

# Appendix A

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## The Scientifically-Based Reading Research (SBRR) Behind Grade 5 ITRI

Grade 5 ITRI is based on scientifically-proven reading comprehension strategies identified by the National Reading Panel in their 2000 report.

The National Reading Panel identified proven reading comprehension strategies.

- **Question Answering** is a strategy in which teachers pose questions and guide students to the appropriate answers. It has been proven effective in increasing comprehension in grades three through eight.

*Grade 5 ITRI models this strategy through the use of Guided Reading Boxes which pose questions and guide students to analyze appropriate parts of the text or text features. Teachers facilitate this process through the in-class discussion session which follows each Grade 5 ITRI lesson.*

- **Question Generating** encourages students to ask who, what, where, when, and why and how questions as they read.

*The Guided Reading Boxes that appear in all Grade 5 ITRI lessons model this strategy by asking students the kinds of questions that proficient readers ask themselves. In | the Inference lessons, the Guided Reading Boxes and Concluding Project ask students to generate their own questions as well. Grade 5 ITRI is designed so that students will internalize the process of generating questions and begin to employ it independently when reading.*

- **Summarization** involves identifying the main idea of a passage and analyzing the degree of importance of the supporting details. This skill is a critical part of Indiana's Academic Standards for English/language arts in grade 5.

*Students will see the main idea identified in the text features of many of the lessons. Grade 5 ITRI's Guided Reading Boxes often point out this main idea, helping students realize its importance. Other Guided Reading Boxes, activities, and concluding projects ask students to put ideas into "their own words," list important steps, and identify key details in an effort to help them summarize effectively.*

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- **Comprehension Monitoring** involves making students aware of the text and text features so that they can use appropriate comprehension strategies. It asks students to engage in “thinking about thinking.” Comprehension monitoring has been proven to improve performance on standardized tests of reading comprehension.

*Comprehension monitoring is the core of Grade 5 ITRI. ITRI teaches students to think about their own thinking as they work. Teachers model this strategy and Guided Reading Boxes probe students to identify why they answered a question a particular way, teach text structure, and draw student attention to the features of informational text.*

- **Cooperative Learning** encourages students to work together to increase comprehension. Cooperative learning has been scientifically-proven to increase comprehension and to boost performance on standardized tests.

*Each Grade 5 ITRI lesson begins with a large group discussion aimed at activating prior knowledge and closes with a group self-checking session and discussion in which students share their answers and reading strategies and learn from each other.*

- **Graphic Organizers** help students visualize the relationships between important ideas. They have been proven to improve memory and to boost performance in social studies and science.

*The Grade 5 ITRI teacher’s manual includes a graphic organizer idea for each unit. These graphic organizers are designed to enhance the reading skills which are the focus of the unit.*

- **Multiple Strategies** approaches encourage students to employ a variety of comprehension strategies simultaneously. Studies have shown that students whose teachers use demonstrations, guiding, modeling, and scaffolding show improvement on standardized tests. Understanding when to employ specific strategies is key to student success in informational text.

*Grade 5 ITRI’s Reading Skill introductions give students clues about what to look for when assessing text so they will know what strategy or strategies to employ. Grade 5 ITRI lessons also demonstrate multiple strategies through the variety of Guided Reading Boxes which help mediate student reading of the text.*

Source: National Reading Panel (2000), Report of the National Reading Panel, Washington, D.C.

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## **ITRI promotes reading skills identified as most important to elementary school students.**

Research shows that students' comprehension of expository material is impeded by lack of familiarity with vocabulary, concepts, and text structures. Elementary students thus often have trouble comprehending informational text. The most successful readers are those who ask themselves questions about content, are aware of organization and page design, think about what they do and do not know about a subject, and actively apply what they read to their own experiences. These skills can be directly taught.

*Grade 5 ITRI models effective reading strategies through Guided Reading Boxes, which focus student attention on text organization by emphasizing signal words and common text structures. The lessons in Grade 5 ITRI encourage students to think critically about text features such as graphics, headings, boldface print, etc. Students practice helpful techniques such as previewing vocabulary, retelling, and summarizing. Teacher-led in-class grading discussions improve comprehension and reinforce these skills by encouraging students to share reading strategies and learn from one another.*

### **Sources:**

Bakken, J. P., and C. K. Whedon. 2002. Teaching text structure to improve reading comprehension. *Intervention in School and Clinic* 37:229-33.

Olson, M. W., and T. C. Gee. 1991. Content reading instruction in primary grades: perception and strategy. *The Reading Teacher* 45:298-307.

Pressley, M., and R. Wharton. 1997. Skilled comprehension and its development through instruction. *School Psychology Review* 26:448-67.

## **ITRI uses methods proven to help students improve vocabulary acquisition.**

Major differences between vocabulary in reading lessons and content area lessons require students to shift their thinking and teachers to adjust their instruction. Students learn vocabulary better when they are instructed on how to use the text itself to make sense of challenging words.

*Grade 5 ITRI includes a unit designed to promote word knowledge acquisition. These lessons focus on strategies to help students make sense of challenging words and encourage students to develop an appreciation for vocabulary. Guided Reading Boxes throughout this unit as well as other units ask students to think about the vocabulary and model questions that good readers ask themselves.*

*Grade 5 ITRI was designed to model the vocabulary structure of Indiana's adopted textbooks. Lessons follow the same number of vocabulary terms per page, the placement and identification of vocabulary terms on the page, the number of difficult words not identified as vocabulary terms per page, and syntactical difficulty. Therefore, skills learned through Grade 5 ITRI are easily transferable to the textbook.*

### **Sources:**

Armbruster, B., and W. Nagy. 1992. Vocabulary in content area lessons. *The Reading Teacher* 45:550-51.

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## **ITRI helps students connect what they read to their own experiences.**

Research indicates that while elementary students infer in their daily activities, they have a difficult time spontaneously drawing inferences between what they read in school and what they experience. Studies have shown that students rarely practice their inference skills enough in the classroom to sufficiently enhance their performance on standardized tests. Making predictions prior to reading has been shown to help students integrate what they read with their prior knowledge.

*The Inference unit in Grade 5 ITRI models thought processes to help students develop and practice their inference skills during their school-related tasks. The Guided Reading Boxes ask students to access their prior knowledge about a subject before they begin the lesson, think critically about why something may have happened, make connections between words they already know and words they are learning, think about how they made their inferences, and understand why the author provides specific information. Beyond the Inference unit, each lesson is preceded with a background prompt in which the teacher asks a question or set of questions to spark discussion and activate prior knowledge, experiences, or infer about possible or fantastical situations. By practicing inference skills in these lessons, students will transfer them to their own content texts.*

### **Sources:**

Hansen, J. and Pearson, P.D. 1983. An Instruction Study: Improving the inferential comprehension of good and poor fourth grade readers. *Journal of Educational Psychology* 75:821-829.

Hansen, J. 1981. The effects of inference training and practice on young children's reading comprehension. *Reading Research Quarterly* 16:391-417.

## **Grade 5 ITRI builds foundations for a future of enhanced critical thinking skills.**

The distinction between fact and opinion is a difficult concept for students to master and it becomes increasingly complicated as informational texts become more complex. Being able to distinguish between the two is an essential skill for better reading and critical thinking. It allows students to identify incorrect or misleading information and accurately articulate opinions and facts in their own oral and written communication.

*Grade 5 ITRI has an entire unit in which students distinguish between facts and opinion as well as assess how each is constructed. Guided Reading Boxes prompt students to identify target words, reiterate facts and opinions within texts, write their own opinions, restructure opinions into facts, research to check facts and opinions, and understand differing opinions. The concluding project of this unit allows students to work independently to identify facts and opinions in primary resource material.*

### **Sources:**

Dow, C. 1987. Lecture 'step-asides' illustrate difference in opinions, facts. *Journalism Educator* 42:48-50.

Graney, J. M. 1990. Determination of fact and opinion: A critical reading problem. *Journal of Psycholinguistic Research* 19:147-166.