

Implementation Guide



Valuable Resources

ARO (Assessment and Reporting Online)—<http://aro.savvascmg.com>

You can access the Literacy Navigator pre-tests, checkpoints, and post-tests on ARO. The assessments can be administered online or in paper-and-pencil format. An ARO user guide, FAQs, and short training videos are available on the ARO Help screen. ARO also includes an extensive set of reporting tools. You can register for ARO or get technical support by calling 877.561.4327 or by completing and submitting a request form at www.savvascommunity.com/formlibrary/arosupport.

my Savvas Training—<http://mysavvastraining.com/products/literacynavigator/2012/materials>

You will find the required teaching materials for Literacy Navigator on “my Savvas Training.” These materials include videos and a packet of resources, such as graphic organizers, to use with the lessons. This site also includes tutorials that provide more information about the program and how to teach it successfully. We suggest you visit the site for the latest updates each time you teach a module.

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ISBN: 978-1-40261-198-8
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Literacy Navigator® Overview

In the early elementary grades, students focus their attention on learning to read—concentrating on mastering phonics letter by letter and word by word. By fourth grade, most students have enjoyed reading and responding to various literary genres. They have worked with character development and plot; they have read and perhaps written memoirs, biographies, and poetry. Soon these students reach a critical juncture—when learning to read becomes reading to learn. Unfortunately, most students approach this academic crossroads with very little heed, much less educational guidance (Chall 1983, 1996).

Expository works, such as textbooks, include amalgamated content and complex structures; deep comprehension requires strategies that are fundamentally different from those used for crafting responses to literature. E. D. Hirsch (2003) says it all in the title of his article “Reading Comprehension Requires Knowledge of Words and the World.” Without explicit instruction on text structure, vocabulary development, and domain knowledge, comprehension can slip just when students need it most. Research shows that fourth-grade students often experience a dip in achievement levels (NAEP 1971, Chall 1996). The “fourth-grade slump,” as it is frequently called, can beset even competent students previously reading narratives on grade level

Literacy Navigator intervenes as students make a critical academic transition. It is designed to keep them reading confidently on grade level—so they can build knowledge of words and the world.

(Hirsch 2003). Older students may be just as vulnerable; Chall (2003) suggests middle-grade students with reading difficulties will likely struggle when faced with the complexities of science, social studies, and mathematics texts.

Traditionally, most extra educational funds have been spent on programs that serve students with special needs or gifted students. Students functioning solidly in the

middle were thought to require little more than the normal curriculum to continue performing on grade level. We now know there are important transition points that should not pass unnoticed, lest good students fall behind. One of these transitions occurs when students move from reading “stories” to reading informational texts.

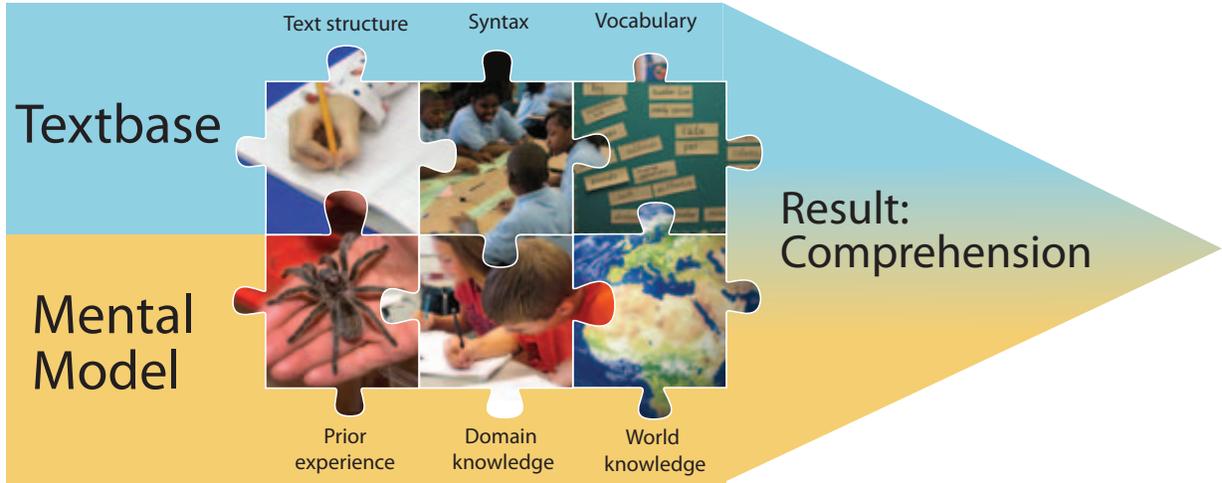
Tackling the Comprehension Slump

Comprehending informational text requires a full complement of special skills and strategies, yet these unique methods are rarely introduced or explicitly taught in the classroom. Savvas developed Literacy Navigator, the first program to address this problem head on. Literacy Navigator is based on the cognitive science behind comprehension. The program deals exclusively with informational text and presents new strategies for the distinct challenges found in complex language structures.

The Construction-Integration Model

Literacy Navigator combines domain-related concepts, leveled informational texts, and structured lessons with the comprehension model developed by Walter Kintsch. Kintsch (1974, 1988, 1998) detailed the science behind reading comprehension, describing the Construction-Integration model as the essential interplay that occurs between reader and text. His model illustrates that it is the construction of the textbase with integration of the mental model that results in deep and lasting comprehension.

Students will bring prior knowledge to bear and develop conceptual understanding in a domain. And they will apply newly learned comprehension strategies in order to navigate increasingly complex texts.



Literacy Navigator also draws on the research of E. D. Hirsch (2006), who recognized that reading is not a general skill that applies readily to informational texts unless students possess relevant background knowledge. Using Hirsch’s research, the research findings of Beck, McKeown, and Kucan (2002), and Kintsch’s Construction-Integration model, Literacy Navigator helps students sharpen their comprehension skills, broaden their domain knowledge, and improve their vocabulary. Lessons increase students’ general academic vocabulary (Tier 2), while simultaneously building domain knowledge and the Tier 3 vocabulary they will encounter in the upper grades.

Literacy Navigator’s structured lessons combine all elements—appropriate text levels, domain-related topics, and specific comprehension strategies. It is this combination, along with customized instructional tools, that allows students to move fluidly from textbase to mental model and back again. Students construct the textbase by working with structure, syntax, and vocabulary daily. They develop the mental model by integrating that textbase with new concepts, prior experience, and a deeper and wider understanding of the domain. This process of working with the textbase and the mental model enables students to move new learning to long-term memory.

How Is Literacy Navigator Unique?

The Literacy Navigator comprehension strategies that students learn today will work for them tomorrow with middle school geography, high school social science, college biology, and the workplace.

Literacy Navigator bridges the divide between grade-school reading books and middle- to upper-grade textbooks. Each element of the Literacy Navigator design, structure, and implementation is shaped by a specific goal: to prepare students to transition from reading story books and literature to comprehending complex, informational texts—in school and in their adult lives.

Literacy Navigator is unique because it revolves around a powerful combination of elements:

- A new model of comprehension for informational text
- Specific reading strategies that support the model
- Leveled text and scaffolded content to practice the strategies
- Engaging topics and high-quality materials in a teachable program

Literacy Navigator is an intervention that fills an identified educational gap for specific students; it is not a remedial program. Administrators will appreciate its flexible implementation. Teachers like that it can be used alongside their regular reading or language arts program. And parents see how it engages their students' interest. It sharpens the skills of students reading at grade level, increases the focus of students who hover just below grade level, and strengthens the abilities of students who may read literature competently but struggle with informational text.

A New Model of Comprehension

The Construction-Integration model helps students develop the skills and strategies they need to *really learn* from informational texts or textbooks. Informational text can be complex. First, students must learn to identify structure, recognize unfamiliar syntax, and link ideas in the textbase to achieve clear and consistent understanding. Students must do all these things while integrating new concepts with prior knowledge in a new mental model. When these construction and integration processes are combined, understanding solidifies and becomes long-term knowledge. Best of all, research shows that once the strategies associated with the Construction-Integration model are mastered, students transfer them easily across contexts and apply them to other topics quite readily.

Specific Strategies Support Construction and Integration

Literacy Navigator is unlike all other reading programs in a critical aspect—it teaches a set of comprehension skills that are specialized for use with nonfiction texts. Explicit instruction of comprehension strategies and word studies supports the Construction-Integration model (See Appendix C). Current, newsworthy science articles reflect popular interests and keep students engaged. The material motivates them to:

- Deconstruct the text and link ideas
- Make connections and build coherence
- Identify organizational and mid-level structures
- Apply prior knowledge to overarching themes
- Learn about word parts
- Use and expand vocabulary
- Mentally, verbally, and graphically frame the science concepts
- Think aloud, write, and discuss

Leveled Text and Scaffolded Content to Practice Strategies

Many reading interventions, even those that use informational texts, often include unrelated concepts in disparate contexts. These interesting, though unrelated, topics are often far-reaching and sometimes widely diverse.

Literacy Navigator breaks this mold. Students practice their comprehension strategies using carefully selected, conceptually related science articles. Modules revolve around a central theme—habitats, for instance—and related concepts like adaptation and ecosystems are introduced gradually with each new text.

In Literacy Navigator, the text complexity increases gradually as well. Savvas selected the appropriate texts using a review process based on a methodology called Qualitative Assessment of Text Difficulty, which was developed by Jeanne Chall (1996, 2003). This process included using rubrics and sample texts at varying grade levels to develop appropriate text complexity for each of Literacy Navigator’s five levels. These levels correlate directly to leveled texts used with the Developmental Reading Assessment (DRA). Because reading selections are anchored to common themes and the difficulty of text increases gradually, students can build comprehension as the model intended—moving fluidly from the textbase to the mental model and back again.

Engaging Topics and High-Quality Materials in a Teachable Program

High-profile issues, such as endangered species and extreme weather, entice students to explore conceptual underpinnings by culling knowledge from the textbase and building mental models. Students read about current developments and important problems in science-related issues, particularly in the areas of life science, ecology, and conservation. Consistent overarching themes weave through the text selections, so students broaden their notion of the domain and learn new vocabulary.

Extensive modeling teaches students how to think through complex texts in a variety of ways, including recognizing genre patterns, identifying connectives, and tracking pronoun referents. As teachers articulate careful reading and demonstrate effective comprehension strategies, students can actually hear and recognize the process. Modeling and group practice is embedded throughout the lessons at a rate appropriate to each grade level. Continual monitoring paces students as they work with new concepts, structures, and strategies with their peers.

Gradually, students learn to “own a text” as they work in consumable Student Readers to underline words, circle phrases, write margin notes, and add definitions. Students approach the text from all directions to link structures, make inferences, and connect ideas, forward to the next or backward to the last. Teacher Editions are embedded with instructional support, and each lesson includes specific recommendations for analyzing the informational text structure. Other topics include

how to establish classroom routines, manage homework, guide discussions, and assist English language learners.

Ultimately, students' daily practice allows them to master even complex texts because they have learned to do two very important things well:

- Construct a cohesive textbase by linking ideas at the phrase, sentence, and paragraph level
- Build a reliable mental model of domain knowledge by integrating prior learning with new concepts and vocabulary

How Is Literacy Navigator Organized?

Literacy Navigator is for students in the elementary, middle, and secondary grades. It includes five levels: A, B, C, D, and E. The primary difference between levels is text complexity. Whether students are working in Level A or Level D, they learn to read and understand informational text by applying the same comprehension strategies. In other words, the process of identifying relationships, tracking pronoun references, or drawing conclusions is the same at all levels; these efforts simply become more challenging as text complexity increases.

Literacy Navigator Level	DRA (Informational Text)	Qualitative Assessment of Text Difficulty (Chall) ¹
A	38–40	3, 4
B	40–50	4, 5–6
C	50–60	5–6, 7–8
D	60–80	5–6, 7–8, 9–10
E	70–80 ²	5–6, 7–8, 9–10

¹ The Chall Qualitative Assessment of Text Difficulty is a measure of what the reader needs to bring to a text to read the material with understanding. Elements for determining the reading level include knowledge of vocabulary, familiarity with sentence structure, subject-related and cultural knowledge, technical knowledge, density of ideas, and level of reasoning. Articles in the Literacy Navigator span the indicated reading levels.

² The DRA tops out at a score of 80. Several texts included in the unit exceed this level of difficulty.

Each Literacy Navigator level has two modules: *Foundations* and *Word Study*. The comprehension strategies are identical at all levels; however, the reading content (theme) and text difficulty vary by level.

Level	Grade Equivalent	Theme
A	4	Environmental Citizenship
B	5	Endangered Species
C	6	Habitats
D	7	Extreme Weather
E	8	Adaptations

With *Foundations*, students read a different but related article each day, receive targeted instruction on comprehension skills, and practice specific strategies for use with expository text. Students see how informational texts differ from literature in structure, purpose, and tone, while learning the routines that successful readers use to construct the textbase and simultaneously build the mental model. Students will:

- Connect ideas and make the text cohere
- Say what the text means
- Answer questions during and after focused reading
- Study text structure and use graphic organizers
- Apply prior knowledge to new concepts
- Learn domain-related vocabulary
- Think aloud, discuss, and write

In the second module, *Word Study*, students focus on vocabulary. This module includes lessons that give students the techniques they need to dig deeper into the foundations of language. Students learn to identify word parts and word families to the extent that vocabulary development becomes a generative process. They focus on roots, prefixes, and suffixes; similes and metaphors; denotative and connotative meanings; and shades of meaning.

Module Materials

Each Literacy Navigator module comprises carefully designed materials that support instruction and learning. They include:

Teacher Edition

Reading selections; objectives and instructional guidance; explanation of important concepts, vocabulary, and discussion questions; transparency and activity masters

Student Readers

Reading selections with numbered paragraphs, wide margins, and extra spacing for notes; graphic organizers and related charts; and all work pages

Assessments

A pre-test to measure baseline performance and a post-test to measure summative progress

Lesson Format

The texts in the Literacy Navigator lessons build upon one another in a coherent series. The lessons contain the following components for the teacher:

- Big Ideas: The most important background information

- Notes for the Teacher: Important background information
- Objectives: Actions students are expected to perform as a result of the lesson
- Activities: What teachers do to guide student learning
- Prep: What teachers need to do to prepare for the lesson
- Vocabulary: Words, usually from the lesson's reading, for the students to learn
- Materials: Materials that teachers and students will need for the lesson

The lessons take about 45–50 minutes and have four parts:

Introduction

The introduction section can serve two purposes: it can guide students to access prior knowledge or it can introduce the text and skill focus for the lesson. When the students are asked to access their prior knowledge, they may be asked to recall what they have read and learned in previous lessons (relevant background knowledge or domain-general knowledge) or state what they know about a topic from personal experience. This part of the introduction is also a place for the teacher to introduce the text that will be read and/or the skill that will be taught, demonstrated, and practiced throughout the lesson. The introduction section is highly dependent on discussion from the students and the teacher capturing their ideas on a chart.

Work Time

Demonstration, reading discussion, and practice take place during the Work Time. The teacher demonstrates a particular skill or several skills that students are to practice and thinks aloud through the process. Depending on the difficulty of the text, the teacher reads aloud, students read aloud, or the reading is silent. The students have an opportunity to practice the skills as part of a group or with a partner and then share their responses with the class. The students also engage in discussion and/or reacting to the information in the text.

Guided Practice

“Practice” is a time for the students to work with a partner, in a group, or independently and to continue reading, negotiating meaning, discussing, and practicing comprehension skills. It is also a time for them to engage in discussion about the text. The teacher monitors what the students practice and what they are discussing. Sometimes students will be asked to refer back to charts that were created during the introduction or in earlier lessons in order to add additional information to a new chart they may have created from the reading.

Reflection

During the reflection (or the lesson conclusion), students discuss the text as a class, write about the text, reflect on the text, and/or organize the information graphically. Students are held accountable for their responses and required to support them with evidence from the text. The teacher might ask students to think aloud about their comments during the discussion.

About Literacy Navigator Assessments

As an intervention program that enhances regular reading and language arts programs, Literacy Navigator develops the sophisticated skills students need to read and understand informational passages. These specialized strategies help students comprehend the complex structures found in advanced textbooks so that they can succeed in school. Incidentally, these are the *same strategies* students must master to perform well on passage-based state exams. Literacy Navigator is like an insurance policy for students who read *on* or *very near* grade level. Investing time with the program now protects a student's capacity for continued success in the years to come.

With that goal in mind, Literacy Navigator assessments were designed to reveal small deficiencies that, if not corrected, could cause larger problems for students down the road. Assessments and monitoring tools reveal the progressive development of comprehension skills. Summative and formative assessments measure a student's ability to recognize and work with particular aspects of language and structures within text, such as understanding reference and word substitution; identifying supporting details, omissions, or patterns; linking ideas; and deducing information and making inferences. Because results of tests and the information from daily progress monitoring are linked to specific competencies, teachers can respond to *individual* learning needs.

Ensuring Student Success

All elements of the Literacy Navigator program—lessons, strategies, and aligned assessments—combine to ensure that students are developing the important reading and comprehension abilities they need to succeed in school. Students learn to read strategically, sifting through complex structures in an orderly manner to build comprehension. Because students hone their skills on related texts, they integrate new concepts with prior knowledge, improve and revise their mental models, and effectively transfer knowledge to long-term memory. The process builds

About Literacy Navigator Assessments

comprehension skills, expands domain knowledge, and prepares students to answer the types of exam questions they will encounter repeatedly on their way to college.

Students (and adults) encounter many testing situations during their academic and professional lives. A significant portion of these include “passage-based” exams. Poor performance on these exams signals incomplete comprehension and can be traced to two major deficiencies:

- A breakdown in the textbase (indicating inability to synthesize language, information, and ideas)
- An underdeveloped mental model (indicating insufficient domain or general knowledge, inhibiting processing and memory)

Passage-based exams, in which long or short reading passages are accompanied by multiple-choice questions, measure critical reading and comprehension skills.

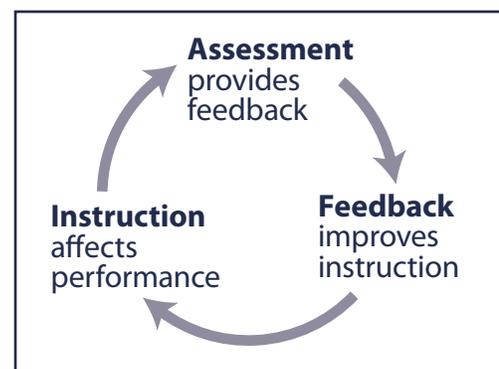
Typically, reading passages are nonfiction, informational texts. While the SAT may include literary fiction passages, most of the reading passages are drawn from the humanities and social and natural sciences (ACT 2009). Kaplan notes that even in civil service exams, the reading passages “will *not* be works of fiction, such as short stories, poems, narratives or excerpts from novels. Instead, passages are nonfiction and the topics will be based on social sciences, natural sciences, and current events” (Kaplan 2008). Literacy Navigator offers the critical preparation students need to succeed on a variety of passage-based exams, including:

- State accountability tests
- PSAT/SAT and other college board exams
- High school exit exams
- Graduate school entrance exams
- Various licensure and civil service exams

Literacy Navigator uses the essential assessment loop. Meaningful assessments provide valuable feedback on student achievement. Valuable

feedback identifies learning needs, so teachers can adjust instruction accordingly. Improved instruction affects student learning and ultimately raises achievement.

Literacy Navigator identifies individual learning needs, tracks progress, and addresses deficiencies in a student’s ability to build a textbase or mental model now—*before* problems occur—because when students read informational texts, comprehension ability translates into learning ability.



Instruction, Assessments, and Monitoring Tools— Solid Alignment with Internationally Recognized Standards

Literacy Navigator responds to the highest standards set by leaders in the field. Its assessments, written by Savvas, align with internationally recognized standards and assessments for English language arts. Literacy Navigator assessments reflect the Common Core State Standards for reading informational text: key ideas and details, craft and structure, and integration of knowledge and Ideas. The assessments focus on students' abilities to read closely to understand what the text explicitly says, to determine the meaning of academic words in context, to use text features (mid-level structures) to locate relevant information, and to acquire and comprehend information from a text. Literacy Navigator supports students' growth in reading and comprehending increasingly complex texts as illustrated by the text complexity sections of the Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects.

In addition, Literacy Navigator assessments reflect the reading framework from the National Assessment of Educational Progress (NAEP), which outlines the importance of reading in different contexts and taking different approaches to comprehension, such as forming a general understanding, developing interpretation, making reader/text connections, and examining content and structure (National Center for Education Statistics 2009).

Finally, Literacy Navigator assessments address the six areas of academic growth outlined in *Academic Literacy Instruction for Adolescents* (Torgeson et al. 2007):

1. Reading fluency
2. Vocabulary knowledge
3. Domain-specific and domain-general content knowledge
4. Higher-level reasoning and thinking skills
5. Cognitive strategies that can be applied specifically to enhance reading comprehension
6. Motivation and engagement

Literacy Navigator Assessments

Literacy Navigator provides a full complement of assessments—preliminary, formative, and summative. Preliminary assessments (module pre-tests) help teachers determine current reading levels, identify appropriate program levels for individual students, and establish a baseline before work begins. Checkpoints in the module and other formative assessments embedded in lessons offer multiple formal and informal opportunities to monitor student progress so instruction can respond

to individual needs. Finally, summative assessments (module post-tests) measure achievement and identify next steps in learning.

Literacy Navigator Pre-Tests and Post-Tests

Each Literacy Navigator module includes a pre-test and a post-test. Pre-tests, taken before students begin working with the module, establish a baseline of performance. Pre-test results act as an indicator that students are beginning work at the appropriate level. Once students have been selected and their reading levels confirmed, it is time for them to take the *Foundations* pre-test at the indicated level. The pre-test establishes students' level of reading accuracy, comprehension skills, and facility with vocabulary.

Post-tests measure students' growth at the end of the module. They highlight improvement and, more importantly, allow teachers to determine where students are having difficulty, so they can focus on individual needs, target instruction toward group trends, or emphasize specific lessons. The post-test helps teachers discern if students' errors follow a pattern and allows them to modify their instruction accordingly.

Pre- and post-tests are passage-based tests that take approximately 30 minutes to complete. They vary in word by level, use informational texts, and are presented in multiple-choice format. Each test has two reading passages and 20 questions.

Progress Monitoring

Interim performance data and ongoing observations are always critical, but especially so in an intervention program aimed at keeping students who are currently "making it" from faltering and slipping through the proverbial crack. The combination of pre- and post-tests and the continual monitoring that is embedded in lessons throughout the modules provides teachers with evidence that all students are developing the skills they need to stay on track for continued success in school.

Review Lessons: When students are reading, working on comprehension, and building domain knowledge, they experience a cycle of teaching and learning. When new information is introduced, students work prior knowledge into the concepts, they reflect on and integrate those concepts, their understanding grows, they gain knowledge, and they are ready to learn more. This cycle continues each time new information is introduced. Review lessons are embedded throughout the modules at appropriate intervals. These lessons are not labeled as such, but their structure and focus constitute a review by leading students to create a coalescence of ideas and to connect previous concepts with overarching ideas within the domain.

Monitoring: The lesson format provides numerous opportunities for teachers to do quick comprehension checks. The Introduction helps assure teachers that students

understand the lesson focus and are activating prior knowledge. During the Work Time and Guided Practice, teachers glance at Student Readers, monitor activities, listen in on discussions, and ask students to “say what the text means.” Reflection includes written and oral work that provides insight into students’ comprehension.

Graphic Organizers: Students use graphic organizers routinely to organize, connect, and represent the ideas within informational texts. Graphic organizers help students reflect on the meaning of the text—not only at the sentence level but paragraph by paragraph—until they have linked ideas and identified important concepts throughout the whole passage. Students frequently illustrate their understanding, often in organizers of their own design. Teachers review the graphic organizers for a visual record of students’ understanding. These graphic illustrations of thought allow teachers to identify where supporting details have not been identified, ideas have not been properly organized, sequence has been lost, or text connections have been dropped.

Writing Samples: Teachers can use students’ writing samples from formal writing activities and informal prompts to see how students are comprehending and interpreting information. Writing activities are found throughout the lessons at appropriate intervals—for instance, when students should be bringing ideas from previous lessons together. Writing samples illustrate whether students are connecting ideas within the current text to create a body of understanding. In other words, students’ writing should show that they are applying new and old concepts to the module’s overarching theme.

Student Readers: Because of their unique design, the consumable Student Readers are an excellent source of informal monitoring. Students write notes and definitions, add arrows and lines, and draw connections directly *in* their readers. The marked passages provide a visual record of how students are connecting ideas. Teachers can glance at students’ work, and ask them to explain how they are interacting with the text.

Discussion: Teachers guide discussion with focused questions during and after all readings. Literacy Navigator lessons include a lot of talk; student thinking and information analysis is audible and ongoing. Students practice connecting ideas, articulating understanding, and using new vocabulary. Teachers listen to ascertain the level of comprehension and to help students identify misreading of the text, clear up confusion, and resolve ambiguities within the text.

Peer- and Self-Evaluation: Ongoing discussions and shared activities, whether with a partner or the whole group, let students see how others interpret the text, connect ideas, and synthesize information. While exchanging ideas, questions, and inferences, students are prompted to self-check, to modify their own understanding, or to help deepen the understanding of others.

Getting Ready to Implement Literacy Navigator

You may be using Literacy Navigator in an elementary school to supplement all levels of the reading curriculum, in middle school to prepare seventh- and eighth-graders for high school textbooks, or with ninth-grade students to help them get ready for the PSAT. Perhaps you have selected Level A for fifth-grade English language learners or Level B for fifth-grade students “on the bubble.” Whatever the scope of implementation, good data are essential for making two very important determinations:

- Identifying students who will realize the greatest benefit from Literacy Navigator
- Identifying the level that is most appropriate for students to use

These are two distinct, yet very closely related, decisions. A complete data set, with information from multiple sources, will provide valuable input for making both decisions, because much of the data you use to identify Literacy Navigator students will also help determine the level at which these students should begin work.

Using Data to Select Literacy Navigator Students

A single indicator rarely tells the whole story; collecting and reviewing a variety of formal and informal evidence is key to the selection process. Ideally, you should use multiple sources of information to identify Literacy Navigator students and determine appropriate placement levels.

The types of data listed in the chart on the following page can help you identify students most in need of the Literacy Navigator intervention. A careful review of the data is important, because there is no direct correlation from solid comprehension and interpretation skills with literary texts to solid comprehension and analysis of informational texts.

You should keep records as data are collected and student placements are discussed. For your convenience, there is a Summary Data Sheet in Appendix A, or you can create your own system of recordkeeping.

Type of Data	Student Selection	Level Identification
Classroom performance histories and anecdotal evidence (including Developmental Reading Scores)	Achievement levels, teacher recommendations, and reading levels identify students	
District or state accountability exams	Reading scores and sub-scores identify students	
Empirical data from Literacy Navigator schools	Common placement issues help identify students	
Developmental Reading Assessment (DRA) scores	Scores help identify students	Scores identify appropriate Literacy Navigator level
NAEP to state exam correlations		Comparisons help identify appropriate pre-test
Module pre-tests		Scores measure baseline ability

Classroom Performance Histories and Anecdotal Evidence

Classroom performance data and teacher recommendations weigh heavily in the selection process. Understanding the nature of the program will help teachers provide the most pertinent student data. They should keep in mind that Literacy Navigator is meant to:

- Provide new strategies students can use specifically with informational texts
- Strengthen the skills and comprehension for students who are currently reading on or almost on grade level
- Prepare students for lengthy expository works, subject-matter textbooks, and other complex documents

Daily exposure allows teachers to identify students who may be doing “just well enough” with literary texts but tend to stumble with more complex structures. Teachers should also supply Developmental Reading Assessment (DRA) scores, when available. The DRA measures students’ ability to read and comprehend both literary and informational texts. Whenever reading levels are included in students’ files, it is important to confirm what measure was used, because *only* the DRA is directly correlated to Literacy Navigator levels.

Overall, the level of experience students have had with expository texts should color interpretation of their classroom performance, especially in the younger grades. Students whose DRA scores and performance histories show them reading

below grade level or “on the bubble” are the most likely candidates for Literacy Navigator. Students with slightly higher reading scores who have little experience beyond “storybooks” can also benefit from Literacy Navigator. For instance, many younger students who are strong readers with solid comprehension skills, even in grades 4 and 5, have had very little experience with informational texts, procedural documents, or news items. This may be true of middle-grade students, as well, whose classroom grades indicate they are holding their own. If students have not mastered phonics, however, or are not yet fluent readers, they require more intervention, and Literacy Navigator is not for them.

When identifying students for the program:

- Take a close look at performance histories and anecdotal evidence to gauge the level of exposure to informational text.
- Focus on students whose teachers suggest they are noticeably stronger with literary pieces than with informational texts.
- If reading levels are reported, verify the measure used.
- Give preference to students whose DRA scores show they are on the bubble.
- If your budget allows, include in your consideration students in grades 6 and above who are reading one to two years below grade level.

District or State Accountability Exam Data

Contact your school’s testing coordinator, principal, or appropriate district leader to access test results. Assemble results from norm-referenced and criterion-referenced exams at district, state, and/or national levels. Accountability exams vary widely from state to state and rarely conform to the rigorous standards found on the National Assessment of Educational Progress (NAEP).

That being said, most state criterion-referenced exams *do* offer useful breakdowns of composite reading scores, including separate comprehension scores for literary and informational (or procedural and technical) texts. Some state exams even provide detailed scores keyed to specific skills and report on discrete categories such as summarizing, identifying details, sequencing, and vocabulary.

Criterion-referenced exams used for state accountability measure individual state standards and gains in achievement. Standards vary from state to state, and so there is no correlation of results, “... no consistent pattern of agreement between NAEP and state assessment reports...” State accountability exams fall short of measuring the same high standards found on the NAEP. The National Center on Education Statistics reports that “in both grades 4 and 8, reading achievement gains from 1998 to 2002 and 2003 measured by state assessments are significantly larger than those measured by NAEP” (McLaughlin et al. 2008).

When selecting students, your state scores will give you relative information on your students that you can use. But you will have to adjust your state scores based on your state NAEP ranking (see pages 50 and 51).

Empirical Data from Literacy Navigator Schools

Literacy Navigator was field-tested in all phases of its development. Schools across the country are implementing it with hundreds of students in different ways—as part of their school improvement plans, as supplementary curricula, or as enrichment programs. As administrators, district leaders, and classroom teachers in these schools share their impressions of the implementation process, some common themes surface. The majority of these educators agree on certain aspects of reading development in general and on the selection of Literacy Navigator students in particular.

The chart on the following page shows the most common issues educators face during the process of matching students and module levels and describes their responses. You can use this information, along with class performance histories and exam results, to help reinforce or resolve placement decisions for your students.

Widespread Findings from Literacy Navigator Schools	
Situation	Response/Solution
ELLs in general, typically possess fewer vocabulary words; they use fewer Tier II words and even fewer, if any, Tier III words.	<ul style="list-style-type: none"> • ELLs benefit from <i>Foundations</i> and especially <i>Word Study</i>. • ELLs hovering near grade level in reading often engage with modules that are one or two reading levels lower.
Elementary students have very little practice reading informational texts, taking positions, or providing evidence of supporting details.	<ul style="list-style-type: none"> • Many elementary schools use Literacy Navigator as a part of their regular classrooms in grades 4 and 5.
Most elementary students have not been taught to identify the common structures found in nonfiction texts that present and organize important information.	<ul style="list-style-type: none"> • Grade 5 students reading on grade level or “on the bubble” take <i>Foundations</i> and <i>Word Study</i> at Level A or B.
Content-specific texts become more complex at the middle school level; most grade school students are not well prepared.	<ul style="list-style-type: none"> • Grades 5 and 6 students appearing to read slightly above grade level often pre-test for <i>Foundations</i> and <i>Word Study</i> at Level B or C, respectively. • Grades 7 and 8 students who appear to be reading just above grade level often pre-test first with Levels C and D, then again in Levels D and E if their scores so indicate.
More students are electing to take the PSAT early, some as soon as grade 8 or grade 9.	<ul style="list-style-type: none"> • Grade 8 students preparing for the PSAT, except those reading more than six months below grade level, often enroll in <i>Foundations</i> and <i>Word Study</i> at Level D or E. • Grade 9 students reading on grade level or “on the bubble” often take <i>Foundations</i> and <i>Word Study</i> at Level E.

Finalizing Selection of Students

To finalize the selection of students who will participate in Literacy Navigator, take one last look at the data. Weigh the information in relation to your students' needs and the number of students your budget will allow. The combined data should provide a complete and accurate picture of students' current abilities. Remember that students reading "on the bubble" will realize the greatest benefit from Literacy Navigator. In finalizing your selections:

- Select students who are weaker with informational texts.
- Focus on students who need intervention most—those whose reading performance is low, relative to the group of students you are considering.
- Consult empirical data for uncertain decisions or special cases, such as English language learners.
- Use DRA scores as the capstone to all other data. These scores provide the most accurate measure of reading levels, based on national benchmarks.

Confirming Selections and Assigning Literacy Navigator Levels

Once you have created a list of students who will benefit from Literacy Navigator, it is time to consider which level is best suited to each individual student. This decision is important, because proper placement can determine students' success within the program. Students will realize the greatest gains in comprehension when working with texts at the appropriate level of complexity. At this point, you will return to the collected data.

Using DRA Scores

The DRA is an accurate measure for providing evidence of reading accuracy, fluency, and comprehension. It is a composite score, based on A–Z leveled texts, fiction and nonfiction.

You have probably selected some students whose DRA scores are a reading level below their enrolled grade level and some whose DRA scores align (or nearly align) with their enrolled grade levels. Both groups can use Literacy Navigator to sharpen their nonfiction comprehension skills.

When DRA scores are available, selecting the right Literacy Navigator program level for a student is straightforward. Literacy Navigator readings were selected based on Chall's Qualitative Assessment of Text Difficulty, which describes what the reader needs to bring to a text to read the material with understanding. Elements used to determine the reading level include

NOTE

Note: Some classrooms may lack DRA scores but may be using leveled texts in the classroom. The students' facility with these leveled texts provides clues as to their reading abilities but cannot substitute for actual DRA scores.

knowledge of vocabulary, familiarity with sentence structure, subject-related and cultural knowledge, technical knowledge, density of ideas, and level of reasoning.

While the resulting Literacy Navigator levels do not correspond exactly to the DRA, they correlate to DRA scores much more closely than they do to grade levels. The same basic organizing principles found in the leveled texts of the DRA have been applied to Literacy Navigator levels. For example, Literacy Navigator begins with Level A, with texts roughly equivalent to level P in the DRA, and ends with Level E, with texts roughly equivalent to DRA levels Y and Z. Therefore, a simple process of aligning DRA scores to Literacy Navigator levels will identify proper placement.

Text selections chosen for Literacy Navigator span Chall's indicated reading levels, as shown in the chart below, and can be correlated to DRA score ranges.

Literacy Navigator Level	DRA Informational Text	Qualitative Assessment of Text Difficulty (Chall) ¹	Leveled Texts
A	38–40	3, 4	PQRS
B	40–50	4, 5–6	QRS
C	50–60	5–6, 7–8	TUV
D	60–80	5–6, 7–8, 9–10	WXYZ
E	70–80 ²	5–6, 7–8, 9–10	YZ

¹ The Chall Qualitative Assessment of Text Difficulty is a measure of what the reader needs to bring to a text to read the material with understanding. Elements for determining the reading level include knowledge of vocabulary, familiarity with sentence structure, subject-related and cultural knowledge, technical knowledge, density of ideas, and level of reasoning. Articles in the Literacy Navigator span the indicated reading levels.

² The DRA tops out at a score of 80. Several texts included in Literacy Navigator Level E exceed this level of difficulty.

A Final Check on Placement—Module Pre-Tests

Literacy Navigator students have been selected and their module levels assigned. Teachers have received their materials and classroom space has been reserved. All that is left to do is administer pre-tests for the module, and students will be on their way. Pre-tests are an excellent way to verify your selection and placement process. They can also be used as the final arbiter in cases where identifying the most appropriate starting level for a student was uncertain.

Although the *Foundations* pre-test is usually not administered until *after* the selection process, it is prudent to review students' results before they launch into work. Pre-tests are the first step in module work; results indicate the students' baseline ability. It is important to note, however, that if results from a pre-test show a rather large or unexpected score difference, there is reason to reconsider the students' placement. If a student scores surprisingly high or low, this would indicate that the student's data should be reviewed and adjustments made.

Surprising results in one pre-test may lead you to consider giving a second pre-test at a higher or lower level. The chart on the following page shows how you might apply the scores from the *Foundations* pre-test.

Pre-Test Percentage Correct	Action
0–20%	<p>A score in this range may indicate guessing.</p> <p>Consider: Giving this student the <i>Foundations</i> pre-test for one level below, which may be a more appropriate starting point.</p>
20–50%	<p>A score in this range indicates this level is likely to be appropriate, though more information may be gained from looking at individual responses.</p> <p>Example: A student may show correct responses in linking text, word study, and accuracy, but score poorly in mid-level structures.</p> <p>Consider: Monitoring this student’s understanding of connectives.</p>
50–80%	<p>Students scoring in this range are probably placed correctly; however, an item-by-item review may help differentiate instruction.</p> <p>Example: A student’s errors involve issues of reference.</p> <p>Consider: Monitoring this student’s facility with pronoun reference and word substitutions or omissions.</p>
Over 80%	<p>A score in this range indicates this level is too easy for the student.</p> <p>Example: The student was testing one or more levels below grade level.</p> <p>Consider: Giving this student the <i>Foundations</i> pre-test for the level above, which may be a more appropriate starting point.</p>

Literacy Navigator Testing

Literacy Navigator includes pre- and post-tests to assess students' performance. You can choose the format—paper-and-pencil or online—that best meets your needs. If you choose the paper-and-pencil version, you will need to score the tests by hand. Online tests are scored automatically.

Once you choose a format, you must use it for both the pre- and post-tests for a single module (i.e., both paper and pencil or both online). However, you can switch between the online and paper-and-pencil formats from module to module.

Using Paper-and-Pencil Assessments

The Literacy Navigator materials package includes the pre- and post-tests for all levels and modules, along with the Teacher Edition and the Student Readers.

Administering Paper-and-Pencil Tests

1. Review the test administration instructions and the delivery script in the Teacher Edition before testing time.
2. Organize testing materials ahead of time to avoid confusing different leveled tests.
3. Configure seating arrangements or use plain test covers to avoid the appearance of obvious reading-level groups.
4. Distribute tests and answer sheets, and ask students to complete the identifying information. If you are testing a large group of mixed levels, confirm that students have been given the correct test level.
5. Follow the administration instructions as written in the test booklets.

Scoring Paper-and-Pencil Tests

Literacy Navigator provides Microsoft Excel® scoring templates for the pre- and post-tests in each module. Using the templates makes it easy to score the tests and to delegate scoring to others, if needed. Aides or parent volunteers can enter students' identifying information and their responses to the multiple-choice options.

To use a scoring template:

1. Go to ARO at <http://aro.savvascmg.com> and log in.
2. Click on the Help link in the upper right of any ARO screen.
3. From the Help screen, click Forms/Templates. Select the Windows or MAC "Answer Submission" form and download it in Excel by clicking on the appropriate link.
4. After downloading the file, open it. (If prompted, answer YES to allow Macros.)
5. Enter the test name, school name, and teacher name.
6. Enter students' IDs and names.
7. Enter answer responses. You can enter students' answers as letters or use numbers (1=A, 2=B, 3=C, and 4=D) if that is easier.
8. Send the completed template to the ARO help desk by filling out the form at this link: www.savvascommunity.com/formlibrary/arosupport.

Your data will be uploaded within three business days. You will receive an email to let you know when you can access the ARO reports.

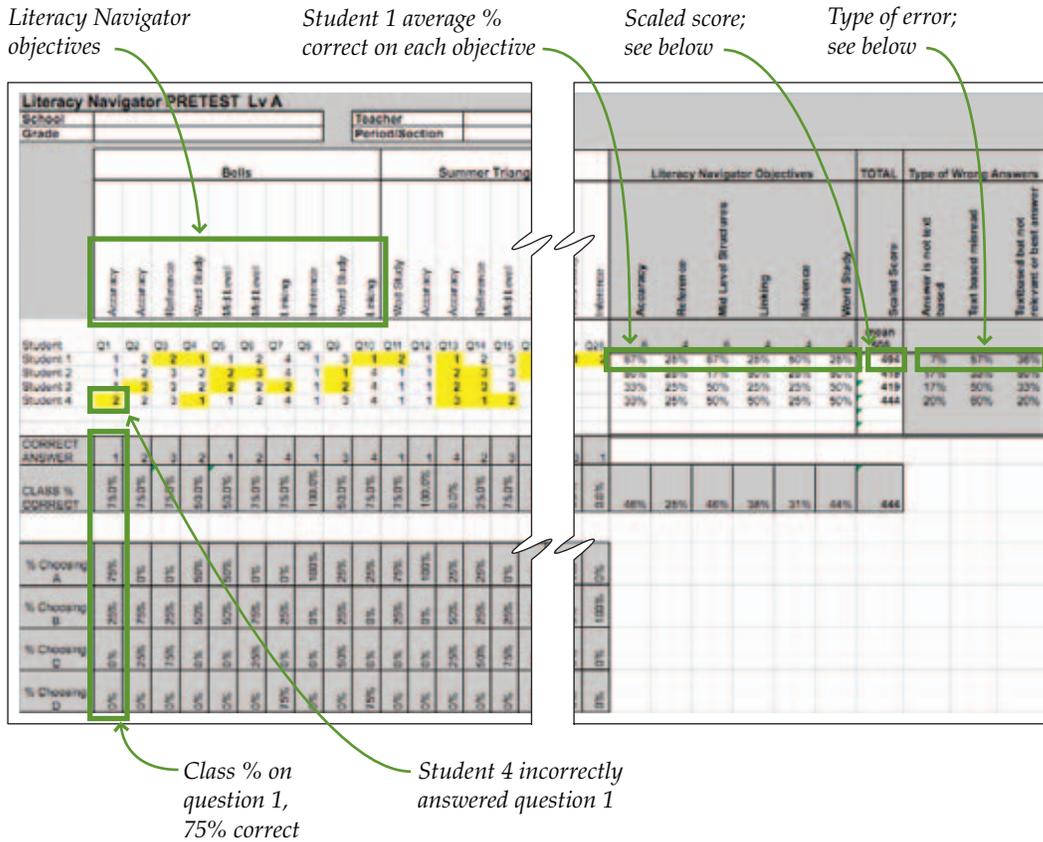
Analyzing Foundations Pre- and Post-Test Data

The Literacy Navigator *Foundations* tests measure five objectives that are linked to the research base for comprehending informational text. These objectives are also linked directly to the strategies that students need to build the textbase and the mental model as described in the Construction-Integration model (see page 2 and Appendix C).

Literacy Navigator Objectives	Sample Test Items
<p>Inference: Items measure students’ ability to draw conclusions and make inferences from careful reading of sentences and paragraphs, as well as from analysis of the entire passage.</p>	<ul style="list-style-type: none"> • How did Eleanor most likely feel about her experiences at the all-girls school in England? • What does the expression “the vine that ate the South!” in paragraph 4 mean?
<p>Main Ideas/Details: Items measure students’ ability to find and retrieve accurate information to answer fundamental questions about the content of text.</p> <p>Items also show how well students can link the ideas in a passage and determine how this relationship contributes to knowing the text’s main point.</p>	<ul style="list-style-type: none"> • Which of these facts in the reading passage supports the idea that the Vikings had to leave their homes to live better lives? • What makes reproduction a particular problem for sea snakes? • What would be another good title to summarize this reading passage? • What main idea fits best in the middle of this web?
<p>Patterns: Items measure students’ ability to recognize and comprehend text written in typical mid-level structures, such as cause and effect, comparison, and sequence.</p>	<p>Cause and Effect</p> <ul style="list-style-type: none"> • What is the primary reason that some underground fires can burn for long periods? <p>Comparison</p> <ul style="list-style-type: none"> • In what ways are peepers and old leaves similar? <p>Sequence</p> <ul style="list-style-type: none"> • According to the reading passage, which of these occurs first in the annual cycle of peepers?
<p>Reference: Items measure students’ ability to recognize the referent for given pronouns and substitute terms. Word Study: Items measure student’s vocabulary knowledge and work study skills.</p>	<ul style="list-style-type: none"> • Read the following sentences from paragraph 5 <i>“Some of their ships were very large, with room for thirty-two oarsmen plus many servants, cattle, pigs, sheep, and seeds. <u>They</u> were “clinker-built.”</i> <p>To what does the underlined word refer?</p>
<p>Word Study: Items measure student’s vocabulary knowledge and work study skills.</p>	<ul style="list-style-type: none"> • Read this sentence from paragraph 2: <i>“The <u>accumulating</u> gas is trapping heat and upsetting the world’s climate.”</i> <p>What does the underlined word mean as it is used in this sentence?</p>

Literacy Navigator Testing

The Literacy Navigator *Foundations* template shows the results of the test. The sample template below shows four students' results. Note the highlighted areas of the template.



About Scaled Scores

The scaled score has a mean of 500 and standard deviation of 100. This means that approximately 2/3 of students across the country score between 400 and 600. A scaled score is a conversion of a raw score to a common scale that allows for direct numerical comparison.

The scaled score is a metric to gauge growth from the pre-test to the post-test because it accounts for differences between the tests.

Type of Error

The last three columns summarize each student's wrong answers. For most multiple-choice questions there are four options, which include one correct answer and three wrong answers. The wrong answers usually fall into three categories: (1) has nothing to do with the text, (2) has something to do with the text but is unrelated to the answer, or (3) closely related to the best correct answer but is not the best answer.

Wrong answers generally indicate one of three error patterns:

1. **Not text-based:** Errors typically made when students look for logical answers based on prior knowledge alone or on something superficially related to the text, e.g. passage title, photo, illustration, caption, or nearby word.
2. **Text-based, misread:** Errors typically made when students read or comprehend certain portions of the text but misinterpret what they read or when students misread some concepts or details.
3. **Test-based, accurate but not correct:** Errors typically made when students who have read the text choose an accurate response that is not the best answer to the question.

These types of wrong answers are meant to be understood as a progression.



Here is what we know about students with high percentages (40% or higher) of wrong answers in each of these categories:

Not Text-Based	Text-Based, Misread	Text-Based, Accurate, But Not Correct
<ul style="list-style-type: none"> • Students are not forming an accurate textbase. They are not accurately reading the text. • Students are making wild guesses for questions they do not know. • Students do not distinguish between information in the text and information not in the text. 	<ul style="list-style-type: none"> • Students can differentiate between information that is in the text and information that is not in the text. • Students misread and incorrectly read but incorrectly interpret the content of the text. • Students likely struggle to “Say What the Text Means” in their own words. 	<ul style="list-style-type: none"> • Students are building an accurate textbase but do not distinguish well between a good answer and the best answer. • Students narrow the possibilities but select the incorrect option.

The purpose of this data is to determine student tendencies and then to monitor and ensure that they move from “not text-based” to “text-based, misread” to “text-based, accurate, but not correct” until they provide the correct answers

About Analyzing Data

When analyzing data, keep the following in mind:

- The primary purpose of the template is to provide feedback on individual student performance, not to summarize classroom performance. For example, you might learn that “Thomas Boyd can accurately read text that does not require making inferences.”
- Use the data to make some overarching conclusions about the performance of your class, such as “students struggle with making pronoun references” or “students are not able to link ideas to identify the main idea.”
- Use the data when planning lessons. The template is not intended to be analyzed one time and then put away. It will have the greatest effect when it is used continually. For example, when you know that a lesson will focus on “Saying What the Text Means” or “Pronoun Reference” or even “Mid-Level Structures,” ask yourself questions like:
 - Which students struggle with this objective?
 - Which students should I call on to determine whether my instruction on the objective is effective?
 - Which students will I touch base with first after the class gets started on individual or partner work?
 - What student work will I analyze after the lesson to determine what learning occurred today?

Using Online Assessments

A Savvas representative will work directly with a school administrator to complete an initial set-up process for using the online assessments. The ARO help desk (877.561.4327) can also provide information about getting started.

Enrolling for Online Testing

1. Go to ARO at <http://aro.savvascmg.com> and log in.
2. Click on the Help link in the upper right of any ARO screen.
3. From the Help screen, click Forms/Templates. Download the “Student Enrollment” template by clicking on the appropriate link.
4. After downloading the file, open and complete it.
4. Send the completed template to the ARO help desk by filling out the form at this link: www.savvascommunity.com/formlibrary/arosupport.

Locating Readings

Even though students are taking the tests online, they need a print copy of the reading when they are at the computer. The readings are included in the Literacy Navigator materials package, along with the Teacher Edition, the Student Readers, and the tests.

Administering Online Tests

1. Provide the System Administrator with a “testing window” for each assessment you plan to administer. The testing window, which can range from a few days to a few weeks, establishes the time frame during which testing should be completed.
2. Set up the computer testing environment with copies of the appropriate readings for the students.
3. Direct students to log on to ARO with their unique user names and passwords.
4. Confirm that students are taking the correct test. Their tests need to match the appropriate module and level.
5. Follow the administration instructions. Monitor student activity and assist with any computer-related issues that may arise.

Scoring Online Tests

Score reports are automatically generated with data from online assessments. Reports for the pre- and post-tests provide subtotals, summative information, and response analysis keyed to specific types of errors and categories of error patterns.

The reports are posted in the secure Classroom Environment, which is accessible by the authorized teacher or administrator. These downloadable reports are available in Microsoft Excel[®] format, the standard Adobe Acrobat[®] PDF format read by most web browsers, and HTML format.

Types of Online Reports

Literacy Navigator assessment results can be used to produce several types of reports in ARO. These reports—available in the Classroom, School, and District Environments—provide input to help analyze students’ data and progress.

Report Title	Analysis Level	Source	Information Provided
Student Achievement Report	Student	Module pre- and post-tests	<ul style="list-style-type: none"> • Total percent of items correct • Total scaled score • Literacy Navigator objectives: percent of items correct • Item analysis • Item errors • Recommendations on follow-on modules
Student Portfolio Report	Student	Pre- and post-tests across modules	<ul style="list-style-type: none"> • Dates of testing • Total percent of items correct • Benchmarks for tracking progress • Growth from pre-test to post-test
Roster Report	Class, grade, school, district, AYP subgroup	Module pre- and post-tests	<ul style="list-style-type: none"> • Total percent of items correct • Total scaled score • Literacy Navigator objectives: percent of items correct • Item analysis • Item errors
Checkpoint Report	Class	Interim assessments inside module	<ul style="list-style-type: none"> • Indication of whether students are on target and making expected progress
Aggregate Portfolio Report	Class, grade, school, district, AYP subgroup	Pre- and post-tests across modules	<ul style="list-style-type: none"> • Dates of testing • Total percent of items correct • Percent of students who are on target at each checkpoint • Growth pre-test to post-test

Implementing Literacy Navigator: Case Studies

Tilles Elementary School Fort Smith Public Schools Fort Smith, Arkansas

Tilles Language Arts Program

Before implementing Literacy Navigator, students received whole-group, small-group, and individual instruction in class, using a workshop model. After-school tutoring was offered to students through a variety of programs; parents and students were free to choose which program would be used.

Tilles began its Literacy Navigator trial with a small number of students—a group of nine fifth-graders. The implementation began in January 2008, immediately after the winter break.

Literacy Navigator Implementation Process

Tilles Elementary students were identified for placement in Literacy Navigator using multiple data sources:

- State assessment scores
- Classroom grades, both in reading and science

The data showed that several English language learners might benefit from the program. In that subset of students, the Levels of Language Acquisition were also considered as data points for placement in the program.

TILLES ELEMENTARY

- › One of 19 elementary schools in the Fort Smith Public Schools
- › Ethnically diverse
- › Predominantly economically disadvantaged
- › Student/teacher ratio of 14:1

When a small cohort of students had been identified, parents were contacted by phone and offered specific information regarding the Literacy Navigator intervention. They were told why their children had been selected for this unique opportunity and what benefits they might derive. Parents who accepted on behalf of their students were asked to commit to delivering students to school one hour earlier than normal. This step created a very positive attitude toward the program—for both students and parents.

Delivering Instruction

The group of nine students met every weekday morning from 7:15–8:15. Two literacy coaches worked together, each of them delivering the *Foundations* Level C lessons on alternate days.

Throughout the implementation, the teachers used multiple student performances as opportunities to monitor student growth and progress. As teachers led students through the Student Readers, responses such as graphic organizers, written summaries, vocabulary tasks, and lesson reflections were analyzed to determine strength of learning and any additional support needs. The Arkansas state standards served as criteria for work analysis, and teachers offered individual students feedback on their performances. These analyses helped teachers address individual learning successes and needs through focused teaching.

Literacy Navigator coaches met regularly with classroom teachers to share information about the instruction taking place in the intervention. Classroom teachers, in turn, shared with Literacy Navigator coaches evidence that students were able to transfer what they were learning in the intervention into their regular classroom practices.

Analysis of Literacy Navigator Implementation

By the end of *Foundations*, students had achieved 100% attendance for all 30 lessons, which reflected their engagement in the process. Students' remarks included:

- *"For the first time, I feel smart."*
- *"I like this program because it helps me read hard stuff like science."*
- *"Using the graphic organizers teaches me to organize my thinking."*
- *"I learned a lot about the ocean. I've never seen the ocean before."*
- *"It feels good to work hard and understand."*

Students who participated in the Literacy Navigator intervention demonstrated growth as readers. To monitor and assess results, DRA data were collected for three quarters: Q1 (Aug/Sept), before Literacy Navigator implementation, Q2 (Dec/Jan), and Q3 (Feb/Mar) after implementation when students had completed 22 lessons. Results from the Arkansas Comprehensive Testing, Assessment, and Accountability Program

(ACTAAP) were also compared for 2006–2007 and 2007–2008. The chart below shows the changes in achievement for the nine students in the Literacy Navigator program.

Tilles Elementary: Quarterly DRA Scores and ACTAPP Reading Scores					
Literacy	DRA Q1 (Aug/Sept) Baseline	DRA Q2 (Dec/Jan) Before Trial	DRA Q3 (Mar) Following 22 <i>Foundations</i> Lessons	2006–2007 ACTAAP Reading Scores	2007–2008 ACTAAP Reading Scores
1	60	70	80	562 <i>Basic</i>	561 <i>Basic</i>
2	60	70	80	520 <i>Basic</i>	—
3*	50	50	80	515 <i>Basic</i>	539 <i>Basic</i>
4*	50	60	70	681 <i>Proficient</i>	645 <i>Proficient</i>
5*	60	70	80	515 <i>Basic</i>	594 <i>Basic</i>
6	50	50	80	681 <i>Proficient</i>	819 <i>Advanced</i>
7*	60	70	80	674 <i>Proficient</i>	699 <i>Proficient</i>
8*	50	50	70	495 <i>Basic</i>	656 <i>Proficient</i>
9	60	70	80	562 <i>Proficient</i>	656 <i>Proficient</i>

*English language learner

Overall results showed:

1. *Improved DRA Scores*

Students 3, 6, and 8 had shown no reading growth from August to December, as measured by the Developmental Reading Assessment (DRA). By March, following only 22 Literacy Navigator lessons from the *Foundations* module, all three students demonstrated significant reading growth. Two of these three students were English language learners.

2. *Improved ACTAAP Scores*

Six of the nine students improved their reading scores on the ACTAAP, performing better at the end of 2008 than they had the previous year. In addition, one student who scored Basic in 2007 moved to Proficient in 2008; another moved from Proficient to Advanced.

Caledonia Elementary School East Cleveland City Schools East Cleveland, Ohio

Caledonia Language Arts Program

At Caledonia Elementary School, the regular English language arts program includes readers and writers workshops. A basal reading program has traditionally been the primary curriculum for the readers workshop. Recently, teachers analyzed results from the Ohio Achievement Test (OAT) to identify specific student needs. OAT results showed extremely low fifth-grade reading scores. When OAT results were considered, in addition to a review of the instructional resources in the basal reading program, teachers recognized the need to bolster the emphasis on reading informational texts.

Literacy Navigator Implementation Process

Literacy Navigator was implemented during the 2008–2009 school year. The implementation process involved approximately 200 students in different schools throughout the district. Instruction took place in 10 different classrooms in three elementary schools and involved seven teachers.

This discussion focuses on 24 students in sixth grade at Caledonia Elementary. Staff at the school used informal data, as well as significant criterion-referenced exam results, to look at student achievement. Data included:

- Classroom performance histories
- Ohio State Achievement Test results

In 2008, just 33% of the fifth-grade students scored at or above proficient in reading, while the average state score was 72%. Because of this, Caledonia Elementary decided to implement Literacy Navigator with an entire class of sixth-grade students. They began with the *Foundations* module.

Delivering Instruction

The students' regular language arts teacher taught the class in their usual classroom during the normal readers workshop period. Students moved through Literacy Navigator lessons five days a week for six weeks. The *Foundations* module replaced the usual curriculum starting in February, about three months before the Ohio Achievement Test (OAT).

Literacy Navigator teachers trained shortly after the new year. We provided professional development as part of its regular technical assistance program. The six-

CALEDONIA ELEMENTARY

- > 1 of 5 elementary schools in the district
- > Predominantly African American and economically disadvantaged
- > On academic watch; did not achieve AYP in 2008

hour workshop included several teachers from the district who were involved in the broader pilot. Teachers followed the standard instructional guidance offered in the Teacher Edition and implemented the usual process of monitoring students informally on a daily basis and formally at periodic intervals.

Analysis of Literacy Navigator Implementation

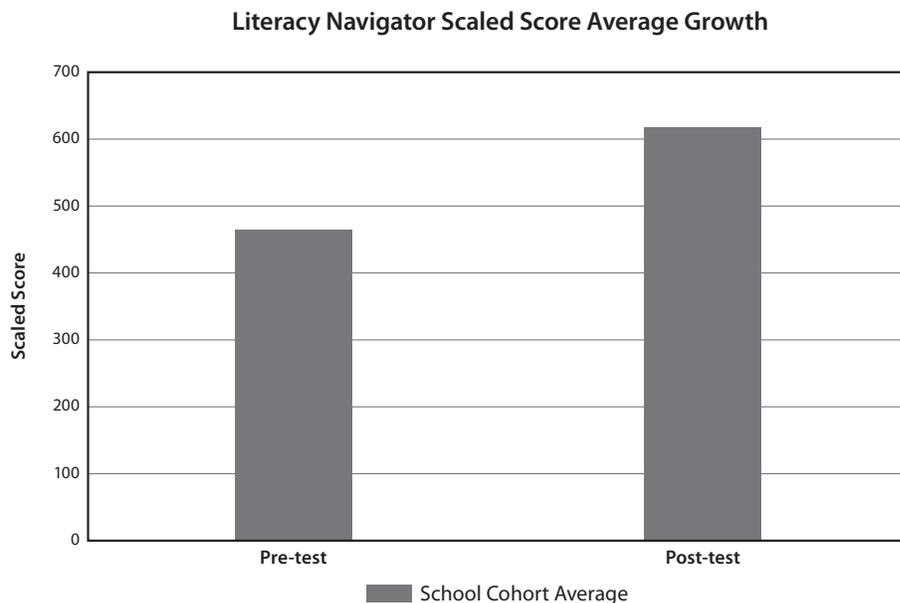
The effectiveness of Literacy Navigator for Caledonia sixth-grade students was analyzed using the following data:

- The difference in cohort scores on the program’s pre-test and post-test
- The difference in cohort reading scores on the 2008 and the 2009 OAT compared with the same scores of students from the state as a whole

Performance data for 15 of the students was analyzed. A comparative analysis was not possible for nine transfer students, because OAT data from the previous year was unavailable. Overall results showed:

1. *Improved Performance for Caledonia Students*

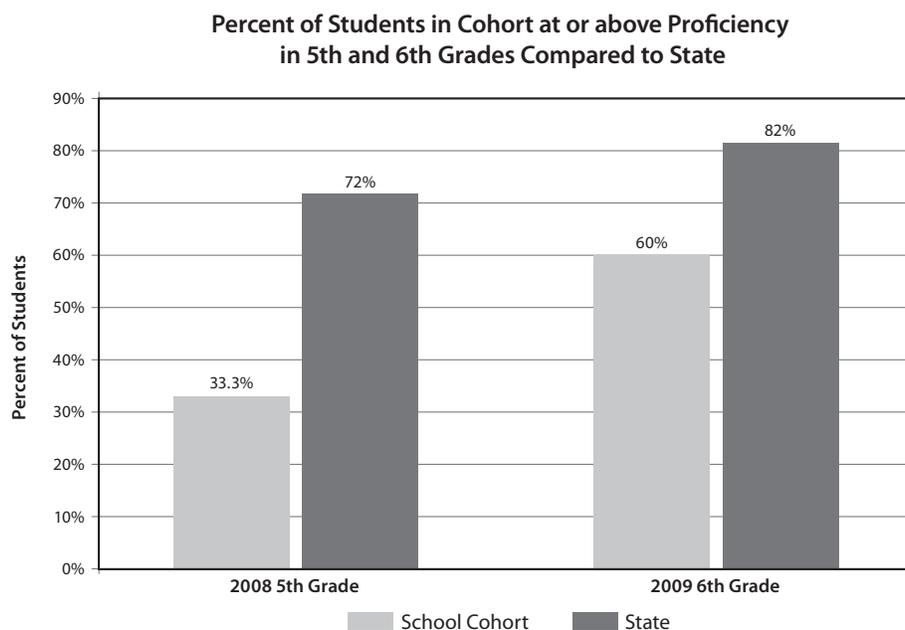
The graph below illustrates the difference between Literacy Navigator pre-tests and post-tests for 15 students in the Caledonia school cohort. Pre-test scores for the students showed a scaled score of 470. As demonstrated on the post-test, achievement grew dramatically, showing a scaled score of 622.



The scaled score is a metric to gauge growth from pre-test to post-test because it accounts for differences between the difficulty levels of the tests. It allows for direct comparison of the two sets of scores, because both the pre-test and the post-test are on the same scale. These results indicate student growth of 1.5 standard deviations, which is generally thought to be a very large effect.

2. Improved State Assessment Scores

Previous test results showed grade 5 reading scores for Cleveland City School District students had been moving steadily downward for the past three years. In 2008, before the implementation of Literacy Navigator, OAT results showed the Caledonia school cohort had only 33% of its students at or above the proficient level in reading, compared to 72% at the state level. The following year, the cohort's performance jumped. OAT results showed 60% of the students at or above the proficient level in reading, compared to 82% at the state level. In just one year, this group of East Cleveland students narrowed the gap in reading scores with their state-wide peers from 39 percentage points to 22.



What Is Your Role?

Our clients have used Literacy Navigator in many contexts: in a single classroom, across a grade level, in select schools, and district-wide at all levels. Your involvement with Literacy Navigator will vary, depending on your professional capacity and the scope of implementation. Whatever your role, feel free to contact your Savvas representative if you have any questions or need more information.

District Administrator

If you are a district administrator, you may have been involved in reviewing and selecting the Literacy Navigator intervention. Now, it is critical that you do your part to ensure a coordinated, efficient, successful implementation process. Be sure to:

1. Assist with school-level implementation.
 - Months before beginning the Literacy Navigator implementation, communicate with school principals to confirm their understanding of the program, its goals, and requirements. Verify that principals have organized a team to review data and select Literacy Navigator students.
Note: Savvas recommends groups no larger than 12 to 15 students with a single teacher. Some schools have worked successfully with two teachers sharing a single class; however, this requires coordination and close communication between the teachers.
 - Once student selections are made, contact principals about their implementation plans. Steps should include: notifying students and communicating with parents, organizing classes and assigning instructors, considering the optimal time and place for classes, and adjusting schedules.
 - Confirm that classrooms (or schools) have the necessary web-enabled computer access for online testing.

2. Create a master list and order the materials needed to implement Literacy Navigator.
 - The configuration of teachers, students, and sites will affect what you order. Determine the type and number of Literacy Navigator classes that will be offered, noting module level, number of students, and number of instructors. Your Savvas representative can help you make the most economical choices. For example, one middle school may use *Foundations* Level B, with one teacher and three small groups during study hall periods. Another school may deliver the same before school. The purchase of one module, Level B, with additional Student Reader classroom sets, may serve the entire group.
3. Schedule training and prepare communications.
 - Consult with your Savvas representative to determine whether teachers need a consultation, a half-day workshop, or a few hours of informal professional development.
 - Be prepared to answer questions from interested parent-teacher groups, individuals, or students. Outgoing messages should always be positive. Literacy Navigator students are not remedial—they are doing well and receiving extra instruction for continued success with informational texts and the advanced textbooks they will use in the upper grades.
4. Track shipping for timely delivery and distribute materials.
 - Arrange for staff to open all boxes, review the contents, and confirm that you have the modules and the levels you need.
 - Consult your master list and assemble the number of Teacher Editions and Student Reader sets that match each class.
5. Collect periodic progress reports on implementation, instruction, and student performance.

School-Level Administrator and/or Instructional Leader

Often a principal, other school-level administrator, or an instructional leader for the English language arts department acts as the on-site implementation coordinator to:

1. Assemble a core team of teachers to implement Literacy Navigator. Meet with team members to discuss why Literacy Navigator is so important to your school and to students' success.
2. Lead the team in evaluating the number of students who use the Literacy Navigator modules and estimate the number for each level.
 - Direct teachers to gather the pertinent information (see pages 17–20) needed to make those determinations. Consult all available data and supervise the selection of Literacy Navigator students.
 - Modify the master schedule or reserve classrooms and teachers for appropriate intervention times before, during, and after school, or in summer sessions.
 - Confirm that all teachers have access to ARO and are prepared for online or paper-and-pencil testing.
3. Act as the on-site contact during implementation.
 - Be available to assist teachers with administrative obstacles or problems that may arise during the implementation process.
 - Observe at least two Literacy Navigator sessions (other than testing sessions) so you can get a firsthand look at how students are responding.
 - Solicit teacher feedback—positive and negative—about Literacy Navigator implementation, including success stories, problems, or suggested changes.
4. Collect periodic data.

Literacy Navigator Teacher

As a Literacy Navigator teacher, you have a critical role—one that begins with the earliest stages of implementation. You may be asked to supply a variety of data on current or past students and to assist in the selection of Literacy Navigator students. (Remember this is not a program for students who need remediation; rather, it is a program for students reading *on grade level* or *just below*. It can also be used by students who may not have much experience with informational texts.) Once students are selected, you can help determine which modules and levels they need.

Here are some of the things you can do to help ensure successful implementation and to boost student performance:

1. Review the Literacy Navigator materials package to familiarize yourself with the contents, including the Teacher Edition and the Student Readers.
2. Log on to “my Savvas Training” to review the online resources, including the videos to use with the lessons. Access the site at:
<http://mysavvastraining.com/products/literacynavigator/2012/materials>.
3. Review this implementation guide for an overview of the program, including its research base, student selection process, and assessments. (It also includes a Summary Data Sheet to help with student selection.)
4. Provide instructions, administer tests, and monitor student progress.
 - Read the pre-test and its instructions. Administer the test and record results. Review the test results for any error trends and use the data to inform your instruction.
 - Read the post-test and its instructions. Administer the test and record results. Review the test results, look for error trends, and evaluate changes in student performance.
5. Follow the course outline.
 - Teach the lessons in the order and at the pace outlined in the Teacher Edition.
 - Model strategies often and monitor all discussions.
 - Pay particular attention to the activities in the Student Readers, such as the graphic organizers that provide visual evidence that students understand the structure of the texts and are able to link ideas.
 - Discuss any problems with your implementation coordinator.

How Savvas Can Support You

Call or email your Savvas representative if you need:

- General assistance with the planning and logistics of your implementation
- Help reviewing performance data and selecting Literacy Navigator students
- Help creating a multi-year strategy for implementation across grade levels, in multiple schools, or throughout your district
- Technical support for online testing or scoring

Appendices

Literacy Navigator Student Selection Summary Data Sheet

Teacher Observations and Classroom Data

Teacher: _____ Student: _____

School: _____ Homeroom #/Grade Level: _____

Qtr./Sem. Grades: _____ Special Category (ELL, etc.): _____

Please rank student's facility with literary texts.

(weak) 1 2 3 4 5 (strong)

Please rank student's facility with informational texts.

(weak) 1 2 3 4 5 (strong)

Classroom Observations: discussion skills, vocabulary, knowledge of text structure, making text connections, and any anecdotal information that might explain discrepancies between classroom grades and performances

Recommend for Literacy Navigator YES NO

Developmental Reading Assessment (DRA) Score _____

State or District Accountability Exams

Reading Level: _____ From (Exam Name): _____

Comprehension Level: _____ From (Exam Name): _____

Split for Informational Texts / Literary Texts _____ / _____

Other Subscores

Skill _____ Score _____ Skill _____ Score _____

Skill _____ Score _____ Skill _____ Score _____

State Standards and NAEP Achievement Levels

The following table displays the state proficiency standards for reading classified into NAEP achievement levels. If your state falls in the Basic category, we suggest either using the appropriate Literacy Navigator grade level or backing up one grade. If your state falls in the Below Basic category, we suggest backing up one or two grade levels.

State	Reading—Grade 4			Reading—Grade 8		
	Below Basic	Basic	Proficient	Below Basic	Basic	Proficient
Alabama	■			■		
Alaska	■			■		
Arizona	■				■	
Arkansas	■				■	
California	■				■	
Colorado	■			■		
Connecticut		■			■	
Delaware	■			■	■	
D. C.	■					
Florida		■			■	
Georgia	■			■		
Hawaii	■			■		
Idaho	■			■		
Illinois	■			■		
Indiana	■				■	
Iowa	■				■	
Kansas	■			■		
Kentucky	■				■	
Louisiana	■			■	■	
Maine		■			■	
Maryland	■					
Massachusetts		■			■	
Michigan	■					
Minnesota	■				■	
Mississippi		■			■	
Missouri		■			■	
Montana	■				■	
Nebraska	*	*	*	*	*	*
Nevada	■				■	
New Hampshire		■			■	
New Jersey		■			■	

State	Reading—Grade 4			Reading—Grade 8		
	Below Basic	Basic	Proficient	Below Basic	Basic	Proficient
New Mexico		■			■	
New York	■				■	
North Carolina	■				■	
North Dakota	■				■	
Ohio	■				■	
Oklahoma		■			■	
Oregon	■				■	
Pennsylvania		■			■	
Rhode Island		■			■	
South Carolina	■				■	
South Dakota	■				■	
Tennessee	■			■		
Texas	■			■		
Utah	■			■		
Vermont		■			■	
Virginia	■			■		
Washington	■				■	
West Virginia		■			■	
Wisconsin	■			■		
Wyoming		■			■	

* In Nebraska, each district develops local assessments to report on standards; therefore, the state was not included in the analyses.

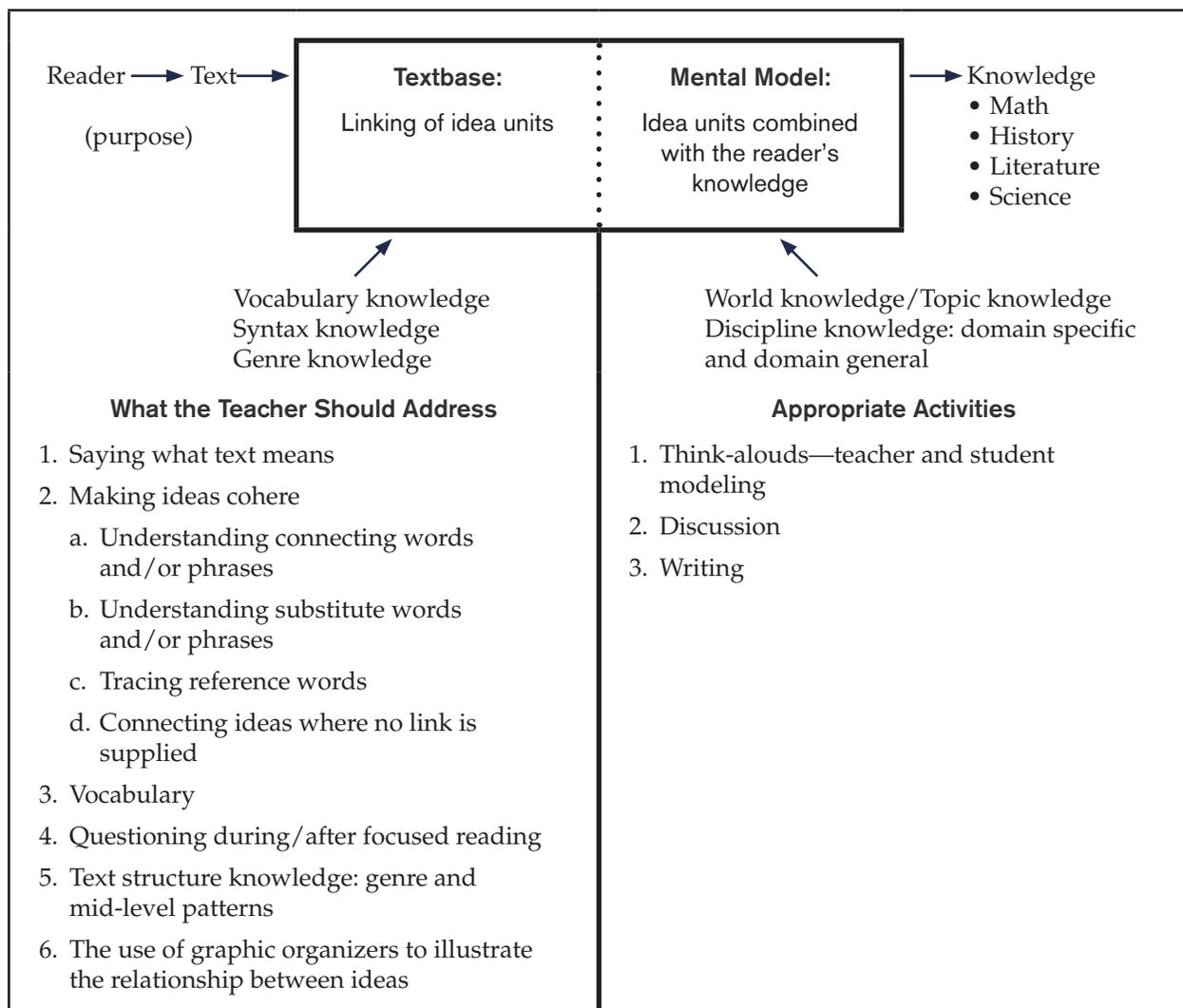
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2008–09, Washington, DC, 2010. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2010.

Instructional Strategies to Improve Comprehension

Current research suggests that in order to comprehend a text, the reader needs to be able to do two things simultaneously: 1) link the ideas expressed via words, phrases, and clauses into a coherent whole and 2) pull from long-term memory relevant background information to flesh out the ideas (Kintsch 1998, 1988, 1974).

As the reader processes the text, his mind does not have sufficient capacity to hold all the information in short-term memory. To remedy this situation, the mind links the ideas into a network called the *textbase*. At the same time, the reader's mind brings forth background knowledge to enhance understanding and create what is called a *mental model*. Comprehension is the result of interaction between the textbase and the mental model. See graphic below.

The Construction-Integration Model of Comprehension



Comprehension can break down during both the building of a textbase and the construction of a mental model. Comprehension can be impeded during the building of a textbase when a reader has problems with co-reference (especially pronoun reference) or cohesion (especially unfamiliar linking/connecting words). It can also breakdown because of unfamiliar vocabulary or problems with seeing how all the various parts of the text fit together. Vocabulary knowledge, understanding of sentence construction, and recognition of genre and mid-level structures all contribute to building a textbase.

Comprehension breaks down during the construction of a mental model when the reader has no context for understanding the text, no relevant information to bring to bear on it, or when the information the reader has is insufficient or erroneous. Knowledge of special topics, knowledge that is domain specific (for example knowledge of habitats in the study of science), and general world knowledge all help the reader to construct a mental model. The mental model enables a reader to go beyond the text and make warranted inferences. Moreover, it is fundamental to a reader's being able to store information in long-term memory and apply it at a future date.

The Instructional Strategies: Textbase

Each Literacy Navigator lesson contains multiple comprehension strategies based on the Comprehension-Integration Model of Comprehension (Kintsch 1974, 1988, 1998). Some of these strategies are familiar, but several are not. It is important to remember that Literacy Navigator lessons are designed both to teach comprehension and to help students store content in long-term memory so it becomes knowledge. Except for the two introductory lessons, each lesson requires students to work with some or all of the content of preceding lessons. This ensures that readers build and elaborate a mental model over a series of content-related texts.

Textbase Strategy One: Saying What the Text Means

If a reader can recast in her own words the meaning of a sentence or a paragraph—or series of paragraphs—it is quite likely that reader understands what she has read. In order to build a coherent representation of what a text means, especially a nonfiction text, the reader needs to be able to link all the various parts of a text—sentence-to-sentence, paragraph-to-paragraph. Thus, Literacy Navigator approaches comprehension instruction by having readers connect the ideas first in sentences and then in paragraphs. As students work with partners to practice this skill, the teacher monitors their responses to check that they are linking ideas appropriately.

What This Means for a Teacher

Teachers should listen to ensure that students are able to recast and link ideas using their own words. They should check that students are staying with the text. Although relevant background knowledge enriches a student's recasting, students should not stray too far from the literal meaning of the words, phrases, sentences, and paragraphs on the page. The primary kind of inference students should be able to make (because this is really a *textbase activity*) is to supply an appropriate linking word or phrase when none is supplied.

Textbase Strategy Two: Making Ideas Cohere

When students have problems with recasting text in their own words, factors such as the misunderstanding of connectives and substitute words, ambiguous pronoun reference, and connecting word being omitted can be problematic.

Understanding Connecting Words/Phrases

To connect ideas and infer relationships between clauses and sentences, the reader must have knowledge of cohesive devices such as connectives (Kintsch and van Dijk 1978). Connectives occur in more than one-third of the sentences found in the basal readers written for students as early as fourth grade.

Research shows that among fourth-graders and fifth-graders, comprehension rates for connectives are too low for independent reading (Robertson 1968). As a result, upper elementary students—at the very least—need explicit instruction to understand how text coheres. Such instruction is likely to be particularly important for English language learners.

Notice how the connectives in the following sentences could present comprehension problems for students.

Although it can be assumed that the drought will ultimately break, farmers are reluctant to borrow money to invest in new farm machinery.

He did not receive his party's support; **however**, he continued to campaign.

The document was valuable because of its age and the fame of its author; **thus**, it brought a considerable price at auction.

He was tried and convicted, **which** caused his family much concern.

Words that Are Commonly Used to Make Connections

Additive Relationship	Adversative Relationship	Causal Relationship	Temporal Relationship
And Also In addition Furthermore Besides	Yet But However Nevertheless On the other hand Instead At any rate	So As a result Consequently Because On account of For Then In that case	Then Next Finally At last First Secondly In conclusion

Keeping Track of Substitute Words

Writers often use substitution to avoid repetition; that is, they use a variety of words to refer to the same person or the same thing. In the following text, the writer avoids repetition by substituting both pronouns and nouns to refer to one character (Officer Reynolds):

*Officer Reynolds routinely patrolled our street where **he** made many friends. A **young rookie policeman**, **he** was assigned countless foot patrols so as **a representative of law and order**, **he** was highly visible. **His** partner, Bill Miller, said of **him**, “**Bob** (Bob Reynolds) is the kind of cop who needs to be on every street in America. Everybody respects **him**.”*

The writer used the following words and phrases to refer to Officer Reynolds:

- he
- a young rookie policeman
- he
- a representative of law and order
- he
- his
- him
- Bob
- him

Other words and phrases that could also refer to Officer Reynolds:

- the young cop
- the young officer
- Reynolds
- Miller’s partner

When a text is lengthy or complex, or the names in it are unfamiliar (as in a novel set in a foreign country), readers often lose track of what or who is being referred to.

Understanding Pronoun Reference

Pronouns are also used to keep a text from being repetitious. In the following passage, the writer relies on a reader's ability to keep track of whom each pronoun refers to. Sometimes this requires making a link forward, sometimes making a link backward.

*Mike was already gone when Jack checked the living room the next morning. A collection of sheets, pillows, and blankets littered the sofa where **he'd** (Mike) spent the night.*

*Fortunately the guard **who** (guard) had been on duty had not noticed the **three of them** (Mike, Jack, and Mary) scouting out the track the night before. **He** (Jack) and Mary had managed to get Mike to the car without further incident except for a brief detour into the doughnut store on the corner where Mike stocked up on carbohydrates. For a moment Jack had thought Mary was going to **indulge too** (indulge in carbohydrates). But when **she** (Mary) saw how many doughnuts were in Mike's order, **she** (Mary) fell quiet. Later, though, when **he** (Jack) drove **her** (Mary) home after helping Mike settle in, **she** (Mary) complained, "**He** (Jack) always eats too much the night before a big race. **I** (Mary) wish **I** (Mary) could indulge the way **he** (Jack) does, but **it** (indulging) would throw me off my stride tomorrow."*

Making Inferences When Connectives Are Omitted

Sometimes students' comprehension falters simply because words that could be stated explicitly to connect ideas have been omitted. Consider sentences below:

Some states are much larger than others. For example, Texas and California dwarf the size of Delaware.

The "For example" connects these two ideas explicitly and, as a result, students have little problem linking the ideas. Now, consider the following three sets of examples in which the connectives have been omitted:

- a) *Some states are much larger than others. This can easily be appreciated when one considers the size of Texas and California in relation to the size of Delaware.*
- b) *Some states are much larger than others. Texas and California dwarf the size of Delaware.*
- c) *Some states are much larger than others; Texas and California, for example [are much larger than Delaware].*

What This Means for a Teacher

When comprehension falters because of problems grounded in a misunderstanding of connectives, the easiest remedy is simply for the teacher to define the word and keep visible a chart of problematic connectors and their foundation. When the problem is grounded in a misunderstanding of pronoun reference or word substitutes, the teacher can use an overhead of a small segment of relative text and draw arrows from the pronoun or substitute word to the noun it refers to. See the following example of a marked text. When the problem occurs because a connective has been omitted, the teacher should ask students to look at the two sentences and infer the link.

The Adaptable Coyote

- 1 Have **you*** seen a coyote lately? Have **you*** heard one howling in the night or yip yapping in the day? **Your*** chances of having one for a neighbor are better than they used to be.
- 2 This small, gray cousin of the wolf is moving from the west to the east. This brother of the dog is moving closer to civilization.
- 3 Once the coyote wandered mainly on **our*** western prairie, but now it lopes up and down the east coast. It roams as far north as Alaska and it has gone south to Costa Rica. Despite human efforts to get rid of it, the coyote has increased its range. The coyote has learned to move where people are because people mean food.

(Miller, publication date unknown)

* This text directly addresses the reader; hence, the pronouns *you*, *your*, *our*.

Textbase Strategy Three: Addressing Vocabulary

The following passage comes from an eighth-grade physical science text (Holt Science and Technology).

Properties of Ionic Compounds

The forces acting between the ions that make up ionic compounds give these compounds certain properties. Ionic compounds tend to be brittle, as shown in Figure 2. The ions that make up an ionic compound are arranged in a repeating three-dimensional pattern called a crystal lattice. The ions that make up the crystal lattice are arranged as alternating positive and negative ions. Each ion in the lattice is surrounded by ions of the opposite charge, and each ion is bonded to the ions around it.

At a glance, it is easy to see in this passage two kinds of vocabulary problems that could cause students to struggle. The first kind of problem is with words for which students have everyday kinds of understanding. These are words like *forces*, *property(ies)*, *crystal*, *positive*, *negative*, *opposite*, and *bond(ed)*. It is quite likely that many readers have encountered these words in a different context. However, students are unlikely to be familiar with what the words mean in the context of science writing, and this unfamiliarity will prove confusing as they work through the text (Beck, McKeown, and Kucan 2002).

The second kind of vocabulary problem will arise when students encounter domain-specific words such as *ions*, *crystal lattice*, and *opposite charge*. Understanding this paragraph requires understanding these words because they relate to the overarching topic of ionic compounds. Unless students have some relevant background knowledge about properties of compounds (what properties are, what compounds are), they will be lost in the language. Vocabulary knowledge that is domain specific, as is the case with these words, most frequently comes through developing a layered understanding by reading domain-specific texts (Hirsch 2006).

According to E.D. Hirsch:

To understand language, whether spoken or written, we need to construct a situation model [mental model] consisting of meanings construed from the explicit words of the text as well as meanings inferred or constructed from relevant background knowledge. The spoken and the unspoken taken together constitute the meaning. Without this relevant, unspoken background knowledge, we can't understand the text.

That is why we are able to understand some texts but not others, no matter how well we can decode the words. We possess the relevant knowledge in some cases, and in those cases we can understand what we are reading, but we lack it in others, and in those cases we cannot comprehend the text. **Since relevant,**

domain-specific knowledge is an absolute requirement for reading comprehension, there is no way around the need for children to gain broad general knowledge in order to gain broad general proficiency in reading¹.
(Hirsch 2006, 39)

What This Means for a Teacher

Each text is likely to contain some words that are not domain specific but are nonetheless problematic for readers. For these words, teachers need only supply the definition that is context specific. This instructional move can take place during focused reading. It is not expected that students learn these words at this time.

Many lessons, however, also contain a list of domain-specific words which students are expected to learn. These are words that students should record and define in the text margins of their Student Readers and that teachers should make an effort to use in discussing the readings. The words will probably come up repeatedly over the course of the module, so students should become familiar using them.

Relevant and Helpful Vocabulary

As previously mentioned, when a student reads informational text, vocabulary can be a challenge because familiar words are used in new ways specific to the content. Furthermore, students will encounter new words that are domain-specific and understanding their meanings is essential to understanding the text. There is often an additional vocabulary challenge when reading informational text and that is encountering a large number of highly academic or advanced words. Because of these challenges, you will find that vocabulary has been addressed in two ways in each lesson.

The first way vocabulary is addressed is as relevant vocabulary. These are words that are related to the concept being developed in the unit. Students will interact with the relevant vocabulary in a number of ways including writing the definitions of the words in the margins of the text, reading the words in the body of the text and using the words as they discuss the text. Students are expected to learn these words and their meanings and to use them appropriately when working with the text.

The second type of vocabulary addressed is helpful vocabulary. These are words that authors have used that may not be part of the students' everyday reading and writing vocabulary and for which a working definition is needed in order to comprehend the text. Definitions for the helpful vocabulary are written in the margins of the text for students to reference as needed. Students will not be held accountable for learning these words beyond using them to comprehend the text in the article in which they are found. The definitions are provided to facilitate comprehension.

1. Material **emphasized** by Savvas.

Textbase Strategy Four: Focused Reading—Questioning during and after Reading

According to Mike Schmoker (2006), focused reading goes by a variety of names: purposefully reading (Popham 2004, 33), strategic reading (Vacca 2002, 6), and deep reading (Meier and Mathews 2004, 2). Focused reading of text is reading that is guided by a teacher for the purpose of highlighting important ideas, language, or difficult concepts. It is the kind of reading that scaffolds a student’s deep understanding of a text.

Such reading is “one of the most powerful and enjoyable ways to develop the ability to think critically and evaluate information—to literally *become smart*” (Schmoker 2006, 58). This being the case, Literacy Navigator makes focused reading a fundamental part of the foundation module.

Questioning during Focused Reading

The purpose of questioning *during* a focused reading of the text is to ensure that students build deep understanding as they move through the material. In order to do this, the questions should cause the readers to:

- Link the idea units in the text correctly
- Understand how the ideas taken as a whole add up to something coherent
- Be able to see how everything relates to the overarching concept

When students are new to developing these skills, it makes sense for the teacher to stop at critical junctures in the text and prompt students with questions. It also affords the teacher time to guide students to draw on relevant background knowledge. The questioning can be relatively brief or, especially when it concerns background knowledge, it can prompt a full-blown discussion.

Questioning after Focused Reading

After students have worked piecemeal through texts and can apply relevant background knowledge, link the ideas in that text coherently, and consider the impact of all the information taken together, it is time to shift the questioning to the end of a text. (Obviously, if the text is quite long, questioning is reasonable both during and at the end of the material.)

The goal of questioning after focused reading is not to have students stop thinking strategically at various points in the text. The goal, instead, is to spend more time considering the text as a whole—its ideas, its information, and its assertions.

Questioning at the end of a text should actually push readers back into the text in order to support their judgments. Questioning at the end of a text also makes sense when asking readers to compare one text with another.

What This Means for a Teacher

Questions during Focused Reading

Teachers should read the text before beginning the lesson and highlight problematic sections of the material, including difficult connectors and potential pronoun reference problems. Questioning during focused reading, however, should not only be about textbase problems such as these. It should also address complex ideas in the text, patterns of text organization, background knowledge that is relevant to an expanded understanding of a concept, and (when applicable) following the logic in a text's judgment/assertion. It is the teacher's role to make students aware of these issues by pointing to specific parts of the text and asking the appropriate questions.

Questions after Focused Reading

The questions that arise naturally at the end of a text will be those questions that cause readers to consider the text as a whole—its big ideas, its text structure (the organizing pattern for the content of the material), its relationship to other texts they have read and the general or domain-specific content the text includes. Questions that come at the end of a focused reading are frequently quite open-ended and lead naturally to a whole-class discussion or writing activity.

Textbased Strategy Five: Text Structure Knowledge

Knowledge of text structures (such as genre patterns) enables a reader to anticipate how events/ideas will be organized (Donovan and Smolkin 2002; Freedman and Medway 1994; Kamberelis and Bovino 1999; Pappas and Brown 1987; Wollman-Bonilla 2000). For example, a student who reads a story expects characters, a setting or settings, a plot, some sort of resolution, and details that make it possible to envision characters, places, and motivations. Stories will likely contain literary language, as well.

By contrast, a student who reads a chapter in a science book expects domain-specific vocabulary, definitions, process explanations, charts, diagrams, graphs, and details related to the topic of the text. The language will likely contain many nominalizations (adjectives and verbs used as nouns, i.e., *settle* as *settlement*) and other features that pack as much information into a sentence as possible.

Knowledge of text structures allows a reader to approach a text appropriately and organize the information and/or ideas encapsulated in the text in a way that makes storing the information/ideas easier. Research tells us that text structure knowledge improves reading comprehension and retention (Savvas and Fielding 1996; Pressley 2006).

Other structures (called mid-level structures) are frequently used by writers to organize ideas at the sentence level, the paragraph level, and even the whole-text level. Such structures include comparison and contrast, cause and effect, problem and solution, definition and example. The students who learn to anticipate forthcoming information that is organized according to one of these or similar structures (claim/evidence; if/then) will have an advantage in comprehending the increasingly difficult text they are expected to understand beyond grade 4 (Kintsch and van Dijk 1978; Meyer 1975; Schank and Abelson 1977).

What This Means for a Teacher

The texts in the lessons are informational texts. Their organizational structures vary to suit the topic. Teachers should point out to students the overall structure of a text and, whenever possible, a variety of mid-level structures as well. Because it is not always productive to analyze text paragraph by paragraph, teachers should make students aware of the most common genre and mid-level structures.

Textbase Strategy Six: Using Graphic Organizers to Display the Relationship Between Ideas

When students comprehend text appropriately, graphic organizers can illustrate how they understand the relationship between the ideas in the text (NICHD 2000). So, for example, students who are reading narrative text—which is arranged chronologically—would likely use a timeline to illustrate the series of events.

When readers use graphic organizers or diagrams, they are using non-linguistic representations which exist precisely because graphics can represent what language cannot and vice versa. Graphics represent something inferred from the language rather than what the language itself represents. In this way, a graphic representation is similar to the mental model. It is not a mere translation of the textbase but is composed of multiple inferences, many of which are non-linguistic such as those that are made when a phrase in the text refers to something you must imagine by drawing on your experience.

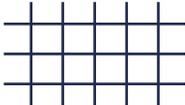
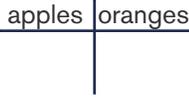
In non-narrative explanations, the reader often has to imagine diagrams (often 3-D, often animated) to understand the interrelationships being explained. In Venn diagrams (which are too simple for most ideas), the referent imagined is a comparison of two sets of anything, usually features or characteristics. In such a comparison, some elements belong to A, some to B, and some to both.



Language can express this concept without graphics, but not very well. To make language precise enough to represent the relationships represented in Venn diagrams would require pedantic sounding sentences: For example, the diagram illustrated above would require a sentence such as “An element belongs to either A but not also B, or B but not also A, or A and B.” The diagram expresses the representation much more clearly and much more like the mind thinks it. Once you get beyond Venn diagrams, to matrices and flowcharts where the content is in the labels of the arrows (relationships) rather than the labels of the nodes, the diagrams have it all over language.

Consider a map of the United States. Try to communicate all the information in the map using language alone. Describe the shape and location and size of each state, mountain range, river, city, etc. You cannot do it because the information is fundamentally non-linguistic. Most of the knowledge in our brains is composed of a mixture of linguistic and non-linguistic information. Very little is pure linguistic. Every thing we see, hear, touch, and smell is non-linguistic. What does the map refer to? It refers to ideas that language cannot. Language can refer to the map only if we have the idea of map already.

At the very least, students should be familiar with these graphic organizers:

- 1. Webs 
- 2. Timelines 
- 3. Matrices 
- 4. Venn diagrams/Circles 
- 5. T-charts 

What This Means for a Teacher

Graphic organizers allow readers to “construct and explicitly show knowledge” (Hyerle 1996). The process of creating a graphic organizer requires readers to reconstruct information and create connections in order to form a coherent picture of the text’s information. Teachers should introduce students to the array of possible organizers and explain which ones might be most useful for structuring their understanding of a particular kind of text.

After students practice developing various types of organizers, they should be encouraged to design their own graphics to match the text they are reading. The goal of using graphic organizers is for students to be able to independently choose the appropriate organizer for the right text in order to deepen their understanding of what is being read. As with other comprehension strategies, students must be able to use the graphic organizer flexibly and fluently.

The Instructional Strategies: Mental Model

Mental Model Strategy One: Think-Alouds

Think-alouds are instructional strategies that actually address both building a textbase and constructing a mental model. When the teacher models “Saying What the Text Means,” she is illustrating how to link ideas, which is a textbase activity. When the teacher does a think-aloud to illustrate drawing on relevant background knowledge, she is illustrating how to build a mental model.

Note: When doing a “Saying What the Text Means” think-aloud, the teacher does not read the text aloud. Instead she simply puts what the text says in her own words. She does not work through the sentence or paragraph word-by-word. Rather, she sums up or “gives the gist” of what she is reading.

When the teacher thinks aloud to illustrate drawing inferences or applying background knowledge, she may read the text aloud to illustrate at what specific point the inference was made or the background knowledge come into play. Because developing a valid mental model requires a reader to have relevant background information, the teacher should stop in her think-aloud at points where such knowledge from previous texts is important.

What This Means for a Teacher

The think-alouds should first be demonstrated by working within a single paragraph and then moving to two or three paragraphs. The teacher should model and then the students, working in pairs, practice. As students practice, the teacher should monitor students' understanding and solve problems. Occasionally, the teacher should ask various students to do a think-aloud for the class.

Mental Model Strategy Two: Discussion

When a reader draws on material he has read in order to engage in a discussion, he expands his mental model. The discussion forces a reader to become aware of how other students interpret the text and allows him to modify or enlarge his own understanding by exchanging information with others (Reznitskaya and Anderson 2002).

If all students in a class link the ideas in the text appropriately, then all of them will have identical textbases. However, because all students will not have the same or an equal amount of relevant background knowledge, they will not all form identical mental models. As a result, some readers will understand a text more fully/accurately than others. Discussion will highlight differences in understanding and address students' inadequacies and/or misconceptions. It will also cause students to develop a reasoned understanding of text.

Collaborative reasoning has a format that is useful for deepening conceptual understanding. Collaborative reasoning discussions do not foster reaching consensus. Instead, this discussion model requires students to seriously consider multiple perspectives on a text they have read and then engage in a thoughtful dialogue. The discussions have an open participation structure; that is, students are expected to communicate freely. According to Richard Anderson, "Reasoning is fundamentally dialogical. Thinkers must hear several voices within their own heads representing different perspectives on the issue. The ability and disposition to take more than one perspective arises from participating in discussions with others who hold different perspectives" (Reznitskaya and Anderson 2002).

What This Means for a Teacher

Teachers should monitor initial attempts using this format by “1) prompting students for their positions and reasoning; 2) demonstrating reasoning procedure by thinking aloud; 3) challenging students with countering ideas; 4) acknowledging good reasoning; 5) summing up what the students have said; and 6) using vocabulary of critical and reflective thinking.” (Reznitskaya and Anderson 2002).

Mental Model Strategy Three: Writing

Writing is perhaps the ultimate test of a reader’s understanding of text. The writer must grapple with the ideas she has read about, blend these new understandings with relevant background knowledge, organize her thoughts coherently, and then recast everything in language and form appropriate to her intended audience and purpose.

Teachers routinely ask students to write summaries of what they have read; but while summaries are a very good spot check of comprehension, they fall far short of mining the deep understanding that can be gleaned when students are asked to work with new information in more expanded ways. Literacy Navigator asks students to apply content in order to make judgments and to construct claims that need to be justified with reference to specific ideas from various texts.

When readers have to work with text in these ways, the content gets stored in their long-term memory and can be retrieved at a later time under different circumstances. This is important because their textbooks are produced on the assumption that readers will carry forward necessary background information from the previous grade’s textbook. If readers did not comprehend the previous year’s content, they will not have the relevant background necessary to understand new concepts. This problem increases each year.

What This Means for a Teacher

Each Literacy Navigator text is accompanied by questions that relate to the module’s theme. These questions require students to develop a perspective—to take a position. Writing related to these questions will most likely help students to develop a “deeper conceptual understanding” of the topic (Hynd, McWhorter, Phares, and Suttles 1994). For this reason, a teacher should use these questions both for discussion and writing assignments. The course also routinely raises issues that serve as the genesis for short, focused writings.

Traditional Reading Skills/Strategies That the Construction-Integration Model Encompasses

Saying What the Text Means

- Paraphrasing
- Summarizing
- Seeing the relationship between ideas
- Identifying main ideas
- Determining importance
- Making textbased inferences
- Vocabulary

Making Ideas Cohere

- Finding pronoun antecedents
- Vocabulary
- Understanding sentence structure
- Using text structure to develop understanding
- Understanding cohesion
- Understanding coherence
- Seeing relationships

Vocabulary

- Tier 2 words
- Tier 3 words

Focused Reading

- Using relevant prior knowledge
- Understanding an author's purpose
- Using text structure to develop understanding
- Understanding coherence
- Understanding cohesion
- Checking for understanding of vocabulary
- Seeing relationships
- Determining importance
- Identifying supporting details
- Linking understanding between and across texts
- Drawing conclusions
- Making inferences

Creating Graphic Organizers

- Seeing relationships between ideas
- Linking to relevant background knowledge—drawing inferences
- Determining importance
- Identifying supporting details

Discussion and Writing

- Making application of knowledge
- Making and supporting a claim with textual evidence
- Making inferences
- Establishing linkages between and within text
- Identifying an author's purpose
- Seeing relationships
- Vocabulary
- Drawing conclusions
- Determining importance
- Checking for understanding
- Summarizing

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Frequently Asked Questions

How is Literacy Navigator different from other intervention programs?

Literacy Navigator works exclusively with informational texts and provides instruction on the specialized skills used to comprehend them. Texts are scaffolded in terms of their reading difficulty and the domain knowledge they introduce. Other reading interventions, even those that use informational texts, cover a variety of diverse, often unrelated topics. Literacy Navigator modules use high-interest topics to introduce concepts in the domain—particularly in the areas of life science, ecology, and conservation—to strengthen comprehension strategies while building domain knowledge students will need in later years. Scaffolding in both aspects—text level and domain concepts—provides the basis for development of the Construction-Integration model of comprehension.

What is the difference between an “intervention program for reading comprehension” and a “remedial reading program”?

Literacy Navigator students do not need remedial reading programs because they have already mastered phonics; they decode with relative ease, have at least average levels of fluency, and possess an appropriate vocabulary for their reading levels. Literacy Navigator is an intervention that focuses on strengthening reading *comprehension* abilities, specifically informational texts. Because these skills are fundamentally different from those used with literary texts, many students can benefit from Literacy Navigator; it prepares them to work with advanced textbooks.

What do I tell parents or students who worry that being assigned to Literacy Navigator means they are weak readers?

The majority of students who work with Literacy Navigator read *on grade level* (or very close to it); some even read *slightly above* grade level. Literacy Navigator is a specialty intervention for competent readers who have never received explicit instruction on how to comprehend informational texts. It prepares them to succeed with the more complex textbooks they will encounter in subject-specific courses.

Do teachers have to adjust their classroom pedagogy for this program?

Teachers may need to adjust their classroom pedagogy in small but significant ways. All modules at all levels follow the same lesson routine, so students know what is expected each day. Instructors are constantly monitoring student progress and looking for evidence that students are connecting parts of the text and creating a mental model that shows growing understanding of concepts. Teachers guide discussion every day, so that individual interpretations, differences of opinion, and textual evidence are articulated in large and small groups—leading to review,

reflection, and correction of comprehension errors. Students take lots of notes in their Student Readers—in text and graphic form—which may be different in classrooms that routinely reuse textbooks. Most teachers have guided their students in the use of graphic organizers, and these play a significant role in the program.

Does Literacy Navigator align to my state standards?

Literacy Navigator should align with your state standards in regard to reading and comprehending informational texts, and will probably exceed them. The program was designed in accordance with the high standards outlined in the reading framework of the National Assessment of Educational Progress (NAEP), the Common Core State Standards, and guidelines published by the Center on Instruction.

Can we use Literacy Navigator in place of our regular reading program?

Literacy Navigator is intended to augment and enrich your regular reading curriculum. That being said, a few pilot programs have experienced success using Literacy Navigator in place of the regular program.

I'm interested in widespread implementation. How do I start?

The first step is to know your students and your budget. Select the number of students from the number of grade levels your budget will allow. Savvas representatives are available to consult with you on a large-scale implementation. Widespread implementation can include numerous Literacy Navigator sessions at different locations throughout the year, and sessions may serve students reading at a different levels and enrolled in various grade levels. Savvas representatives can always assist you with organizing and scheduling.

How do I know whether my students really need Literacy Navigator?

Literacy Navigator aims to give students the skills and strategies they need to comprehend complex, informational text *before they experience* a problem. Students tackle the kinds of structures found in informational articles, news reports, research papers, and the advanced textbooks that they will work with in the upper grades. Without explicit instruction, many students who read literature on grade level or just below grade level feel challenged when they begin reading informational material.

A variety of information should be used to select students. Review your students' performance histories and quarter grades, and ask for teacher recommendations. Look at state or district accountability exams and how they compare to the NAEP. Use available Developmental Reading Assessment (DRA) scores as a capstone to the data. Correlate the DRA scores to the correct Literacy Navigator module levels.

What kind of instructional support can teachers expect?

Instructional support is embedded throughout the Teacher Editions. Teachers will find assistance with and suggestions for introducing lessons, demonstrating and modeling comprehension strategies, and facilitating discussions of the text structure. They will learn how to use graphic organizers, how to administer assessments, and how to spot comprehension difficulties.

Budgeting is a problem. Can I adjust the organization of the modules to fit the district's pricing plan?

Contact an Savvas representative to discuss your needs.

Can we reuse Student Readers?

Student Readers are designed for a single use and their “consumable” nature is integral to the program. Student Readers include numbered paragraphs, wide margins, and liberal spacing between lines. Extensive note-taking, vocabulary definitions, and text connections are written directly into the Student Reader.

What will Literacy Navigator require in terms of classroom space and staff time?

Classroom space (or something suitable) is needed for small groups of 10–12 students. A total of 12 lessons (for most modules) last 45–50 minutes each and should be delivered by a teaching professional.

Can students work through the Literacy Navigator modules independently?

No. Teachers and students work together. Facilitated discussions and partner work are important elements in Literacy Navigator.

Is there an extra charge for using ARO's online testing features or the resources on “my Savvas Training” site?

No, the purchase price includes access to both of these sites. They can be accessed as soon as the implementation coordinator contacts Savvas and provides the necessary information.

How far in advance must I request online testing? What is a “testing window”?

Requests for online testing should be made at least three to five days before your estimated test date. This allows Savvas' technical support to make all preparations within the system. The “testing window” defines a period in which testing can be administered, providing teachers with flexibility.

I don't want to administer or score tests online. Will I have a problem?

No; all tests can be printed, administered in paper-and-pencil format, and scored by hand.

If students take their tests online, do I have to score them or are they scored automatically?

When students take tests online, their answers are automatically recorded and their results entered into the secure Classroom Environment on ARO. You can then print the results.

I administered the pre-test for a module using the paper-and-pencil test. Can students take the post-test online?

No, the pre-tests and post-tests for each module must be administered in the same format.

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ISBN: 978-1-40261-198-8

