Problems in the Elementary School Classroom <i>(September 2008)</i>		◆	
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Developing Effective Fractions Instruction for Kindergarten Through 8th Grade <i>(September 2010)</i>		◆	◆
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Dropout Prevention <i>(August 2008)</i>			◆
Helping Students Navigate the Path to College: What High Schools Can Do <i>(September 2009)</i>			◆

# Improving Reading Comprehension in Kindergarten Through 3rd Grade

**September 2010**

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What Works Clearinghouse Practice Guide citations begin with the panel chair, followed by the names of the panelists listed in alphabetical order.

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# Review of Recommendations

## Recommendation 1.

*Teach students how to use reading comprehension strategies.*

- Teach students how to use several research-based reading comprehension strategies.
- Teach reading comprehension strategies individually or in combination.
- Teach reading comprehension strategies by using a gradual release of responsibility.

## Recommendation 2.

*Teach students to identify and use the text's organizational structure to comprehend, learn, and remember content.*

- Explain how to identify and connect the parts of narrative texts.
- Provide instruction on common structures of informational texts.

## Recommendation 3.

*Guide students through focused, high-quality discussion on the meaning of text.*

- Structure the discussion to complement the text, the instructional purpose, and the readers' ability and grade level.
- Develop discussion questions that require students to think deeply about text.
- Ask follow-up questions to encourage and facilitate discussion.
- Have students lead structured small-group discussions.

## Recommendation 4.

*Select texts purposefully to support comprehension development.*

- Teach reading comprehension with multiple genres of text.
- Choose texts of high quality with richness and depth of ideas and information.
- Choose texts with word recognition and comprehension difficulty appropriate for the students' reading ability and the instructional activity.
- Use texts that support the purpose of instruction.

## Recommendation 5.

*Establish an engaging and motivating context in which to teach reading comprehension.*

- Help students discover the purpose and benefits of reading.
- Create opportunities for students to see themselves as successful readers.
- Give students reading choices.
- Give students the opportunity to learn by collaborating with their peers.

# Acknowledgments

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# Levels of Evidence for Practice Guides

## Institute of Education Sciences Levels of Evidence for Practice Guides

This section provides information about the role of evidence in Institute of Education Sciences' (IES) What Works Clearinghouse (WWC) practice guides. It describes how practice guide panels determine the level of evidence for each recommendation and explains the criteria for each of the three levels of evidence (strong evidence, moderate evidence, and minimal evidence).

The level of evidence assigned to each recommendation in this practice guide represents the panel's judgment of the quality of the existing research to support a claim that when these practices were implemented in past research, positive effects were observed on student outcomes. After careful review of the studies supporting each recommendation, panelists determine the level of evidence for each recommendation using the criteria in Table 1. The panel first considers the relevance of individual studies to the recommendation and then discusses the entire evidence base, taking the following into consideration:

- the number of studies
- the quality of the studies
- whether the studies represent the range of participants and settings on which the recommendation is focused
- whether findings from the studies can be attributed to the recommended practice
- whether findings in the studies are consistently positive

A rating of *strong evidence* refers to consistent evidence that the recommended strategies, programs, or practices improve student outcomes for a wide population of students.<sup>1</sup> In other words, there is strong causal and generalizable evidence.

A rating of *moderate evidence* refers either to evidence from studies that allow strong causal conclusions but cannot be generalized with assurance to the population on which a

recommendation is focused (perhaps because the findings have not been widely replicated) or to evidence from studies that are generalizable but have some causal ambiguity. It also might be that the studies that exist do not specifically examine the outcomes of interest in the practice guide although they may be related.

A rating of *minimal evidence* suggests that the panel cannot point to a body of research that demonstrates the practice's positive effect on student achievement. In some cases, this simply means that the recommended practices would be difficult to study in a rigorous, experimental fashion;<sup>2</sup> in other cases, it means that researchers have not yet studied this practice, or that there is weak or conflicting evidence of effectiveness. A minimal evidence rating does not indicate that the recommendation is any less important than other recommendations with a strong evidence or moderate evidence rating.

In terms of the levels of evidence indicated in Table 1, the panel relied on WWC evidence standards to assess the quality of evidence supporting educational programs and practices. The WWC evaluates evidence for the causal validity of instructional programs and practices according to WWC standards. Information about these standards is available at [http://ies.ed.gov/ncee/wwc/pdf/wwc\\_procedures\\_v2\\_standards\\_handbook.pdf](http://ies.ed.gov/ncee/wwc/pdf/wwc_procedures_v2_standards_handbook.pdf). Eligible studies that meet WWC evidence standards or meet evidence standards with reservations are indicated by **bold text** in the endnotes and references pages.

**Table 1. Institute of Education Sciences levels of evidence for practice guides**

<b>Strong Evidence</b>
<p>In general, characterization of the evidence for a recommendation as <i>strong evidence</i> requires both studies with high internal validity (i.e., studies whose designs can support causal conclusions) and studies with high external validity (i.e., studies that in total include enough of the range of participants and settings on which the recommendation is focused to support the conclusion that the results can be generalized to those participants and settings). Strong evidence for this practice guide is operationalized as</p> <ul style="list-style-type: none"><li>▪ A systematic review of research that generally meets WWC standards (see <a href="http://ies.ed.gov/ncee/wwc/">http://ies.ed.gov/ncee/wwc/</a>) and supports the effectiveness of a program, practice, or approach with no contradictory evidence of similar quality; OR</li><li>▪ Several well-designed, randomized controlled trials or well-designed quasi-experiments that generally meet WWC standards and support the effectiveness of a program, practice, or approach with no contradictory evidence of similar quality; OR</li><li>▪ One large, well-designed, randomized controlled, multisite trial that meets WWC standards and supports the effectiveness of a program, practice, or approach with no contradictory evidence of similar quality; OR</li><li>▪ For assessments, evidence of reliability and validity that meets the Standards for Educational and Psychological Testing.<sup>3</sup></li></ul>
<b>Moderate Evidence</b>
<p>In general, characterization of the evidence for a recommendation as <i>moderate evidence</i> requires studies with high internal validity but moderate external validity or studies with high external validity but moderate internal validity. Moderate evidence is derived from studies that support strong causal conclusions, but generalization is uncertain, or studies that support the generality of a relationship, but the causality is uncertain. Moderate evidence for this practice guide is operationalized as</p> <ul style="list-style-type: none"><li>▪ Experiments or quasi-experiments generally meeting WWC standards and supporting the effectiveness of a program, practice, or approach with small sample sizes and/or other conditions of implementation or analysis that limit generalizability and no contrary evidence; OR</li><li>▪ Comparison group studies that do not demonstrate equivalence of groups at pretest and, therefore, do not meet WWC standards but that (1) consistently show enhanced outcomes for participants experiencing a particular program, practice, or approach and (2) have no major flaws related to internal validity other than lack of demonstrated equivalence at pretest (e.g., only one teacher or one class per condition, unequal amounts of instructional time, highly biased outcome measures); OR</li><li>▪ Correlational research with strong statistical controls for selection bias and for discerning influence of endogenous factors and no contrary evidence; OR</li><li>▪ For assessments, evidence of reliability that meets the Standards for Educational and Psychological Testing<sup>4</sup> but with evidence of validity from samples not adequately representative of the population on which the recommendation is focused.</li></ul>
<b>Minimal Evidence</b>
<p>In general, characterization of the evidence for a recommendation as <i>minimal evidence</i> means that the recommendation is based on expert opinion derived from strong findings or theories in related areas and/or expert opinion buttressed by direct evidence that does not rise to the moderate evidence or strong evidence levels. Minimal evidence is operationalized as evidence not meeting the standards for the moderate evidence or strong evidence level.</p>

# Introduction

## Introduction to the Improving Reading Comprehension in Kindergarten Through 3rd Grade Practice Guide

This section provides an overview of the importance of improving reading comprehension in kindergarten through 3rd grade and explains key parameters considered by the panel in developing the practice guide. It also summarizes the recommendations for readers and concludes with a discussion of the research supporting the practice guide.

Strong reading comprehension skills are central not only to academic and professional success, but also to a productive social and civic life.<sup>6</sup> These skills build the capacity to learn independently, to absorb information on a variety of topics, to enjoy reading, and to experience literature more deeply. Despite the growing demand for highly educated workers in today's information- and service-related economies,<sup>7</sup> the proportion of American adults classified as "below basic" readers remained remarkably constant between 1992 and 2003.<sup>8</sup> This guide, developed by a panel of experts, presents a set of evidence-based practices that teachers and other educators can use to successfully teach reading comprehension to young readers. The panel believes that students who read with understanding at an early age gain access to a broader range of texts, knowledge, and educational opportunities, making early reading comprehension instruction particularly critical. The guide also describes the evidence that supports the practices and gives examples of how they can be implemented in the classroom.

The fundamental assumption in this guide is that the objective of reading instruction is to give young readers the tools they need to understand increasingly sophisticated material in all subjects from elementary through later years of school. The practices recommended in this guide are therefore not an end in themselves, but the means to developing sound ability in reading comprehension. For example, a story map is a useful tool only if it helps students to follow a storyline more fully and accurately. With this principle in mind, teachers should prepare their reading lessons in a way that encourages students to use the tools to enhance comprehension adeptly and

### Defining reading comprehension

The panel selected a definition of reading comprehension that emphasizes both what the author has written and readers' ability to use their background knowledge and thinking ability to make sense of what they read. The panel defines reading comprehension as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language."<sup>5</sup> Extracting meaning is to understand what an author has stated, explicitly or implicitly. Constructing meaning is to interpret what an author has said by bringing one's "capacities, abilities, knowledge, and experiences" to bear on what he or she is reading. These personal characteristics also may affect the comprehension process.

independently as they read. The examples in the guide should not, however, be construed as either the only or the most effective ways to put each recommendation into practice. They are intended to illustrate practices that have been used successfully to teach reading comprehension.

### Scope of the practice guide

**Audience and Grade Level.** This guide is intended for teachers, reading coaches, principals, and other educators. It focuses on reading comprehension abilities that may be taught specifically to students in kindergarten through 3rd grade. Most research on improving reading comprehension concentrates on the upper grades, in which it is a more salient part of the curriculum.<sup>9</sup> The panel, however, believes that the teaching of reading comprehension should begin in kindergarten and elementary school. That said, the panel acknowledges that instructional practices in kindergarten or early 1st grade, when

students are beginning to read, can and will differ from practices in 2nd or 3rd grade, when students exhibit more mastery over language. Consequently, the recommendations may need to be adapted to students of different ages or at different reading levels.

**Content.** Reading requires a rich and complex array of abilities that enable comprehension, not all of which are specifically reading comprehension skills. For example, successful decoding undergirds successful reading comprehension, and it certainly should be taught, but the panel believes decoding instruction alone will not produce desired levels of reading comprehension for all students. The current research on reading indicates that the following types of skills and knowledge are critical to building a young student's capacity to comprehend what he or she reads:

- 1. Word-level skills** allow students to identify, or decode, words in text accurately and fluently. Instruction in this area includes phonemic awareness, word analysis strategies (especially phonemic decoding), sight word vocabulary, and practice to increase fluency while reading.
- 2. Vocabulary knowledge and oral language skills** help readers understand the meaning of words and connected text. Instruction in this area involves strategies to build vocabulary and activities to strengthen listening comprehension.
- 3. Broad conceptual knowledge** includes not only general knowledge of the world but also knowledge drawn from science, social studies, and other disciplines. An information-rich curriculum can help students develop the background that is necessary for good reading comprehension.<sup>10</sup>
- 4. Knowledge and abilities required specifically to comprehend text** include an understanding of the different ways text can be structured and the ability to use a repertoire of cognitive strategies.
- 5. Thinking and reasoning skills** that are involved, for example, in making inferences are essential to reading comprehension as text becomes more complex and as a student's tasks depend more on the thoughtful analysis of content.
- 6. Motivation to understand and work toward academic goals** makes it more likely that students will intentionally apply strategies to improve their reading comprehension. Comprehending complex text requires active mental effort, which is most likely to occur when a student is engaged in the task at hand.

Acknowledging the plethora of instructional demands that teachers must address in the early primary grades, this guide focuses on the last three areas, which represent explicit instruction in reading comprehension. The panel believes that these should be taught and fostered, along with the first three, right from the start rather than waiting until the word-level skills are firmly established. This belief is encouraged by research suggesting that proficiency in reading comprehension depends on the ability to bring the skills in all six areas to bear on the reading process itself.<sup>11</sup> The panel therefore encourages educators to create learning opportunities that prompt students to draw on some combination of all six areas as they read.

The following factors are not discussed in this guide because the material appears in earlier guides or because of space limitations. However, the panel believes that these considerations are important when planning for reading comprehension instruction.

- **Special Populations.** The panel did not consider instructional practices that had been evaluated only for use with learning-disabled students, special-education students, students with an Individualized Education Program, or English language learners. Practices used with struggling and at-risk readers are included. However, the panel believes that the practices

recommended in this guide are applicable to all of these special populations and knows of no evidence to the contrary. On the other hand, the amount, intensity, and duration of instruction may need to vary for such students. For other resources on working with these students, the panel refers readers to two prior What Works Clearinghouse (WWC) practice guides: *Effective Literacy and English Language Instruction for English Learners in the Elementary Grades* and *Assisting Students Struggling with Reading: Response to Intervention (RtI) and Multi-Tier Intervention in the Elementary Grades*.

- **Assessment.** Students vary in their development of reading comprehension skills, and the panel believes that teachers must adjust instruction or differentiate instruction based on assessments of student progress. In fact, teachers should view all their interactions with students as an opportunity for informal assessment. This can include asking students to summarize or retell what they have read, asking them to write about their response to the text, and observing their contributions to discussions about the text. The panel refers readers to the WWC practice guide *Using Student Achievement Data to Support Instructional Decision Making* for more information on using student data to inform instructional choices.
- **Graphic Literacy.** A student's ability to comprehend graphics *within a text* is critical to reading comprehension and can be taught, but comprehension of graphics independent of text is not the focus of this guide.

Evidence. In making its recommendations, the panel looked for evidence that instructional practices caused or led to improvements in reading comprehension when students were reading texts that had not been part of the instruction. To deem an instructional practice effective, the panel members looked for changes in outcome measures showing that students demonstrated improved

comprehension when reading independently (i.e., without teacher assistance) relative to similar peers who had not been exposed to the instructional practice.

Although listening comprehension remains a strong predictor of reading comprehension after 1st grade,<sup>12</sup> most students can read words independently from the 2nd grade onward. Therefore, the panel judged the evidence for 2nd- and 3rd-grade students on the basis of outcome measures for reading comprehension only, and for kindergarteners and 1st-grade students on the basis of outcome measures for listening comprehension when reading comprehension outcomes were not available.

## Summary of the recommendations

The five recommendations in this guide promote practices that have shown promise in increasing reading comprehension among students in kindergarten through 3rd grade.

- **Recommendation 1** encourages teachers to teach students a variety of strategies that will help them understand and retain what they read and thus become independent, resourceful readers.
- **Recommendation 2** is about how to teach young readers to recognize how a text is organized, or “structured.” Authors structure texts in a variety of ways to get their point across. Recognizing text structure can build students’ understanding of what they are reading and improve their ability to recall it.
- **Recommendation 3** suggests that teachers discuss the text with students to improve their reading comprehension. This approach will allow young readers to more deeply explore the ideas in the text they are reading. In guiding the discussion, teachers should model ways to think about the text that can help students when they are reading independently.

- **Recommendation 4** emphasizes the importance of choosing texts that specifically support the goals of teaching and improving reading comprehension.
- **Recommendation 5** outlines how teachers can motivate students to improve their efforts to comprehend text. Constructing meaning while reading can be demanding intellectual work, and teachers who hold their students' interest may be more effective in helping them to develop good reading comprehension skills.

To be successful, these five recommendations must be implemented in concert, and clearly explained in a rich educational context that includes the following: a comprehensive literacy curriculum, ample opportunity for students to read and write while being coached and monitored by teachers, additional instruction and practice for students based on the results of formal and informal assessments, and adequate resources for students and teachers.

### Use of research

The research base for this guide was identified through a comprehensive search for studies that evaluated practices designed to improve reading comprehension for beginning readers. It includes both experimental and quasi-experimental effectiveness studies as well as qualitative reports of practices and strategies. An initial search for studies conducted in English-speaking settings in the past 20 years (1989–2009) and additional highly relevant studies prior to 1989 recommended by the panel yielded 812 citations.

Of the 812 original studies, 27 met WWC standards with or without reservations and represent the strongest evidence of the effectiveness of the practices recommended in this guide. Although in the preparation of this guide an extensive review of research was conducted into the teaching of reading comprehension to young children, the guide is not meant as a complete or exhaustive summary

of all of the findings of such studies. The panelists, through their expertise and experience, used their collective judgment to determine the most valuable recommendations that could be made on this topic, and the guide then shows how the research evidence supports those particular recommendations.

Studies that met WWC standards were used to assess whether a recommendation was supported by moderate evidence or strong evidence. Studies that potentially met or did not meet WWC standards were used when appropriate to provide additional detail on how recommended practices could be implemented. Studies that provided information on how the guide's five recommendations have been applied in different instructional settings (e.g., at different grade levels) were especially informative. The panel also relied on support for the recommendations from their own teaching and research experience.

Table 2 shows each recommendation and the strength of the evidence that supports it as determined by the panel.

Some of the studies focused on the effectiveness of combinations of practices. This bundling of practices presents challenges when reviewing levels of evidence because evidence of the impact of a group of practices on reading comprehension cannot, with any certainty, be attributed to any one of the specific practices in that combination. The panel members therefore identified promising practices in each group on the basis of their own expert judgment and the similarity of the practices to those that were the sole focus of other studies.

The evidence for two of the five recommendations in this guide is rated as minimal. Nevertheless, the panel believes that these recommendations hold promise for the development of the deeper understanding and critical thinking that enhances reading comprehension. The evidence for Recommendation 3, which describes how to plan and facilitate a discussion about text to improve reading comprehension, is rated as minimal evidence

for two reasons: (1) few studies tested the practice with students in kindergarten through 3rd grade and (2) no studies that tested the effectiveness of this recommendation met WWC evidence standards. The evidence for Recommendation 4 includes only one study of effectiveness that met WWC standards, and the study did not test all aspects of the recommendation. Although the level of evidence ratings are minimal, the panel members have included

them among the five recommended practices because they believe they have the potential for stimulating improvement in reading comprehension in students from kindergarten through 3rd grade.

Following the recommendations and suggestions for carrying out the recommendations, Appendix D presents more information on the research evidence that supports each recommendation.

**Table 2. Recommendations and corresponding levels of evidence**

Recommendation	Levels of Evidence		
	Minimal Evidence	Moderate Evidence	Strong Evidence
1. Teach students how to use reading comprehension strategies.			◆
2. Teach students to identify and use the text’s organizational structure to comprehend, learn, and remember content.		◆	
3. Guide students through focused, high-quality discussion on the meaning of text.	◆		
4. Select texts purposefully to support comprehension development.	◆		
5. Establish an engaging and motivating context in which to teach reading comprehension.		◆	