

How *Jamestown Reading Navigator*[™]
Supports Research-Based Instruction
for Struggling Adolescent Readers

Comprehension

Prepared for

Glencoe/McGraw-Hill

by

Interactive Educational Systems Design, Inc.

New York, NY



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About This Paper

This paper presents research-supported best practices related to instruction of struggling adolescent readers—that is, students in grades 6–12 who are reading at least two levels below grade level—and describes how *Jamestown Reading Navigator*[™] supports those practices.

What Is *Jamestown Reading Navigator*?

Jamestown Reading Navigator is a reading intervention program designed specifically for students in grades 6–12 who are reading two or more reading levels below their grade in school. The program provides direct, explicit instruction and modeling of good reading practices, together with opportunities for students to practice and apply these reading strategies.

Jamestown Reading Navigator combines online activities featuring interactive multimedia for students to complete; engaging and appropriate online and print texts for students to read; an audio component for further guided or independent study; student writing in response to reading; student recording of fluency passages; an assessment program to monitor students' progress; an independent measure of progress monitoring; and teacher support materials, including professional development, lesson plans, instructional recommendations, and reteaching skills support. Major areas of focus for *Jamestown Reading Navigator* include

- Comprehension skills and strategies, designed for application to content-area reading
- Vocabulary
- Writing
- Fluency
- Decoding/phonics (for students with a particular need in this area)

The *Jamestown Reading Navigator* Learner Management System helps teachers manage individual student learning and provides ongoing, up-to-the-minute information on how students are performing. Online professional development modules and on-site professional development sessions offered by Jamestown Education help educators—teachers, administrators, literacy specialists, and others—learn how to implement *Jamestown Reading Navigator* more effectively. These sessions also provide information and suggestions to help educators develop effective strategies for working with struggling adolescent readers.

Jamestown Reading Navigator has been developed based on the most up-to-date research and expert thinking in adolescent literacy, drawing on more than 30 years of experience in reaching adolescent readers with the popular Jamestown Education print series. This paper describes the match between *Jamestown Reading Navigator* and the best available instructional thinking in a variety of specific areas that are important to the success of struggling adolescent readers, as described below.

Introduction

A Critical Need to Support Struggling Adolescent Readers

Problems with literacy have serious and long-lasting consequences. A lack of literacy skills is “one of the most commonly cited reasons” for students to drop out of school (Biancarosa & Snow, 2006, p. 7). A resource guide on adolescent literacy prepared for the Southwest Educational Development Laboratory described the problem as follows:

For secondary-level students . . . the social and economic consequences of not reading well can be cumulative and profound: the failure to attain a high school diploma, a barrier to higher education, underemployment or unemployment, and difficulty in managing personal and family life. Years of failing at what is deemed a hallmark of intelligence and worth can also leave struggling readers with emotional consequences, such as anxiety and low self-esteem, that affect personality and interpersonal relationships. These effects within and beyond the classroom walls show that by the secondary grades educators can no longer defer solutions to future development or instruction. (Peterson et al., 2000, p. 6)¹

¹ Peterson et al. (2000) is laid out in a paginated PDF format, but the format does not include page numbers. Page references for quotes from Peterson et al. (2000) that are given in this paper have therefore been calculated on the basis of page numbers shown in the document table of contents.

Numerous sources attest to the scope of the challenge. *Reading Next* cited both results from the National Assessment of Educational Progress (NAEP) and the opinions of experts in adolescent literacy that “as many as 70 percent of students struggle with reading in some manner” that requires instruction differentiated for their specific needs (Biancarosa & Snow, 2006, p. 8, citing Loomis & Bourque, 2001; NCES, 1999, 2006; Olson, 2006).

Adolescents struggle with literacy for a variety of reasons. For some, English may not be their first language. Others may have mild learning disabilities. In many cases, students may simply lack experience and skill with reading. Unfortunately, difficulties in reading don’t cure themselves, but instead tend to get worse as students get older—a phenomenon reading experts refer to as the “Matthew Effect” (Stanovich, 1986). These students need literacy instruction that addresses the specific challenges they face, using the best available research-based methods and principles, in order to improve their chances of succeeding both during school and afterward.

The State of Research on Struggling Adolescent Readers

Over the last two decades, attempts to improve student literacy on the national level have focused largely on elementary instruction, and particularly on early literacy—that is, literacy at the primary grades. For example, the focus of the Reading First initiative was on improving literacy at the primary levels. Recently, however, a number of efforts—including research summaries for a variety of sources, publication of the *Reading Next* report and other documents from the Alliance for Excellent Education, and position statements from organizations such as the National Reading Conference and the International Reading Association—have helped create a higher profile for instructional issues related to adolescent readers, and particularly the large proportion of adolescents who struggle with reading.

Initiatives such as the No Child Left Behind Act have raised expectations for instruction. Instruction is expected to be backed with solid research that concludes it is likely to result in the desired impact on student learning. Unfortunately, research on what constitutes effective literacy instruction for adolescents is still limited. According to the editors of a volume intended to “compile from the best researchers in the field a summary and synthesis of adolescent literacy research and practice,”

As of 2003, there is not a body of research to tell us appropriate interventions that will help struggling middle and secondary school readers who can barely read. As of 2003, we still do not have a body of research to provide us with appropriate interventions to help high school readers who can read fluently but remain 3 or 4 years below grade level in reading. (Jetton & Dole, 2004, p. 6)

Although research on what constitutes effective literacy instruction for adolescents is limited in significant ways, there is substantial support in research and expert opinion for a variety of specific instructional recommendations. The state of knowledge with regard to effective instruction for struggling adolescent readers fits the description of *best available evidence* as characterized by U.S. Department of Education Assistant Secretary Grover J. Whitehurst: that is, “the integration of professional wisdom with the best available empirical evidence in making decisions about how to deliver instruction” (Whitehurst, 2002).

The Reading Next Report

A critical milestone in recent efforts to highlight the challenges related to adolescent literacy was the publication of *Reading Next*, a report to Carnegie Corporation of New York focusing on the needs of adolescent readers (defined in the report as those in grades 4–12), with a special emphasis on the needs of struggling readers. Preparation of this report included the following steps.

- A panel of five nationally known and respected educational researchers was convened in spring 2004, together with representatives of Carnegie Corporation of New York and the Alliance for Excellent Education.
- These panelists drew up a set of recommendations for how to meet the needs of struggling readers, including 15 specific elements of effective adolescent literacy programs that had “a substantial base in research and/or professional opinion” (Biancarosa & Snow, 2006, p. 12). These included both elements with an instructional focus and recommended infrastructure elements to improve adolescent literacy.

- The resulting paper was reviewed and augmented at the 2004 meeting of the Adolescent Literacy Funders Forum (ALFF).
- An Appendix was compiled of literature supporting each of the report’s main recommendations.
- In 2006, a second edition of the report was published.

The *Reading Next* recommendations thus represented a synthesis of research-informed expert opinion that serves as an important touchstone for much of what is known about effective adolescent literacy instruction. Several caveats, however, are in order with regard to using the recommendations as a yardstick for measuring instructional programs in general, and *Jamestown Reading Navigator* in particular.

- While all 15 elements identified by *Reading Next* are characterized as having “a substantial base in research and/or professional opinion” (Biancarosa & Snow, 2006, p. 12), the report nonetheless cautions that “the optimal mix of these factors has yet to be determined. . . . Nor does the remediation of adolescent literacy difficulties involve indiscriminately layering on all fifteen key elements. Choices should be matched to school and student needs” (Biancarosa & Snow, 2006, p. 29). The expectation is not that each literacy program should necessarily include all 15 elements, but that developers and adopters of such programs should select those elements that seem best matched to their specific circumstances.
- The focus of *Reading Next* is explicitly on “the large population of struggling students who already decode accurately but still struggle with reading and writing after third grade” (Biancarosa & Snow, 2006, p. 11). The report thus does not include recommendations related to areas such as decoding and fluency that may be important for readers who are struggling at a more basic level.
- Several of the elements of *Reading Next* relate to how infrastructure impacts adolescent literacy learning. The most that any purchased instructional program can do in these areas is to provide support to schools and districts as they implement these elements.

Development of This Paper

Development of this research-based white paper included the following steps.

- A top-level review of *Reading Next* was conducted to identify claims and recommended practices, including both those that are associated with the 15 key elements of adolescent literacy identified in the report and those that appear elsewhere in the report. As part of this review, information was collected about the sources in the Appendix to *Reading Next*, which listed literature supporting each of the 15 key elements.
- Well-known experts in the field of adolescent literacy were consulted to identify key, current, and reputable sources related to instruction for struggling adolescent readers. These included both experts who had been consulted during the development of *Jamestown Reading Navigator* and an independent expert not previously associated with the program.²
- Key documents were identified for review, with priority given to two types of documents:
 - *Broad policy-oriented research reviews and surveys of expert opinion, developed by reputable institutions and authors, with a goal of identifying key elements in effective adolescent literacy programs*
 - *More focused research syntheses and meta-analyses from reputable sources, describing the state of research and/or theory related to a specific relevant topic in adolescent literacy (e.g., comprehension, writing, formative assessment)*

2 Key contributors included Dr. Thomas W. Bean, professor in literacy/reading and coordinator of doctoral studies in the Department of Curriculum and Instruction, University of Nevada at Las Vegas; Dr. William G. Brozo, professor of literacy, Graduate School of Education, George Mason University; and Dr. Douglas Fisher, professor of language and literacy education, San Diego State University. Drs. Brozo and Fisher had previously consulted with the development team for *Jamestown Reading Navigator*. These experts provided input into interpretation of the research literature, as well as recommendations of sources to review, but are not responsible for writing the summaries of the literature or for developing the correlations of the instructional recommendations to *Jamestown Reading Navigator*.

In addition to these two types of documents, some specific research reports were also identified for review, in the case of studies that were particularly germane to topics under investigation.

- Sources were reviewed and summarized, with special reference to
 - *Specific instructional recommendations*
 - *The nature of the evidence supporting each recommendation*
- Instructional recommendations were consolidated from multiple sources.
- Cross-comparison of the research-based recommendations and *Jamestown Reading Navigator* verified that *Jamestown Reading Navigator* supports each research-based recommendation listed in this paper.

In the final paper as presented here, each section spells out specific instructional recommendations that are supported by a mix of research and expert opinion. A table then provides information on how *Jamestown Reading Navigator* aligns with each recommendation.

Key policy-oriented documents and research syntheses that were reviewed for this paper are listed in the References section of the complete White Paper.

COMPREHENSION

“Why do readers struggle? The problem is not illiteracy, but comprehension. The bulk of older struggling readers and writers can read, but cannot understand what they read.”—*Reading Next* (Biancarosa & Snow, 2006, p. 10)

Comprehension: The Critical Challenge in Adolescent Literacy

When reading experts and public officials talk about a “crisis” in adolescent literacy, it is primarily a crisis in comprehension. While some adolescents need help with basic skills in the areas of reading words accurately, according to *Reading Next*, “Most older struggling readers can *read* words accurately, but they do not *comprehend* what they read” (Biancarosa & Snow, 2006, p. 8; emphasis in original).

Part of the challenge with regard to comprehension for adolescents is that text comprehension becomes more difficult as students get older and are expected to process increasingly sophisticated texts. Alvermann (2001), after describing disappointing results from the National Assessment of Educational Progress (NAEP), stated: “Simply put, basic level literacy is insufficient in today’s world where both reading and writing tasks required of adolescents are continuing to increase in complexity and difficulty” (p. 4). Along similar lines, a position statement from the International Reading Association’s (IRA) Commission on Adolescent Literacy argued, “Adolescents deserve instruction that builds both the skill and desire to read increasingly complex materials” (Moore et al., 1999, p. 5).

By the high school level, text comprehension is not only an important part of performance in English language arts classes, but also an important “gatekeeper” skill for students as they are expected to master content-area knowledge. Instruction that is specifically designed to support literacy in content-area contexts is addressed explicitly in a later section of this paper, reflecting practical considerations of instructional focus and recommended elements of adolescent literacy programs in influential documents such as *Reading Next*. However, at a fundamental level, comprehension of content-area texts cannot be separated from text comprehension as a whole. Put simply, substantial text comprehension skills are vital if students are to succeed in content-area learning.

What Is Text Comprehension?

Comprehension is often identified as the primary goal of reading: children and adults *read* in order to understand. Describing the nature and the history of research into comprehension instruction, the National Reading Panel (NRP) stated, “[R]eading comprehension has come to be viewed as the ‘essence of reading’ . . . essential not only to academic learning but to lifelong learning.” (NICHHD, 2000, p. 4-1, citing Durkin, 1993).

Comprehension, according to *Reading Next*, includes elements such as “the ability to grasp the gist of a text, to notice and repair misinterpretations, and to change tactics based on the purposes of reading” (Biancarosa & Snow, 2006, p. 8). Writing in more detail, Pressley (2000) stated,

Children are taught to read so that they can understand what is in text. . . . Reading instruction is effective in stimulating student comprehension abilities to the extent that it stimulates students to process texts as good readers do. (p. 545)

Pressley went on to describe comprehension as involving word-level processes related to decoding and vocabulary knowledge, together with processes above the word level, including automatic relating of text content to prior knowledge and a variety of conscious, controllable processes, such as

- “Being aware of [the reader’s] purpose in reading, whether it be pleasure or to find critical information for some task (e.g., writing a paper, evaluating a political position).
- “Overviewing the text to determine if it is really relevant to the reader’s goal as well as to identify sections that might be particularly apt.
- “Reading selectively, focusing on the portions of text most relevant to the reader’s goal.
- “Making associations to ideas presented in a text based on reader prior knowledge.
- “Evaluating and revising hypotheses that arose during previewing or occurred in reaction to earlier parts of the text, revising hypotheses if that is in order.
- “Revising prior knowledge that is inconsistent with ideas in the text, if the reader is convinced by the arguments in the text (alternatively, rejecting the ideas in the text, when they clash with prior knowledge).
- “Figuring out the meanings of novel words in text, especially if the words seem important to the overall meaning of the text.
- “Underlining, rereading, making notes, and/ or paraphrasing in an attempt to remember some point made in the text.
- “Interpreting text, perhaps to the point of having an imaginary conversation with the author.
- “Evaluating the quality of the text.
- “Reviewing the text after the reading is completed.
- “Thinking about how to use the information in the text in the future” (pp. 550–551, citing Pressley & Afflerbach, 1995).

Text comprehension thus “begins with decoding of words, processing of those words in relation to one another to understand the many small ideas in the text, and then, both unconsciously and consciously, operating on the ideas in the text to construct the overall meaning encoded in the text” (Pressley, 2000, p. 551).

Why Teach Comprehension Strategies?

While “[r]eaders normally acquire strategies for active comprehension informally,” the National Reading Panel cautioned, “Readers who are not explicitly taught these procedures are unlikely to learn, develop, or use them spontaneously” (NICHD, 2000, p. 4-40). Along similar lines, Nokes and Dole (2004) asked, “Why do students need explicit strategy instruction? After all, it is true that some students figure out certain strategies themselves, without help and assistance from teachers,” typically through trial and error in college (pp. 162–163). They answered:

However, wouldn’t most of us have preferred being taught, very explicitly and clearly, how to study in high school? . . . Early college life would have been easier. So it is with many high school students, most of whom would benefit from explicit strategy instruction.

But there is an even more important reason to teach strategies to students. Many students will not figure out strategies on their own. So if someone does not teach them, they will never learn them. (p. 163)

A substantial body of research verifies the value of explicitly teaching comprehension strategies. Describing the body of existing research, the NRP reported a “general finding” that “when readers are given cognitive strategy instruction, they make significant gains on measures of reading comprehension over students trained with conventional instruction procedures” (NICHD, 2000, p. 4-40, citing Pressley et al., 1989; Rosenshine & Meister, 1994; Rosenshine, Meister, & Chapman, 1996). The NRP’s own review of experimental and quasi-experimental studies “favors the conclusion that teaching of a variety of reading comprehension strategies leads to increased learning of the strategies, to specific transfer of learning, to increased memory and understanding of new passages, and, in some cases, to general improvements in comprehension” (NICHD, 2000, p. 4-52).

Instructional Recommendations

General Guidelines and Approaches

- **Extensive reading.** Several researchers pointed out the value of extensive reading to help develop students’ comprehension.
 - Pressley (2000) identified two primary reasons why extensive reading is likely to improve student comprehension. First, extensive reading improves fluency, which in turn “increas[es] the cognitive capacity available for comprehension” (p. 553). Second, “extensive reading of and exposure to excellent literature and expository material . . . increases reader knowledge . . . as reflected by the breadth of the reader’s knowledge of vocabulary. . . . Thus, when children read books that include a great deal of information pertaining to beginning science, they know more science . . . which should improve comprehension of related science content encountered in the future” (p. 553, citing multiple sources).³
 - Allington (2006) cited an extensive body of correlational research that supports the link between increased reading and greater comprehension. For example, analysis of National Assessment of Educational Progress (NAEP) scores found, “At every age level, reading more pages in school and at home each day was associated with higher reading scores. At each grade level, students who read more pages every day were more likely to achieve the proficient level of performance on the NAEP reading assessment” (p. 38, citing Donohue et al., 1999). More specifically, in a study of students in grades 4–5, Cipielewski and Stanovich (1992) found that “individual differences in reading comprehension growth were reliably linked to differences in print exposure—volume of reading—even when decoding skills were accounted for in the analyses” (Allington, 2006, p. 39). Along similar lines, Allington summarized a study of 9-year-old and 14-year-old students by Elley (1992), who “reported a strong positive relationship between teacher reports of time allocated to silent reading in their classrooms and reading comprehension proficiency of their students . . . across an international sample of schools” (p. 39).
 - Allington (2006) also reported on several “explanatory” studies that suggest a causal relationship between reading achievement and volume of reading (p. 40). For example, Taylor et al. (1990) “studied the relationship between volume and reading achievement of 165 fifth- and sixth-grade general education students. . . . Taylor and her colleagues demonstrated that the minutes of reading per day during reading period contributed significantly to individual reading achievement growth” (p. 43). Likewise, Guthrie, Wigfield, and colleagues (1999) “found reading volume predicted reading comprehension in third-, fifth-, eighth-, and tenth-grade students, even when pupil factors such as past reading achievement, prior knowledge, and motivation were controlled statistically” (Allington, 2006, p. 43).
- **Explicit instruction in comprehension strategies.** As noted above, a substantial body of research supports the value of explicitly teaching comprehension strategies. This approach is generally endorsed by experts in literacy, particularly adolescent literacy. For example:
 - The IRA Commission on Adolescent Literacy advocated “expert teachers who model and provide explicit instruction in reading comprehension and study strategies across the curriculum” as one of its seven principles for supporting adolescents’ literacy growth (Moore et al., 1999, p. 7).

³ On exposure to literature increasing reader knowledge: Stanovich & Cunningham, 1993. On exposure to literature increasing breadth of vocabulary: Dickinson & Smith, 1994; Elley, 1989; Fleisher et al., 1979; Pellegrini, Galda, Perlmutter, & Jones, 1994; Robbins & Ehri, 1994; Rosenhouse, Feitelson, Kita, & Goldstein, 1997; Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1988. On exposure to books with science information improving science learning: Morrow, Pressley, Smith, & Smith, 1997.

- Pressley (2000) wrote that extensive reading alone “does not lead to as active meaning construction during reading as occurs when students are taught explicitly to use and articulate comprehension strategies when they read. . . . [C]omprehension instruction has consistently proven its worth in experimental evaluations of it” (p. 554).
- Underwood and Pearson’s (2004) hierarchy of instructional interventions for helping struggling adolescent readers improve their comprehension included a common grounding of direct instruction in comprehension strategies at all levels, although the higher levels in the hierarchy added social and contextual components as well.
- **Multiple instructional approaches.** According to *Reading Next*, “A number of excellent approaches have been shown to be effective in middle and high school contexts, but no one approach is necessarily better than another; the ideal intervention will tap more than one comprehension instructional approach” (Biancarosa & Snow, 2006, p. 13). The report then lists comprehension strategies instruction, comprehension monitoring and metacognition strategies, teacher modeling, scaffolded instruction, and apprenticeship models as specific examples of approaches that can be used. (Many of these approaches are addressed separately below.)
- **Teacher modeling.** One of several “excellent approaches [that] have been shown to be effective in middle and high school contexts” identified by *Reading Next* was “*teacher modeling*, which involves the teacher reading texts aloud, making her own use of strategies and practices apparent to her students” (Biancarosa & Snow, 2006, pp. 13–14; emphasis in original).
 - Along these same lines, the NRP stated, “Instruction in comprehension strategies is carried out by a classroom teacher who demonstrates, models, or guides the reader on their acquisition and use” (NICHHD, 2000, p. 4-40).
 - Nokes and Dole (2004) cited recommendations by researchers that “teachers model the use of strategies as part of their explicit instruction,” “reveall[ing] to the students the invisible mental processes used by expert readers . . . by pausing and thinking aloud as they read” (p. 168, citing multiple sources).⁴
- **Cooperative learning.** Several sources described the importance and the potential usefulness of incorporating a social dimension into teaching comprehension strategies.
 - According to Nokes and Dole (2004), some researchers “agree that allowing students to work in groups is critical during the guided practice phase of explicit strategy instruction” (p. 169). Nokes and Dole cited research to the effect that “[s]ocial collaboration has been shown to be extremely motivating in regard to strategy use” (p. 169, citing Guthrie, Anderson, Alao, & Rhinehart, 1999; Swan, 2003) and noted Pressley’s (2002) contention that “small-group practice is a key to the internalization of a strategy. It seems that students working in groups are forced to defend their choice of strategy and to explain their cognitive processes. Such interaction provides a review of the declarative, conditional, and procedural knowledge for both the explainer and the listener” (p. 169).
 - Cooperative learning, defined by the NRP as describing strategies in which “peers instruct or interact over the use of reading strategies” (NICHHD, 2000, p. 4-45), was identified by the NRP as a strategy that had “a firm scientific basis for concluding that [it] improve[s] comprehension in normal readers” (NICHHD, 2000, p. 4-42), on the basis of 10 studies across grades 3–6.⁵
 - In his discussion of the NRP results in the context of adolescent literacy, Kamil (2003) stated, “Cooperative learning allows students to learn while being engaged in the learning process with other students. Research shows that students often learn better when they are engaged in cooperative learning. While cooperative learning is often thought of as a social organization for the classroom, it is also a specific learning strategy whereby students can work together on clearly defined tasks to arrive at a solution” (p. 13; emphasis in original).

4 Baker, 1994; Collins & Smith, 1982; Duffy, Roehler, & Hermann, 1988; Pearson & Dole, 1987; Pressley, 2002; Pressley et al., 1994.

5 Bramlett, 1994; Guthrie et al., 1996; Judy, Alexander, Kulikowich, & Wilson, 1988; Klingner, Vaughn, & Schumm, 1998; Mathes et al., 1994; Pickens & McNaughton, 1988; Soriano, Vidal-Abarca, & Miranda, 1996; Stevens, Madden, Slavin, & Farnish, 1987; Stevens, Slavin, & Farnish, 1991; Utter, 1988.

- **Scaffolding.** *Reading Next* also endorsed “*scaffolded instruction*, which involves teachers giving high support for students practicing new skills and then slowly decreasing that support to increase student ownership and self-sufficiency” (Biancarosa & Snow, 2006, p. 14; emphasis in original). Such approaches have encountered wide support. For example:
 - *Describing research on the effectiveness of comprehension strategy instruction, the NRP described a four-part model for building student comprehension strategies: “This improvement occurs when teachers demonstrate, explain, model, and implement interaction with students in teaching them how to comprehend a text” (NICHD, 2000, p. 4-47, citing multiple sources).⁶ This was contrasted with the too-common practice of “ ‘mentioning’ a skill to students and ‘assigning’ it to them rather than employing the effective instruction modeling and transactional practices that research supports” (NICHD, 2000, p. 4-48, citing Durkin, 1981; Reutzel & Cooter, 1988; Pressley, 1998). The end goal of this process is that “[w]hen these procedures have been acquired, the reader becomes independent of the teacher. Using them, the reader can effectively interact with the text without assistance” (NICHD, 2000, p. 4-40).*
 - *Nokes and Dole (2004) referenced Vygotsky’s concept of the zone of proximal development as identifying “the optimal difficulty level of a task” as being “beyond the learner’s ability to complete the task, but not beyond his or her ability to complete the task with the help of a more capable individual. Optimal learning activities are located within this zone” (p. 167). They described the typical structure for teaching comprehension strategies as incorporating the three steps of (1) explicit training, including teacher modeling; (2) guided practice; and (3) independent practice” (p. 167), and then introduced the concept of scaffolding in the context of guided practice: “The term scaffolding is often used to describe the temporary, adjustable, removable support that teachers provide for students” (p. 169, citing Rosenshine & Meister, 1997; emphasis in original).*
 - *With reference to guided practice, Nokes and Dole (2004) stated, “[S]ome researchers are emphatic about the need for students to have time to practice a strategy with assistance from the teacher and peers. . . . Other researchers describe the gradual release of responsibility from the teacher to the student” (p. 169, citing Pearson & Gallagher, 1983). Similarly, a guide to resources from the Southwest Educational Development Laboratory stated, “An effective way to teach a reading strategy is to follow the Pearson and Gallagher ‘Gradual Release of Responsibility’ model” (Peterson et al., 2000, p. 18, citing Pearson & Gallagher, 1983). Some researchers have argued that the gradual release of responsibility model can be effective for improving reading comprehension (Lloyd, 2004), writing achievement (Fisher & Frey, 2003), and literacy outcomes for English language learners (Kong & Pearson, 2003). The gradual release of responsibility model includes four components: focus lessons, incorporating teacher modeling; guided instruction, in which teachers prompt or lead students through comprehension tasks; collaborative learning, in which students apply the strategies they have learned in student groups; and independent learning, during which students transfer and apply their understanding to other tasks (Frey & Fisher, 2006).*
- **Practice in multiple contexts.** According to *Reading Next*, “Teachers should . . . have students employ [particular strategies] in multiple contexts with texts from a variety of genres and subject areas” (Biancarosa & Snow, 2006, p. 14).
- **Comprehension monitoring and metacognition.** Another of the “excellent approaches [that] have been shown to be effective in middle and high school contexts,” according to *Reading Next*, is “*comprehension monitoring and metacognition instruction*, which is instruction that teaches students to become aware of how they understand while they read” (Biancarosa & Snow, 2006, p. 13; emphasis in original).
 - *Comprehension monitoring, in which students learn how to monitor their own understanding of texts using procedures such as think-aloud, was also identified by the NRP as a strategy that had “a firm scientific basis for concluding that [it] improve[s] comprehension in normal readers” (NICHD, 2000, p. 4-42), based on 22 studies across grades 2–6.⁷*

6 Palincsar & Brown, 1984; Rosenshine, Meister, & Chapman, 1996; Rosenshine & Meister, 1994; Bereiter & Bird, 1985; Block, 1993; Brown, Pressley, Van Meter, & Schuder, 1996.

7 Babbs, 1984; Baker & Zimlin, 1989; Baumann, Seifert-Kessell, & Jones, 1992; Block, 1993; Carr, Dewitz, & Patberg, 1983; Cross

- Nokes and Dole (2004), describing metacognition as “the consideration, monitoring, and control of one’s cognitive activities” (p. 165, citing multiple sources),⁸ argued that “It is through metacognition that strategies are selected and put to use” and cited Schraw’s (1998) contention that “a teacher can improve students’ metacognitive abilities by making them aware of the existence of metacognition; teaching them strategies and how to evaluate strategies; showing them how to regulate, adapt, and adjust strategies; and fostering a metacognitive environment by attributing student success to strategy use” (Nokes and Dole, 2004, p. 166).
- **Coordinated use of multiple strategies.** Several researchers have concluded that it is more effective to teach multiple strategies in combination than individually. For example:
 - On the basis of 36 reviewed studies featuring instruction that combined a variety of different comprehension methods, the NRP concluded, “Multiple strategy instruction . . . finds considerable scientific support for its effectiveness as a treatment,” particularly “in classroom instruction where teachers and readers interact over texts. . . . Considerable success has been found in improving comprehension by instructing students on the use of more than one strategy during the course of reading” (NICHD, 2000, pp. 4-46-4-47).⁹
 - One particular advantage of this approach is its ability to guide students through the kind of “coordinated and flexible use of several different kinds of strategies” that is required for skilled reading (NICHD, 2000, p. 4-47).
 - Similarly, Nokes and Dole (2004) cited Trabasso and Bouchard (2002) as arguing that “the teaching of multiple strategies at once is very powerful . . . ‘there is strong empirical, scientific evidence that the instruction of more than one strategy in a natural context leads to the acquisition and use of reading comprehension strategies and transfer’ ” (Nokes & Dole, 2004, p. 175, quoting Trabasso & Bouchard, 2002, p. 184).
- **Consistent development of practices over time.** Describing “fundamental characteristics of effective instruction” on which “[t]he numerous literature reviews on explicit strategy instruction agree” (p. 170), Nokes and Dole (2004) stated, “Effective strategy instruction takes time. Students should not be expected to grasp a strategy fully after a single lesson. Explicit training, modeling, and practice should be an ongoing process throughout the school year. . . . Studies on the effects of strategy instruction, with very few exceptions, have generally taken weeks to show any results, and months to show long-term adoption of strategic reading (p. 171, citing Ogle & Blachowicz, 2002; emphasis in original).
- **Vocabulary instruction.** Several sources reference the usefulness of vocabulary instruction as a tool in improving text comprehension. For example, the NRP cited a variety of studies that “underscore the notion that comprehension gains and improvement on semantic tasks are results of vocabulary learning” (NICHD, 2000, pp. 4-15, 4-20, citing seven studies).¹⁰ The NRP’s findings were cited by both Alvermann (2001, p. 10) and Kamil (2003, p. 11) in contexts of discussing research that was applicable to adolescent readers. Similarly, Pressley (2000) described the importance of vocabulary knowledge as a component of comprehension and cited research on fourth-grade students demonstrating that in-depth instruction in vocabulary can improve comprehension (Beck et al., 1982; McKeown et al., 1983, 1985).

& Paris, 1988; Elliot-Faust & Pressley, 1986; Hasselhorn & Koerfel, 1986; Markman, 1977; Miller, 1985; Miller, 1987; Miller, Giovenco, & Rentiers, 1987; Nelson et al., 1996; Paris, Cross, & Lipson, 1984; Paris & Jacobs, 1984; Paris, Saarnio, & Cross, 1986; Payne & Manning, 1992; Schmitt, 1988; Schunk & Rice, 1984; Schunk & Rice, 1985; Silven, 1992; Tregaskes & Daines, 1989.

8 Baker, 1994; Flavel, 1979; Paris, Cross, & Lipson, 1984.

9 Adams, Carnine, & Gersten, 1982; Anderson & Roit, 1993; Blanchard, 1980; Brady, 1990; Brown, Pressley, Van Meter, & Schuder, 1996; Carnine & Kinder, 1985; Carr, Bigler, & Morningstar, 1991; Chan & Cole, 1986; Dermody, 1988; Fischer Galbert, 1989; Gilroy & Moore, 1988; Grant, Elias, & Broerse, 1989; Jacobs & Paris, 1987; Jones, 1987; Kelly, Moore, & Tuck, 1994; Klingner, Vaughn, & Schumm, 1998; Labercane & Battle, 1987; Loranger, 1997; Lysynchuk, Pressley, & Vye, 1990; Padron, 1985; Palincsar, 1987; Palincsar & Brown, 1984; Palincsar, David, Winn, & Stevens, 1991; Pelow & Colvin, 1983; Reutzel & Hollingsworth, 1991a; Reutzel & Hollingsworth, 1991b; Rich, 1989; Ritchie, 1985; Rush & Milburn, 1988; Shortland-Jones, 1986; Sindelar, 1982; Smith, Johnson, & Johnson, 1981; Soriano, Vidal-Abarca, & Miranda, 1996; Stevens, 1988; Taylor & Frye, 1992; Williamson, 1989.

10 Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983; Wixson, 1986; Carney, Anderson, Blackburn, & Blessing, 1984; Kameenui, Carnine, & Freschi, 1982; Stahl & Fairbanks, 1986; Medo & Ryder, 1993.

Specific Strategies

The list below describes some specific strategies that are supported by research and/or expert opinion, and that are featured in *Jamestown Reading Navigator*.

Many of these specific strategies are based on the National Reading Panel’s review of research literature spanning grades 3–9, with some recommendations based on research that focused on the upper elementary grades only. However, several researchers in adolescent literacy have endorsed these findings as identifying “effective ways of teaching comprehension in the middle grades, and possibly beyond” (Alvermann, 2001, p. 9; see also Kamil, 2003). This is particularly true in connection with the seven strategies identified by the NRP as having a “firm scientific basis”: comprehension monitoring, cooperative learning, graphic organizers, question answering, question generation, story structure, and summarization.

- **Question answering.** Based on a review of 17 studies (mostly in grades 3–5) in which teachers asked questions about the text, the NRP included question answering among strategies with a “firm scientific basis” (NICHD, 2000, p. 4-42).¹¹ According to the NRP, “The evidence is primarily that the effects are specific to increased success on experimenter tests of question answering. . . . This procedure may be best used as a part of multiple strategy packages where the teacher uses questions to guide and monitor readers’ comprehension” (NICHD, 2000, p. 4-45).
- **Question generation.** According to the NRP, “The strongest scientific evidence was found for the effectiveness of asking readers to generate questions during reading” (NICHD, 2000, p. 4-45, based on review of 27 studies in grades 3–9).¹² Nokes and Dole (2004) endorsed these findings, identifying question generation as a strategy that “yielded positive results” (p. 173). Pressley (2000) similarly cited evidence in favor of why-questioning, in which students “[ask] themselves why-questions about facts presented in connected text,” declaring, “Why-questioning produces large effects on learning and can be used profitably by elementary and middle school students to learn material in factually dense text” (p. 553, citing Pressley, Wood, Woloshyn, Martin, King, & Menke, 1992).
- **Summarization.** Another strategy that the NRP endorsed as having a firm scientific basis was summarization, in which students are taught “how to identify the main or central ideas of a paragraph or a series of paragraphs” (NICHD, 2000, p. 4-92, citing 18 studies, mostly at grades 5–6).¹³
 - According to the NRP, “The effects [of summarization] are largely specific to improving the writing of summaries, but there are 11 studies that show transfer effects on recall of what was summarized and on question answering. . . . Instruction of summarization succeeds in that readers improve on the quality of their summaries of text, mainly identifying the main idea but also in leaving out detail, including ideas related to the main idea, generalizing, and removing redundancy. This indicates that summarizing is a good method of integrating ideas and generalizing from the text information. Furthermore, the instruction of summarization improves memory for what is read, both in terms of free recall and answering questions” (NICHD, 2000, p. 4-46).
- **Story structure.** The NRP also identified story structure—in which students are instructed in the “content and organization of stories,” including use of graphic organizers (such as story maps) in conjunction with story content and structure—as a strategy with a firm scientific basis (NICHD, 2000, p. 4-45, citing 17 studies across grades 3–6).¹⁴ Kamil (2003), writing about the NRP results in the context of research-supported practices for adolescent literacy, described story structure as referring to “the common components in story (or narrative) text. These components are often described as: setting, initiating events, internal reactions, goals, attempts, and outcomes” (p. 14).

11 Anderson & Biddle, 1975; Ezell et al., 1992; Fischer, 1973; Garner, Hare, Alexander, Haynes, & Winograd, 1984; Garner, Macready, & Wagoner, 1984; Griffey et al., 1988; Levin & Pressley, 1981; Pressley & Forrest-Pressley, 1985; Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985; Richmond, 1976; Rowles, 1976; Serenty & Dean, 1986; Sheldon, 1984; Watts, 1973; Wixson, 1983.

12 Blaha, 1979; Brady, 1990; Cohen, 1983; Davey & McBride, 1986; Dermody, 1988; Dreher & Gambrell, 1985; Hansen & Pearson, 1983; Helfeldt & Lalik, 1976; King, 1989; King, 1990; King, 1992; Labercane & Battle, 1987; Lonberger, 1988; Lysynchuk, Pressley, & Vye, 1990; MacGregor, 1988; Manzo, 1969; Nolte & Singer, 1985; Palincsar, 1987; Palincsar & Brown, 1984; Ritchie, 1985; Short & Ryan, 1984; Simpson, 1989; Singer & Donlan, 1982; Smith, 1977; Taylor & Frye, 1992; Williamson, 1989; Wong & Jones, 1982.

13 Afflerbach & Walker, 1992; Armbruster, Anderson, & Ostertag, 1987; Baumann, 1983, 1984; Bean & Steenwyk, 1984; Berkowitz, 1986; Brown & Day, 1983; Brown, Day, & Jones, 1983; Carnine, Kame’enui, & Woolfson, 1982; Doctorow, Wittrock, & Marcks, 1978; Jenkins et al., 1987; Reutzel & Cooter, 1988; Reutzel & Hollingsworth, 1988; Rinehart, Stahl, & Erickson, 1986; Sjoström & Hare, 1984; Taylor, 1982, 1986; Taylor & Beach, 1984.

14 Baumann & Bergeron, 1993; Buss, Ratliff, & Irion, 1985; Fitzgerald & Spiegel, 1983; Gordon & Rennie, 1987; Greenwald & Rossing, 1986; Griffey et al., 1988; Idol, 1987; Idol & Croll, 1987; Nolte & Singer, 1985; Omanson, Beck, Voss, McKeown, et al., 1984; Reutzel, 1984; Reutzel, 1985; Reutzel, 1986; Short & Ryan, 1984; Singer & Donlan, 1982; Spiegel & Fitzgerald, 1986; Varnhagen & Goldman, 1986.

- **Graphic organizers.** As defined by the NRP, *graphic organizers* refers specifically to a method in which “teachers instruct students to organize their ideas through the construction of graphs of ideas based upon what they read” (NICHHD, 2000, p. 4-73). The NRP identified this as a strategy with a firm scientific basis, based on 11 studies (grades 2–8) involving use of content-area texts (social studies and science) (NICHHD, 2000, p. 4-45).¹⁵
 - According to Kamil (2003), “Graphic organizers are alternative representations of text, visual or spatial. Graphic organizers include semantic networks, concept maps, or text maps. . . . Graphic organizers can be used before, during, or after reading” (Kamil, 2003, p. 13; *emphasis in original*).
- **Mental/visual imagery.** Training students to create visual imagery was specifically endorsed by Nokes and Dole (2004) as a strategy that has “yielded positive results” (p. 173).
 - While the NRP did not conclude that teaching students to use mental/visual imagery had a “firm scientific basis,” the report did state, “Mental imagery . . . strategies have reliable effects on improving memory for text. . . . These procedures are useful for recall of individual sentences or paragraphs” (NICHHD, 2000, p. 4-42, citing five studies in grades 2–8).¹⁶
 - Similarly, Pressley (2000) included “construction of mental images representing the meanings expressed in text” as being among the “[s]trategies that proved their worth” in research on teaching of individual comprehension strategies (p. 554, citing Gambrell & Bales, 1986; Gambrell & Jawitz, 1993; Pressley, 1976).
- **Activation of prior knowledge.** According to Pressley (2000), “The mature reader knows much about the world. Such prior knowledge affects comprehension” (p. 549).
 - Pressley went on to endorse prior knowledge activation as a strategy that was supported by existing research (p. 554, citing Levin & Pressley, 1981).
 - Based on a review of 14 studies (grades 1–9), the NRP stated, “The activation of relevant world knowledge helps children understand and remember what they read. The activation of prior knowledge occurs naturally in contexts in which subject content is taught by the teacher, and readers then read text that relates to what has been learned. Prior knowledge activation occurs with several strategies, notably question elaboration, generation, and answering” (NICHHD, 2000, p. 4-85).¹⁷ However, the strategy did not reach the threshold of firm scientific basis in the NRP’s view.
- **Critical reading.** A variety of sources attest the importance of teaching students to read critically as an important outcome of comprehension instruction. This argues for the potential usefulness of instruction that focuses explicitly on the development of such critical reading skills.
 - In their discussion of content-area literacy, Readence et al. (2004) noted, “Critical thinking has been a part of curriculum design in the United States for many years, generally in the form of helping students distinguish facts from opinions, instances of propaganda, and so on” (p. 32).
 - Underwood and Pearson (2004), in their critique of the “intense instructional emphasis on print skills” in the 1990s (pp. 138–139), argued instead for “a balance that does justice to issues of comprehension, writing in response to reading, and critical examinations of text” (p. 139).

15 Alvermann & Boothby, 1983, 1986; Armbruster, Anderson, & Meyer, 1991, 1992; Baumann, 1984; Berkowitz, 1986; Darch, Carnine, & Kame’enui, 1986; Gordon & Rennie, 1987; Simmons et al., 1988; Sinatra, Stahl-Gemake, & Berg, 1984; Vidal-Abarca & Gilabert, 1995.

16 Borduin et al., 1994; Gambrell & Bales, 1986; Peters & Levin, 1986; Pressley, 1976; Shriberg et al., 1982. We note that the text description in the National Reading Panel chapter on Comprehension stated that seven studies were reviewed for mental imagery (NICHHD, 2000, pp. 4-43, 4-75); however, only five studies were listed in the Mental Imagery References section.

17 Au, 1980; Brown et al., 1977; Dewitz et al., 1986; Dole et al., 1991; Hansen & Pearson, 1983; Manzo, 1979; Linden & Wittrock, 1981; Neuman, 1988; Palincsar & Brown, 1984; Prince & Mancus, 1987; Roberts, 1988; Spires et al., 1992; Tharp, 1982; Wood et al., 1988.

- More broadly, according to the National Reading Conference, “Adolescents’ interests in the Internet, hypermedia, and various interactive communication technologies (e.g., chat rooms where people can take on various identities unbeknown to others) suggest the need to teach youth to read with a critical eye toward how writers, illustrators, and the like represent people and their ideas—in short, how individuals who create texts make those texts work” (Alvermann, 2001, p. 2).
- Along similar lines, Allington (2006) argued for a “thoughtful literacy” in the classroom that reflects what we do with texts in the real world: “We engage in conversations about the texts, typically focusing on the ideas in the texts—the gist of the article or book. We also offer our responses, reactions, and evaluations. . . . Often we discuss the perspective of the writer of the text. In other words, we look for bias. . . . [W]e constantly monitor an author’s or informant’s perspective as we imagine it” (p. 111; emphasis in original).

How Jamestown Reading Navigator Aligns with Instructional Recommendations for Teaching Comprehension

The following table describes how *Jamestown Reading Navigator* aligns with instructional recommendations described above for teaching comprehension.

Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>		
<p>Students should read extensively to develop fluency and background knowledge.</p>	<ul style="list-style-type: none"> • Much of the time students spend online in <i>Jamestown Reading Navigator</i> consists of silent reading (supported in many cases by audio) and oral fluency activities. (For more information on how <i>Jamestown Reading Navigator</i> improves student fluency, see the Fluency section earlier in this paper.) • Students practice reading texts from a variety of content areas (science, literature, social studies) and genres (short stories, essays, poems, plays), which helps build their background knowledge. • In addition to reading selections online, the program also includes activities and print resources for reading off the computer, using the <i>inClass Reader</i> anthologies and <i>inTIME</i> Magazines. • The program also provides a list of suggested additional readings for each quest (unit) in Treks (levels) 2–4 in the Resources section of the <i>Teacher Resource Guide</i>. These represent additional book-length texts that teachers could make available to their students. 		
<p>Comprehension strategies should be explicitly taught.</p>	<p>Each journey (lesson) in Treks 2–4 in <i>Jamestown Reading Navigator</i> has a specific comprehension skill/strategy focus. <i>Jamestown Reading Navigator</i> provides explicit instruction in 32 comprehension skills/strategies, as listed below. (Note that several of the bullets below incorporate more than one distinct skill/strategy.)</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> • Analyzing media • Analyzing story elements • Connecting across texts • Drawing conclusions • Finding the main idea and details • Identifying sequence • Identifying theme • Making inferences • Making predictions • Questioning to get information • Questioning to monitor comprehension • Recognizing cause and effect • Recognizing fact and opinion • Recognizing literary devices • Recognizing problem and solution • Summarizing </td> <td> <ul style="list-style-type: none"> • Understanding author’s purpose and viewpoint • Understanding character description • Understanding characterization • Understanding compare and contrast • Understanding graphic information • Understanding plot • Understanding setting • Understanding style, mood, and tone • Understanding text structure (cause and effect, compare and contrast, narrative and informational, problem and solution, sequence) • Using context • Visualizing </td> </tr> </table>	<ul style="list-style-type: none"> • Analyzing media • Analyzing story elements • Connecting across texts • Drawing conclusions • Finding the main idea and details • Identifying sequence • Identifying theme • Making inferences • Making predictions • Questioning to get information • Questioning to monitor comprehension • Recognizing cause and effect • Recognizing fact and opinion • Recognizing literary devices • Recognizing problem and solution • Summarizing 	<ul style="list-style-type: none"> • Understanding author’s purpose and viewpoint • Understanding character description • Understanding characterization • Understanding compare and contrast • Understanding graphic information • Understanding plot • Understanding setting • Understanding style, mood, and tone • Understanding text structure (cause and effect, compare and contrast, narrative and informational, problem and solution, sequence) • Using context • Visualizing
<ul style="list-style-type: none"> • Analyzing media • Analyzing story elements • Connecting across texts • Drawing conclusions • Finding the main idea and details • Identifying sequence • Identifying theme • Making inferences • Making predictions • Questioning to get information • Questioning to monitor comprehension • Recognizing cause and effect • Recognizing fact and opinion • Recognizing literary devices • Recognizing problem and solution • Summarizing 	<ul style="list-style-type: none"> • Understanding author’s purpose and viewpoint • Understanding character description • Understanding characterization • Understanding compare and contrast • Understanding graphic information • Understanding plot • Understanding setting • Understanding style, mood, and tone • Understanding text structure (cause and effect, compare and contrast, narrative and informational, problem and solution, sequence) • Using context • Visualizing 		

ANALYSIS AND RESULTS

Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<p>Comprehension instruction should incorporate multiple approaches.</p>	<p><i>Jamestown Reading Navigator</i> combines a variety of approaches to teaching text comprehension, including</p> <ul style="list-style-type: none"> • Explicit instruction in comprehension strategies through the use of multi-media animations • Instruction in comprehension monitoring (teaching students how to ask questions to monitor their own comprehension) • Teacher modeling, in which teachers or computer animations read texts aloud and demonstrate to students how a skill is used • Gradual release of responsibility model, which includes four steps: students watch a skill being applied, students practice with teacher guidance, students practice together collaboratively, and students use the skill independently • Ample opportunities for individual, collaborative, whole-group, and small-group instruction <p>These approaches are described in more detail below in this table.</p>
<p>Instruction in comprehension strategies should include modeling of strategy use, through procedures such as think-aloud.</p>	<p><i>Jamestown Reading Navigator</i> incorporates modeling of comprehension strategies in several ways.</p> <ul style="list-style-type: none"> • Animations in the online Focus on the Skill and Look Back at the Skill sections model strategy use by reading aloud a text and using a think-aloud procedure to demonstrate use of strategies, so the process is apparent to students. • From these same sections, students can use the Tutor buttons to access yet another explanation of the reading skill, with another modeling of a think-aloud. • The <i>Reteaching Skills Support</i> resources include a section titled Teacher Modeling for every skill. This section provides a sample passage and explicit guidance to the teacher on modeling use of the skill for students. • The online professional development module on reading comprehension includes a reading specialist demonstrating how she uses teacher modeling with students, including use of think-alouds. • An optional on-site professional development session on scaffolded instruction with Think Alouds provides guidance in using think-alouds to model instruction as part of the gradual release of responsibility model. (More information on this model is provided later in this table.)
<p>Instruction should provide opportunities for students to work together while applying comprehension strategies to interpret texts.</p>	<p><i>Jamestown Reading Navigator</i> provides multiple opportunities for students to work together as they interpret texts.</p> <ul style="list-style-type: none"> • The <i>inClass Readers</i> include end-of-selection questions for partner or small-group discussions. • The <i>inClass Reader</i> Teacher Guide also provides suggestions for literature circle activities and discussions in conjunction with many of the <i>inClass Reader</i> selections. These activities provide opportunities for students to discuss and interpret what they have read and how it relates to the guiding question for the quest. • The <i>Reteaching Skills Support</i> resources for Treks 2–4 include small-group activities for interacting with text, for students who need additional instruction to help them learn specific skills. • The online professional development module on comprehension provides numerous suggestions for how to engage groups in collaborative activities before, during, and after reading. The vocabulary module also includes collaborative activities for learning vocabulary.

Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<p>Student learning of comprehension strategies should be scaffolded, using a model such as the gradual release of responsibility that helps students achieve independent strategy use.</p>	<p>The gradual release of responsibility model used by <i>Jamestown Reading Navigator</i> includes the following components. Professional development on using this model in creating lesson plans is provided as part of the on-site <i>Jamestown Reading Navigator</i> follow-up training. There is also a description of the gradual release of responsibility model in the <i>Teacher Resource Guide</i>.</p> <ul style="list-style-type: none"> • Focus lessons. <i>Jamestown Reading Navigator</i>'s journeys provide extensive modeling of critical reading and vocabulary skills that students use as they work through lessons online. In each journey in Treks 2–4, an animated lesson related to the selection topic describes and models a reading skill. For students who need additional support, <i>Reteaching Skills Support</i> resources provide further guidance to teachers for modeling skills and strategies as needed. • Guided instruction. <ul style="list-style-type: none"> – In each journey in Treks 2–4, a skill-based activity prior to the reading selection helps students practice the reading skill and provides substantive feedback on their performance. – During this activity, additional guidance on the skill is immediately available to students by clicking the Tutor button, which reteaches the reading skill using different language, strategies, and format. – While students are reading text selections online, they are reminded to use appropriate reading skills and strategies. – Students are tested on the reading skill for each journey in the Journey Test and are routed to an animated skill lesson with new examples of the reading skill if they do not perform well on skill-related questions. They are then reassessed on the skill. If students still do not do well on the skill, their names are listed on the Reading Skill Intervention Report, so that the teacher knows to prepare additional instruction for them using the <i>Reteaching Skills Support</i> resources. – <i>InClass Reader</i> selections prompt students to use specific reading skills and offer teachers additional opportunities to facilitate students' learning of skills through guided instruction. • Collaborative learning. The program incorporates collaborative learning opportunities in the form of <i>inClass Reader</i> group activities and <i>Reteaching Skills Support</i> activities. <ul style="list-style-type: none"> – As students read the <i>inClass Reader</i> selections, margin notes prompt them to use skills they have learned in order to understand the text. These questions and prompts can be used by the teacher as the basis for collaborative group discussions among students who are reading the same texts at the same time. – After students have read the <i>inClass Reader</i> selections for each quest, teachers are prompted to organize students into literature circles. Within the literature circles, students discuss specific questions that relate to the <i>inClass Reader</i> selections and to the guiding question for the quest. – Also within the literature circles, students complete a hands-on collaborative activity, such as creating summary cards or playing a game. – <i>Reteaching Skills Support</i> resources incorporate small-group discussion opportunities to help ensure that students practice and apply what they have learned.

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Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<p>Student learning of comprehension strategies should be scaffolded, using a model such as the gradual release of responsibility that helps students achieve independent strategy use. <i>(continued)</i></p>	<ul style="list-style-type: none"> • Independent learning. Work with multiple texts over the course of <i>Jamestown Reading Navigator</i> provides students with the opportunity to internalize new skills and strategies as they move through the journeys and treks. Quest assessments test for transfer of important reading skills to unfamiliar texts, and <i>inClass Readers</i> and <i>inTIME</i> Magazines offer students engaging opportunities to read independently and apply the reading skills and strategies they have learned.
<p>Students should practice using comprehension skills in multiple contexts with texts from a variety of genres and subject areas.</p>	<p>Students practice comprehension skills in a variety of contexts, including the online journey reading selections; Quest Test passages; <i>inClass Reader</i> selections; <i>inTIME</i> Magazine articles; and Reteaching Skills passages, if they need additional help with learning specific skills.</p> <p>Students practice their comprehension skills with a variety of genres and subject areas. Examples:</p> <ul style="list-style-type: none"> • <i>Identifying sequence</i> is taught in the context of a textbook chapter, informational nonfiction, and biography. • <i>Drawing conclusions</i> is taught with informational nonfiction, a mystery, a textbook chapter, and fiction. • <i>Connecting across texts</i> is taught with fiction, myths, memoirs, and nonfiction. • <i>Making predictions</i> is taught with a textbook chapter, informational nonfiction, folktales, an Internet blog, a memoir, and fiction. • <i>Recognizing theme</i> is taught with fiction and myths. • <i>Summarizing</i> is taught with informational nonfiction, a textbook chapter, a memoir, and a biography. <p><i>Jamestown Reading Navigator</i> includes informational nonfiction, fiction, plays, poetry, folktales, myths, mysteries, memoirs, speeches, and biographies, and content-area passages related to science, social studies, literature, math, geography, music, art, health, and history.</p>
<p>Comprehension instruction should help students develop metacognitive abilities to monitor their own comprehension.</p>	<p><i>Jamestown Reading Navigator</i> helps students develop their metacognitive and comprehension monitoring abilities in several ways.</p> <ul style="list-style-type: none"> • Questioning to monitor comprehension is taught as a focus skill in three journeys, one each in Treks 2, 3, and 4. • Students are prompted to think about their reading with comprehension monitoring questions, note-taking prompts, and reading tips as they read the various journey text selections. • Additional resources for teaching comprehension monitoring are provided in the <i>Reteaching Skills Support</i> materials. • The online professional development module on comprehension models use of think-alouds to demonstrate comprehension monitoring. This module also encourages teachers to have students ask themselves questions about what they are reading. • An optional on-site professional development session titled Monitoring Comprehension and Using Fix-up Strategies helps teachers develop activities to teach students how to (a) recognize when comprehension breaks down and (b) use strategies to clarify their understanding.

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Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<p>Students should be taught to use multiple comprehension strategies in coordinated ways.</p>	<p>Specific comprehension skills and strategies are taught one at a time in <i>Jamestown Reading Navigator</i>. However, the program guides students in several ways to practice using multiple strategies in a coordinated way.</p> <ul style="list-style-type: none"> • Within each journey, students practice using multiple strategies to interpret texts. For example, typically students use a graphic organizer, a background builder, or an anticipation guide as part of the prereading activity; use the reading skill/strategy as they are reading a text selection; learn key vocabulary related to the selection; and are prompted to take notes and monitor their own comprehension. • Reading tips throughout the online text selections remind students to use reading skills/strategies they have already learned, monitor their comprehension as they read, and use “fix-up” strategies to help them clarify their understanding. • As students are reading the <i>inClass Reader</i> text selections, margin notes prompt them to use multiple strategies in order to interpret the text. For example, in <i>inClass Reader Trek 2, Quest 4</i>, the side-margin notes for the selection titled “War” prompt students to use skills related to recognizing cause and effect, drawing conclusions, making predictions, using context clues, and understanding the author’s purpose. <ul style="list-style-type: none"> – Example of a during-reading tip: “Ask yourself <i>who, what, when, where, why, and how</i> questions about the selection.”
<p>Instruction in and practice with comprehension strategies should be ongoing over an extended period of time.</p>	<p><i>Jamestown Reading Navigator</i> provides extensive opportunities for students to practice skills over time using level-appropriate texts.</p> <ul style="list-style-type: none"> • Most skills/strategies are taught more than once, in more than one trek of <i>Jamestown Reading Navigator</i>. • Review skill questions in each Journey Test check for transference of reading skills taught earlier in the trek. • Reading tips in the side margins of the online text selections and <i>inClass Reader</i> anthologies remind students to employ the various reading skills and strategies they have already learned, monitor their comprehension as they read, and use “fix-up” strategies to help them clarify their understanding.
<p>Students should be taught vocabulary to improve their text comprehension.</p>	<p><i>Jamestown Reading Navigator</i> includes an extensive program for developing students’ vocabulary knowledge, focusing in particular on vocabulary that is used in the text selections for each journey. (For more information, see the Vocabulary section earlier in this paper.)</p>

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ANALYSIS AND RESULTS

Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<p>Students should be taught specific research-supported comprehension strategies, such as:</p> <ul style="list-style-type: none"> • Question answering 	<p><i>Jamestown Reading Navigator</i> provides students with ample practice in answering questions both during and after reading, based on the online and <i>inClass Reader</i> selections.</p> <ul style="list-style-type: none"> • Comprehension monitoring questions appear throughout the online and <i>inClass Reader</i> selections. For example, while reading a selection about someone traveling on the <i>Titanic</i>, students are prompted to select an answer about that person's reasons for traveling on the <i>Titanic</i>. Students receive immediate substantive feedback to questions they answer while reading the online selections. • After reading an online selection, students take a Journey Test with 10 comprehension questions based on the selection. They receive immediate substantive feedback on their answers. • After reading an <i>inClass Reader</i> selection, students complete an online quiz that includes five comprehension questions. • Scores on the Journey Test and the <i>inClass Reader</i> quizzes are recorded in the Learner Management System and reported to teachers. This allows them to monitor how well students are doing with answering questions based on the text selections.
<ul style="list-style-type: none"> • Question generation 	<p>Several <i>Jamestown Reading Navigator</i> reading skills teach students how to generate questions related to texts for specific purposes, including</p> <ul style="list-style-type: none"> • Analyzing media (covered in Treks 2, 3, and 4) • Analyzing story elements (Treks 3 and 4) • Connecting across texts (Treks 2 and 3) • Finding the main idea and details (Treks 2 and 3) • Identifying theme (Treks 2, 3, and 4) • Questioning to get information (Treks 2 and 3) • Questioning to monitor comprehension (Treks 2, 3, and 4) • Recognizing problem and solution (Treks 2 and 3) • Summarizing (Treks 2, 3, and 4) • Understanding text structure: cause and effect (Treks 2 and 3) • Understanding text structure: sequence (Treks 2 and 3) • Understanding the author's purpose (Treks 2, 3, and 4) • Understanding the author's viewpoint (Treks 2, 3, and 4) • Visualizing (Treks 2 and 3)
<ul style="list-style-type: none"> • Summarization 	<ul style="list-style-type: none"> • Students are taught summarization as the focus reading skill/strategy in two journeys each in Treks 2 and 3 and in one journey in Trek 4. • Students are taught to find the main idea and details as the focus skill for two journeys each in Treks 2 and 3. • For both of these skills, <i>Reteaching Skills Support</i> provides additional activity suggestions and resources to help students further develop the skill as needed.

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Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<ul style="list-style-type: none"> • Story structure 	<p>Students are taught a variety of skills related to story structure, including</p> <ul style="list-style-type: none"> • Analyzing story elements (Treks 3 and 4) • Identifying sequence (Treks 2, 3, and 4) • Identifying theme (Treks 2, 3, and 4) • Understanding character description (Trek 2) • Understanding characterization (Trek 3) • Understanding plot (Trek 2) • Understanding setting (Trek 2) • Understanding text structure (narrative and informational) (Treks 2 and 3) • Understanding text structure (sequence) (Treks 2, 3, and 4)
<ul style="list-style-type: none"> • Graphic organizers 	<p>Students are guided to use many different graphic organizers in a variety of settings within <i>Jamestown Reading Navigator</i>.</p> <ul style="list-style-type: none"> • Graphic organizers are often used online as part of the before reading and after reading activities. • The <i>Reteaching Skills Support</i> for teachers includes many suggestions for using graphic organizers to help students learn comprehension strategies. • The <i>Teacher Resource Guide</i> section on Enriching Vocabulary includes several suggestions for using graphic organizers to help students explore concepts represented by new vocabulary words. • Teachers are prompted to have students use graphic organizers as tools for practicing specific skills as they read print selections in the <i>inClass Readers</i>. • An optional on-site professional development session on Using Manipulatives to Create Reading Independence provides guidance to teachers on how to create and use graphic organizers and on teaching students how to use them. • Blackline masters are provided for 20 graphic organizer formats teachers might want to use with their students.
<ul style="list-style-type: none"> • Mental/visual imagery 	<p>Students are taught to visualize pictures of what they are reading as the focus skill for journeys in Treks 2 and 3.</p>
<ul style="list-style-type: none"> • Activation of prior knowledge 	<ul style="list-style-type: none"> • Prereading activities for each online selection prompt students to activate their prior knowledge about the selection’s topic. For example, students are often prompted to complete a KWL (Know/Want to know/Learned) chart or word web prior to reading a selection, which prompts them to remember and process information they already know about the topic. • The model lesson plan provided in the <i>Teacher Resource Guide</i> for use with the <i>inClass Reader</i> selections includes strategies for activating prior knowledge before students read the text selections. • An optional on-site professional development session is available that covers “front loading” to help teachers use engagement strategies to access students’ prior knowledge.

Continued ➡

Summary of Comprehension Recommendations	Application Through <i>Jamestown Reading Navigator</i>
<p>Students should be taught to read texts critically.</p>	<p><i>Jamestown Reading Navigator</i> includes a variety of reading skills/strategies that are directed toward helping students learn to read and interpret texts critically.</p> <ul style="list-style-type: none"> • <i>Analyzing media</i> (Treks 2–4) teaches students to look critically at information from books, newspapers, magazines, TV, radio, and the Internet. When students analyze media, they consider, question, and interpret information. Students are asked to think about who provided the information for a text, what the purpose of the text is, and whether it can be trusted. • <i>Connecting across texts</i> (Treks 2–3) helps students understand and interpret multiple texts that may present different perspectives on the same topic. • <i>Recognizing fact and opinion</i> (Treks 2–4) helps students learn to identify facts and opinions in written texts. • <i>Understanding author’s purpose</i> (Treks 2–4) helps students recognize an author’s reason(s) for writing: e.g., to persuade, describe, explain, or entertain. • <i>Understanding author’s viewpoint</i> (Treks 2–4) helps students recognize an author’s viewpoint—how the author thinks, feels, or believes about something—through careful reading of a text.

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