"High 5!" Strategies to Enhance Comprehension of Expository Text

Susan Dymock, Tom Nicholson

The reviewed theoretical and research evidence in this article supports the explicit and systematic teaching of five comprehension strategies that help all students tackle expository texts with success.

xpository texts have their own unique structures that are different from those of narrative text, and most students, regardless of their reading ability, struggle at times with expository text (Vacca, 1998). There are many reasons why. Expository text contains vocabulary that is both challenging and new, words are often outside students' everyday knowledge (e.g., condensation, velocity), topics are ones students have never experienced personally (e.g., volcanoes, outer space, Amazon rainforest), and unlike narrative text that has one structure, exposition has many structures (e.g., cause–effect, compare–contrast).

What We Do Not Cover—and Why

Although vocabulary is fundamental to reading comprehension, it is not the focus of our article. (See Hiebert and Kamil [2005], Nicholson and Dymock [2010], Stahl and Nagy [2006], and Wagner, Muse, and Tannenbaum [2007] for thorough discussions of theory and practice in the teaching of vocabulary.) Another topic that we do not cover is the teaching of decoding. The report of the National Reading Panel (National Institute of Child Health and Human

Development [NICHD], 2000) has made it clear that the decoding of words is fundamental to comprehension, but it is not the focus of our article either. We concentrate on the teaching of comprehension strategies, that is, devices and techniques that make comprehension easier.

What Is a Strategy?

In this article, a comprehension strategy is a plan or technique used by students to get information they need from the text, whether it is for the purpose of choosing the correct stem on a multiple-choice test or getting enough information to construct an effective report or essay. The goal is to teach students the five comprehension strategies that we think are the most effective.

Harris and Hodges (1995) defined a reading comprehension strategy as "a systematic sequence of steps for understanding text" (p. 39). Pearson, Roehler, Dole, and Duffy (1992) stated that "strategies emphasize conscious plans under the control of the reader" (p. 169). To implement these plans, students must have a good understanding of how strategies work and when to use them.

Skilled readers use different strategies to comprehend expository text (Calfee & Drum, 1986; Pressley, 2006; Snow & Sweet, 2003; Stanovich, 2000), and teachers play a critical role in the acquisition of effective strategies (Pearson & Duke, 2002; Smolkin & Donovan, 2002). Strategies should be explicitly taught over a long period of time (Snow & Sweet, 2003); we should not assume that all students will learn them in an incidental or serendipitous way.

According to Ellis and Worthington (1994), explicit teaching occurs when teachers state their

"goals, objectives and expectations" (p. 87) to students. Explicitly taught lessons are "clear, accurate, and rich in example and demonstration" (p. 87). Students receive many opportunities to practice a comprehension strategy, with teacher guidance and using many texts, until they have a good understanding of how to use and apply the strategy (Block & Parris, 2008; Block & Pressley, 2002; Calfee & Patrick, 1995). Such teaching includes explicit feedback, independent practice, and weekly and monthly reviews (Ellis & Worthington, 1994).

Explicit teaching also means teaching comprehension strategies one at a time (Keene & Zimmermann, 1997; NICHD, 2000) to "acquaint students with a strategic process" (Pressley, 2002, p. 19). Pressley (2006) explained that the aim, over time, is to teach "a small repertoire of strategies," so readers can use them in a "self regulated fashion" (p. 17) to enhance comprehension. The results of such instruction are "substantial improvements in student understanding of text" (Pressley, 2002, p. 12).

Research on the "High 5!"

There are between five and nine comprehension strategies that good readers use (NICHD, 2000; Pressley, 2000, 2002, 2006), but we suggest teaching only five. We think it is better to keep it simple, to take advantage of the fact that the adult mind can only hold up to seven (plus or minus two) pieces of information at one time (Miller, 1956). We think that for students, five is more than enough.

The five key comprehension strategies that published studies support, those that we think are most critical and that we have called "High 5!" are (1) activating background knowledge (Brown, 2002; Calfee & Patrick, 1995; Pressley, 2002), (2) questioning (Block & Pressley, 2007; NICHD, 2000), (3) analyzing text structure (Block & Pressley, 2002; Calfee & Patrick, 1995; Dymock & Nicholson, 2007), (4) creating mental images (Pearson & Duke, 2002; Pressley 2002, 2006), and (5) summarizing (NICHD, 2000; Pressley & Block, 2002).

PAUSE AND PONDER

- Do you have students whose minds go blank when you ask, "What was this article about?"
- Do you have students who write screeds of notes about an article but cannot boil it down to four or five main points?
- Do your students keep asking you for some easy strategies on how to summarize nonfiction text?

High 5! Strategy 1: Activating Background Knowledge

Research has shown that comprehension is enhanced when readers activate prior knowledge or make connections to background knowledge (Brown, 2002; Pressley, 2002). Initial questioning by the teacher can quickly establish if students have the knowledge base to do this. For example, if the class is reading about Santiago, Chile, and students lack background knowledge about this area, the teacher can help them

by discussing some useful facts about Chile before reading. The teacher can show students how to use the Internet to locate Chile on a map, find out how many people live in Santiago, and find out what language Chileans speak. This builds students' background knowledge and gives a starting point for reading the article (Stanovich, 2000).

Activating relevant background knowledge helps readers make connections between what they know and what they are reading. Knowing about Mars, Jupiter, and so forth helps readers when reading about the solar system. Knowing about Meriwether Lewis and William Clark helps readers when reading about the Oregon Trail. Knowing about mammals and how they differ from other animals can help readers when reading about polar bears, skunks, or beavers.

High 5! Strategy 2: Questioning

Encouraging the reader to generate and answer questions before and during reading aids comprehension (Block & Parris, 2008; Block & Pressley, 2007; Dymock & Nicholson, 1999; NICHD, 2000). There are three types of questions the student can ask: right there, think and search, and beyond the text (Dymock & Nicholson, 1999; Raphael, 1982). A right there question about the text is factual, such as, What are the facts here? An example of a think and search question is What does the writer want me to figure out based on the facts? A sample beyond the text

question is, What is not being said here that I should check by doing some background research? Prior to reading, good readers also ask themselves questions that activate background knowledge.

Good readers consider the text structure the writer has followed and ask questions such as Does this text on the Monarch butterfly have a descriptive structure (e.g., describes the butterfly's habitat, diet, physical characteristics, and unique features) or a sequential structure (e.g., explains the life cycle)? If the text has a sequential structure, readers should be encouraged as they read to ask themselves what will happen next. If the text is descriptive and focused on one topic, readers should ask themselves as they read what the subtopics are. Good readers continually ask and answer questions as they read.

High 5! Strategy 3: Analyzing Text Structure

Text structure awareness, or the ability to analyze text in terms of its structure, is a mental awareness of how writers organize information. Meyer and Rice (1984) explained text structure as "how the ideas in a text are interrelated to convey a message to a reader" (p. 319). It involves the reader looking mentally for the text structure—looking at keywords, subheadings, and other text features that can reveal the structure the writer is using. For example, the subheadings in an article about the uses of water may be a series of dates, starting with 5,000 years ago when water was collected on the Nile River to 2,000 years ago when the Romans used aqueducts to collect and transport water, and so on. These subheadings immediately suggest a sequence structure involving time.

Signal or cue words used by nonfiction writers send a signal to the reader as to the text structure the writer has followed. For example, in linear string texts, signal words and phrases such as *to begin with*, *then*, *following*, and *after* tell the reader that there is a sequential structure, that one thing follows another.

Inside the text, subheadings, labels, captions, tables, graphs, charts, maps, timelines, and figures assist readers in navigating expository text. Outside the text, indexes, tables of contents, and glossaries help identify the structure of expository text (Duke & Bennett-Armistead, 2003). Although not all texts contain each of these features, students need to be taught

to exploit these aids, not just ignore them, and to use this information to support their comprehension.

Exposition has many types of structures, and some are complex. The use of design sketches to capture the structure helps hugely in terms of comprehension (Calfee & Patrick, 1995; Dymock, 2009; Dymock & Nicholson, 2007). Capturing the design of the text in the mind as soon as possible is part of text structure awareness. Teachers need to teach each type of expository text structure (e.g., cause–effect, description, problem–solution), so students can internalize all of the structures.

Knowledge of a single expository text structure, such as sequence, does not transfer to another type of structure, such as description (Williams, 2005). For example, a student who knows how to identify a problem–solution text structure may not necessarily be able to identify a compare–contrast structure. Why? The reason is that each structure is different. Each expository text needs to be taught separately.

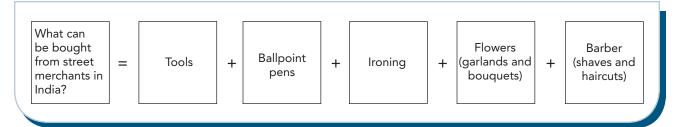
Almost all of the expository texts that students read can be separated into two groups: texts that describe and texts that are affected by time (Calfee & Patrick, 1995). We have found that elementary students encounter three descriptive and three sequential structures. You may be thinking to yourself, what about persuasive texts? We do not include this text structure because it is not one that students typically read. We scanned many texts while researching for this article, and persuasive texts are rare (see Dymock & Nicholson [2007] for examples of this structure).

Descriptive Structures

Descriptive structures focus on the attributes of something, that is, the qualities that distinguish it from other things. For example, the writer may present the attributes of New York, glass, or rattlesnakes. The three descriptive patterns that readers encounter most frequently are list, web, and matrix (see Dymock and Nicholson [2007] for an in-depth discussion on these structures).

List. The simplest descriptive pattern is a list. This may be a grocery list, a list of countries that grow wheat, a list of goods and services sold by street merchants in India (see Figure 1), or in science, the attributes of a kangaroo (e.g., is brown or gray in

Figure 1
List Pattern for Merchandise Available From Street Merchants in India



color, eats plants, has a long tail, jumps). With a list, in terms of order, it does not matter which item is first.

Web. A web is a more complex structure than a list. This text structure is called a web because it looks like a spiderweb (Calfee & Patrick, 1995). A spiderweb has a center and a number of fine threads that form a network of lines. In a web, the attributes of an object are discussed. The attributes have a common link. For example, an article may be about the characteristics of the brown bear, the features of San Francisco, the cockroach, or the cork tree (see Figure 2). The important thing for the student to remember is that, like a list, a web describes one thing or idea, but the difference is that a web has categories.

Matrix. A matrix is more complex than either a list or a web. The difference between a matrix and a web or list is that a web or list describes just one thing, and a matrix describes more than one thing. It compares and contrasts two or more topics. For example, it could compare types of bears, volcanoes, bicycles, or crocodiles (see Figure 3).

Sequential Structures

Sequential structures present a series of events or steps that progress over time. Normally, sequence texts are set in a first-to-last pattern, that is, step by step.

String. A string is where a step-by-step description of events is given (e.g., sequence for baking cookies,

Figure 2 Web Pattern for a Cork Tree

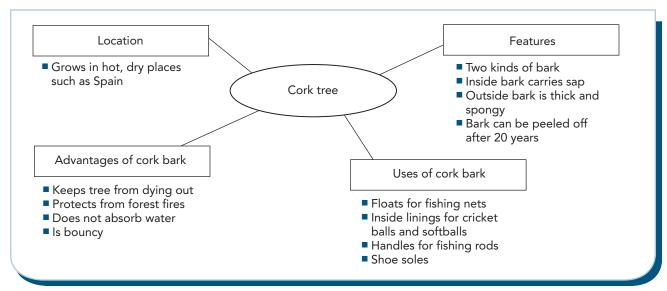


Figure 3
Matrix Pattern for Types of Crocodiles

Туре	Nickname	Male length	Female length	Danger level	Physical features	Diet
Freshwater	Freshie	10 feet	7 feet	Less dangerous than saltwater crocodiles	■ Sharp teeth	BirdsFishLizardsSmall mammals
Saltwater	Saltie	18 feet	13 feet	Dangerous (uses jaw and teeth to kill and eat prey)	Large headTwo bony ridges along snout	Young—Small animals, insects, fishAdult—Snakes, buffalo, cattle, kangaroos, people

Figure 4
String Pattern for a Beaver's Dam Building

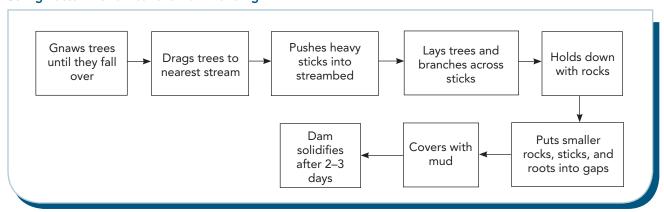
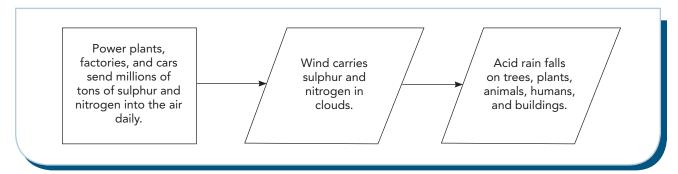


Figure 5
Cause–Effect Pattern for Acid Rain



the events leading up to the American Civil War). It could also refer to an order to follow in working out a math problem or the steps beavers follow in building a dam (see Figure 4).

Cause–Effect. In the cause–effect text structure, two (or more) ideas or events interact with one

another. One is the cause, and the other is an effect or result. For example, a text may cover the causes and effects of environmental disasters, such as an oil spill in the ocean, a nuclear explosion, a volcanic eruption, or acid rain (see Figure 5). This pattern is common in history, science, and health publications.

Figure 6
Problem-Solution Pattern for Riding a Bike to School

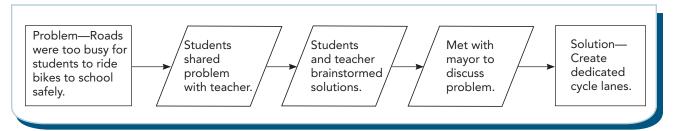


Figure 7
Problem–Solution Pattern for the Andes Mountains

Problem		Solution
The Andes Mountains in Peru used to be covered in forests. Now 90% of the forests have been cleared. Soil is lost during heavy rain because there is no forest to hold the soil.	\Rightarrow	Create national parks. Ban mining and farming.
The forests used to contain rare animals such as jaguars, pumas, and mountain tapirs. These animals are now endangered. Only 200 mountain tapirs remain.	\Rightarrow	Improve farming methods to keep the soil from eroding; use terrace farming.
Mining creates toxic chemicals that destroy plants. Dust and pollution from gases cause acid rain.	\Rightarrow	Implement safe mining practices. Treat chemicals. Plant trees to stop dust pollution. Clean up spills. Create and enforce strict rules for dumping waste.

Problem–Solution. In the problem–solution text structure, the writer states a problem or poses a question followed by a solution or answer in the text. There is a sequence in this kind of text: first the problems and then the solutions. Figure 6 represents a single problem and solution text structure (i.e., students' safety while riding bikes to school), and Figure 7 represents a multiple problems and solutions text structure (i.e., environmental factors that have a negative impact on the ecosystem of the Andes Mountains).

High 5! Strategy 4: Creating Mental Images

Creating a mental image of the text being read (or being able to visualize how texts are structured) enhances comprehension (Pressley, 2002). According

to Calfee et al. (1984), good readers are like architects when reading text. They can see the ribs and bones of the text: The "structure is the key to comprehension—to comprehend a passage is to create a mental structure" (p. 82). Readers, as they process the text, should be able to get a visual image of its ribs and bones, its structure.

High 5! strategies 3 and 4 reinforce each other. When learning about text structures (High 5! strategy 3), it is helpful for students to image the structure, that is, to visualize it while reading so that they can later make a diagram of it. Diagrams help students make the structure concrete. Students use different diagrams for different text structures. As students progress in reading, some skilled readers may continue to diagram the text, while others may visualize the structure in their minds. There are other ways of

imaging the text, such as forming a picture in your mind, but pictures fade and details get lost. We advocate the image to be the structural image, simply because we think it is so useful.

High 5! Strategy 5: Summarizing

Knowing how to summarize the main ideas has a positive impact on comprehension (Calfee & Patrick, 1995; NICHD, 2000). To most of us, a summary is concise and gives only the main points. Research shows that the ability to summarize a text can enhance comprehension. Block and Pressley (2003) defined *summarize* as "the ability to delete irrelevant details, combine similar ideas, condense main ideas, and connect major themes into concise statements that capture the purpose of a reading for the reader" (p. 117).

Students can easily produce a summary if they use High 5! strategy 3. First, read the text. Second, identify the text structure the writer has used. Third, make a diagram of the structure. Fourth, discard redundant information so that only the key ideas remain. Fifth, circle only the critical ideas that you need for the summary. Diagrams help readers summarize the main idea(s) orally, visually, or in writing (Dymock & Nicholson, 2010).

Putting the High 5! Strategies Into Practice: Mrs. Daly's Class

Mrs. Daly's (pseudonym) class has been studying cockroaches. The topic is part of a science unit on insects. In preparation for the lesson, Mrs. Daly reads the article "The Great Survivor" (O'Brien, 2004), which is about cockroaches. She wants to use it to reinforce the High 5! strategies she had been teaching. She thinks it is a good article to use because it is relevant to the insect unit, and it will arouse student curiosity by not specifically identifying the cockroach in its title. Mrs. Daly does not limit the teaching of comprehension strategies to formal reading instruction. Instead, she teaches comprehension strategies in all curriculum areas.

In "The Great Survivor," the writer describes the characteristics of cockroaches and explains how the species has survived for 350 million years. The article contains six main points of information: the cockroaches' diet, movement, habitat, physical

appearance, body parts, and unique characteristics. The article explains how cockroaches have survived for such a long time (e.g., they can hold their breath for 15 minutes, are able to survive a week without their heads, move faster than any other insect). Although this lesson focuses on a science topic, the lesson can easily be adapted across the curriculum to include history, math, social studies, and health topics.

To help reinforce the High 5! strategies, Mrs. Daly wants students to use the High 5! bookmark (see Figure 8), which lists the five comprehension strategies. Students use the bookmark as a mental checklist while they read: Have I activated background knowledge? Have I asked questions? Have I identified the text structure the writer has used? Have I created a mental image? Have I summarized the text?

Start of the Lesson

The High 5! strategies used during this part of the lesson are activating background knowledge, questioning, and analyzing text structure.

Mrs. Daly: The aim of this lesson is to practice the High 5! strategies. To do this, we will read an article titled "The Great Survivor." The article describes something that has survived for a long time. *Survivor* is a keyword. How would you define *survivor*? Turn to your neighbor and share your definition.

Student: A survivor is something or someone that continues to live after an event that threatens their existence. It could be someone who has survived a car accident. Doesn't survivor mean you have outlived someone or continued to live after some event that perhaps you could not have survived? Lived against the odds? Remember the US Airways plane that landed on the Hudson River in January 2009? The news reported that all crew and passengers survived. They were survivors.

Mrs. Daly: Excellent responses. You have shared examples of human survivors. Insects have survivors, too. "The Great Survivor" is about an insect. What characteristics do you think an insect might need to survive for a long time?

Student: They would have to be able to avoid their enemies and live through extreme hardship if their environment was under

threat.

Mrs. Daly: I have pictures of four insects. Which insect do you think might be the great survivor? [She shows pictures of a spider, cockroach, fly, and butterfly.]

Student: We're not sure. All those insects are still around, so they must all be great survivors.

Mrs. Daly: Well, yes, that is a good answer. There is one insect, though, that is sometimes called the *great survivor* more than other insects. It is the cockroach, which is one of the insects we have been studying in science. We already know a lot about the cockroach, but do we know why it is called the great survivor?

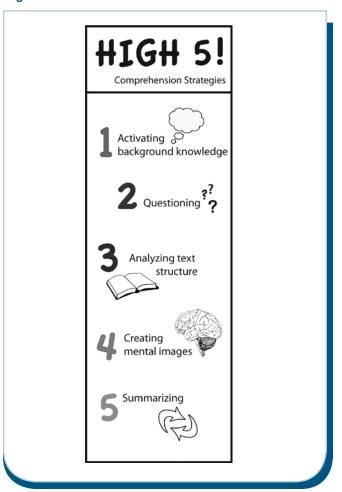
Today, I want you to use our High 5! strategies to work out why the cockroach has this reputation of surviving. We have not yet started to read the article, but we have already used strategy 1. We have activated our background knowledge about the word *survivor* and activated what we know about how insects survive. Before reading, it is important to activate background knowledge. Activating background knowledge and relating the ideas in the article to what you already know helps you understand what you read.

Mrs. Daly: Now let us use strategy 3, which is analyzing text structure. Good readers identify what text structure the writer has used. We can use strategy 2 as well. Good readers ask themselves questions as they read. Read the first two paragraphs of "The Great Survivor" and ask yourself what text structure this writer has followed.

Student: The writer describes cockroaches. It must be a web structure, because the article is just about one thing, cockroaches—but we need to read a bit more to be sure.

Mrs. Daly: You are right, it is a web structure. Can you use strategy 3 now? Read the next two paragraphs and ask questions. When you think about the information that is

Figure 8 High 5! Bookmark



"right there" in the text, is it descriptive or sequential? Does the article describe cockroaches? Discuss this with your partner.

Middle of the Lesson

The High 5! strategies used during this part of the lesson are analyzing text structure, questioning, activating background knowledge, and creating mental imagery.

Mrs. Daly: We have established that the article describes cockroaches and that it follows a web structure. As you read the remainder of the article, ask yourself what the subtopics are. We know the article is about cockroaches, as the first two paragraphs discuss only cockroaches. Look

for captions, headings, figures, and other cues to help you. For example, there are several pictures of cockroaches. When you are finished reading, discuss with your neighbor what the subtopics might be

Student: The subtopics are body parts, diet, physical appearance, habitat, movement, and unique characteristics.

Mrs. Daly: Well done! Now we are going to make a diagram of the article. This is strategy 4. Diagrams help us create a mental image—a picture in the mind. Good readers create mental images of the text as they read. For example, the writer says that cockroaches can live even without their heads. The reader can create an image of a headless cockroach. Readers can also image how the text is structured. A diagram helps visualize the structure. Before we draw a diagram, try to create an image in your mind of what the diagram will look like. Talk with your

partner about the diagram that you have both imagined.

Note: For "The Great Survivor," students should imagine a web structure.

Mrs. Daly: We will put cockroaches in the middle of the web. We will then label the subtopics [see Figure 9].

Note: Students could complete this activity in small groups and report back. The teacher could then collate the subtopics and put them on large sheets of paper or a dry-erase board.

Mrs. Daly: We have identified the topic and subtopics.

Now, as we read, we will identify facts relating to each subtopic. Ask yourself questions, such as, What information does the article provide about cockroaches' habitat? and What extra information does the article provide about cockroaches' diet?

Together, Mrs. Daly and her class completed the web structure (see Figure 10).

Figure 9
Web Pattern for "The Great Survivor"

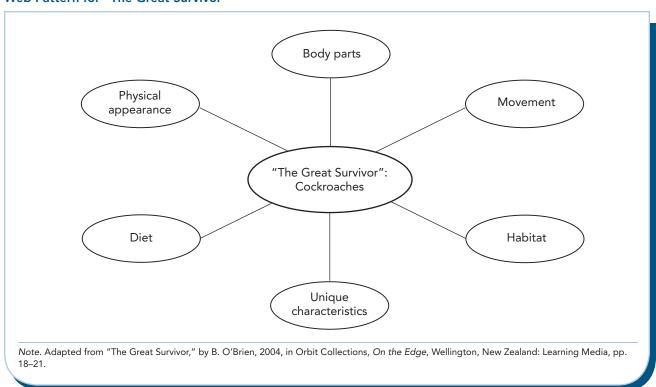
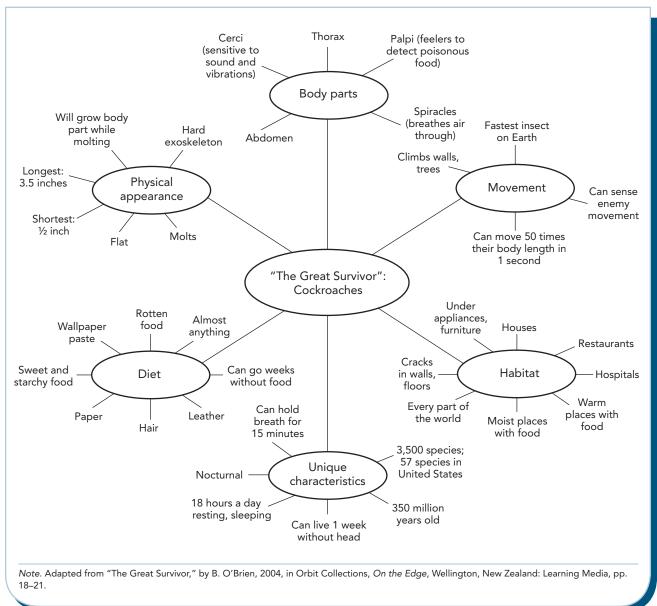


Figure 10
Completed Web Pattern for "The Great Survivor"



End of the Lesson

The High 5! strategies used during this part of the lesson are analyzing text structure, questioning, activating background knowledge, creating mental imagery, and summarizing.

Mrs. Daly: Let's reflect on the lesson. What was the

goal?

Student: To practice the High 5! strategies.

Mrs. Daly: What did we find out about the text

structure?

Student: It has a web structure.

Mrs. Daly: How did you verify that it was a web?

Student: It was just about one thing—that's what a

web is.

Mrs. Daly: What else did you do?

Student: We divided the information into sec-

tions, into subtopics.

Mrs. Daly: Have we practiced all of the High 5!

strategies?

Student: Not quite, there is still one left—the sum-

mary strategy.

Mrs. Daly: OK, let's go through this strategy one step

at a time. Use your dictionary and thesaurus to find a meaning for *summarize*.

Student: The dictionary says, "A statement giving

the main points of something briefly; giving the main points only" [Deverson, 1998, p. 816]. The thesaurus says to summarize is to give the main points or to

put it in a nutshell.

Mrs. Daly reminded the class that the article explained *why* the cockroach is a great survivor, so the summary should explain why. Mrs. Daly and her students returned to the completed web diagram for "The Great Survivor" to identify the key points about why the cockroach is a great survivor and circled them. That would be the basis of the summary.

Mrs. Daly then gave the class a starter sentence for the summary: "In this article, the cockroach is called a great survivor because...." Students worked in pairs to write a summary. An example summary that the teacher would be hoping for would be the following:

In this article, the cockroach is called a great survivor because it can detect danger through its cerci, can move at great speed to escape enemies, has nocturnal

habits, can eat just about anything, and can live just about anywhere.

"Gimme Five!"

Why are we excited about teaching the High 5! comprehension strategies? The reason is that we have found them to be so helpful in the classroom. Some might argue that students will automatically pick up the High 5! strategies through extensive reading. This may be the case for some students, but it might not be so for all students. We say this because we have found that, after giving teacher workshops, some teachers have commented, "Why didn't my own teachers teach me these strategies when I was at school?"

We have argued that there is strong evidence to support the teaching of five very effective research-based comprehension strategies. We have described these five strategies, which we call the High 5! We have given an example of how to use all of them while teaching. We have also included a High 5! comprehension strategies bookmark that all students can use to remind them to use these strategies whenever they read expository text—and especially when they have to retell the information verbally, make a diagram of the main points in a visual format, or have to write a report or summary. Using the High 5!

Take ACTION!

Replicate the lesson on "The Great Survivor." We suggest teaching the lesson several times in small groups so that you can adapt the lesson to different levels of reading ability:

- 1. Purchase the text *On the Edge* (www.brightpointliteracy.com/product/Edge/6-pack/Various/9780790305868/872/). Alternately, select another article, as the strategies will work for any expository text.
- **2.** Make a copy of the High 5! bookmark for each student in the group. Explain the bookmark, that is, how each strategy works. If the

concept of text structure is new to the group, explain two structures as a first step (e.g., web, matrix).

- **3.** Start of the lesson—Focus on the concept of survivor in students' experience and in the dictionary. What does it mean? Ask students to read the first few paragraphs. Use strategy 1 (activating background knowledge), strategy 2 (questioning the text—what text structure has the writer used?), and strategy 3 (analyzing text structure—which of the two structures do students think best suits the text?).
- **4.** Middle of the lesson—Finish reading the text. Use strategy 4

(imagine the structure) and then make a diagram.

5. End of the lesson—Reflect. Ask specific questions, such as What was the goal? (to practice the High 5! strategies) and What are the four strategies covered so far? (activating background knowledge, questioning, analyzing text structure, creating a mental image). Teach strategy 5 (summarizing) and circle the main points on the diagram as to why the cockroach is a great survivor (e.g., it can live for long periods without food.). Write a summary.

comprehension strategies will give your students a flying start when it comes to tackling expository text.

References

- Block, C.C., & Parris, S.R. (Eds.). (2008). Comprehension instruction: Research-based best practices (2nd ed.). New York: Guilford
- Block, C.C., & Pressley, M. (Eds.). (2002). *Comprehension instruction: Research-based best practices*. New York: Guilford.
- Block, C.C., & Pressley, M. (2003). Best practices in comprehension instruction. In L.M. Morrow, L.B. Gambrell, & M. Pressley (Eds.), *Best practices in literacy instruction* (2nd ed., pp. 111–126). New York: Guilford.
- Block, C.C., & Pressley, M. (2007). Best practices in teaching comprehension. In L.B. Gambrell, L.M. Morrow, & M. Pressley (Eds.), *Best practices in literacy instruction* (3rd ed., pp. 220–242). New York: Guilford.
- Brown, R. (2002). Straddling two worlds: Self-directed comprehension instruction for middle schoolers. In C.C. Block & M. Pressley (Eds.), Comprehension instruction: Research-based best practices (pp. 337–350). New York: Guilford.
- Calfee, R.C., et al. (1984). The book: Components of reading instruction. Unpublished manuscript, Stanford University, Stanford, CA.
- Calfee, R.C., & Drum, P. (1986). Research on teaching reading. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 804–849). New York: Macmillan.
- Calfee, R.C., & Patrick, C.L. (1995). *Teach our children well: Bringing K–12 education into the 21st century.* Stanford, CA: Stanford Alumni Association.
- Deverson, T. (Ed.). (1998). *The New Zealand Oxford paperback dictionary*. Auckland, New Zealand: Oxford University Press.
- Duke, N.K., & Bennett-Armistead, V.S. (2003). Reading and writing informational text in the primary grades. New York: Scholastic.
- Dymock, S. (2009). Teaching expository text structure awareness. In D. Lapp & D. Fisher (Eds.), *Essential readings on comprehension* (pp. 62–68). Newark, DE: International Reading Association.
- Dymock, S., & Nicholson, T. (1999). *Reading comprehension:* What is it? How do you teach it? Wellington: New Zealand Council for Educational Research.
- Dymock, S., & Nicholson, T. (2007). *Teaching text structures: A key to nonfiction reading success.* New York: Scholastic.
- Dymock, S., & Nicholson, T. (2010). Every story has a problem: How to improve student narrative writing in grades 4–6. In B. Moss & D. Lapp (Eds.), *Teaching new literacies in grades 4–6: Resources for 21st-century classrooms* (pp. 26–42). New York: Guilford.
- Ellis, E.S., & Worthington, L.A. (1994). Research synthesis on effective teaching principles and the design of quality tools for educators (Tech. Rep. No. 5). Eugene, OR: National Center to Improve the Tools of Educators. (ERIC Document Reproduction Service No. ED 386853)
- Harris, T.L., & Hodges, R.E. (Eds.). (1995). *The literacy dictionary: The vocabulary of reading and writing*. Newark, DE: International Reading Association.
- Hiebert, E.H., & Kamil, M.L. (Eds.). (2005). Teaching and learning vocabulary: Bringing research to practice. Mahwah, NJ: Erlbaum.
- Keene, E.O., & Zimmermann, S. (1997). Mosaic of thought: The power of comprehension strategy instruction. Portsmouth, NH: Heinemann.

- Meyer, B.J.F., & Rice, G.E. (1984). The structure of text. In P.D. Pearson, R. Barr, M.L. Kamil, & P. Mosenthal (Eds.), *Handbook of reading research* (pp. 319–351). New York: Longman.
- Miller, G.A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81–97. doi:10.1037/h0043158
- National Institute of Child Health and Human Development. (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Nicholson, T., & Dymock, S. (2010). Teaching reading vocabulary. Wellington: New Zealand Council for Educational Research.
- O'Brien, B. (2004). The great survivor. In Orbit Collections, *On the edge* (pp. 18–21). Wellington, New Zealand: Learning Media.
- Pearson, P.D., & Duke, N.K. (2002). Comprehension instruction in the primary grades. In C.C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 247–258). New York: Guilford.
- Pearson, P.D., Roehler, L.R., Dole, J.A., & Duffy, G.G. (1992). Developing expertise in reading comprehension. In S.J. Samuels & A.E. Farstrup (Eds.), What research has to say

MORE TO EXPLORE

ReadWriteThink.org Lesson Plan

 "Using the Check and Line Method to Enhance Reading Comprehension" by Cammie Singleton

IRA Books

- Guided Comprehension in Grades 3–8 (combined 2nd ed.) by Maureen McLaughlin and Mary Beth Allen
- Guided Comprehension in the Primary Grades (2nd ed.) by Maureen McLaughlin
- Quality Comprehension: A Strategic Model of Reading Instruction Using Read-Along Guides, Grades 3–6 by Sandra K. Athans and Denise Ashe Devine
- Reciprocal Teaching at Work: Powerful Strategies and Lessons for Improving Reading Comprehension (2nd ed.) by Lori D. Oczkus

IRA Journal Articles

- "Moving Beyond the Page in Content Area Literacy: Comprehension Instruction for Multimodal Texts in Science" by Amy Alexandra Wilson, The Reading Teacher, October 2008
- "Teaching Expository Text Structure Awareness" by Susan Dymock, The Reading Teacher, October 2005
- "Writing to Learn Across the Curriculum: Tools for Comprehension in Content Area Classes" by Kathy J. Knipper and Timothy J. Duggan, The Reading Teacher, February 2006

- about reading instruction (2nd ed., pp. 145–199). Newark, DE: International Reading Association.
- Pressley, M. (2000). What should comprehension instruction be the instruction of? In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 545–561). Mahwah. NJ: Erlbaum.
- Pressley, M. (2002). Comprehension strategies instruction: A turnof-the-century status report. In C.C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 11–27). New York: Guilford.
- Pressley, M. (2006). Reading instruction that works: The case for balanced teaching (3rd ed.). New York: Guilford.
- Pressley, M., & Block, C.C. (2002). Summing up: What comprehension instruction could be. In C.C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 383–392). New York: Guilford.
- Raphael, T.E. (1982). Question-answering strategies for children. The Reading Teacher, 36(2), 186–190.
- Smolkin, L.B., & Donovan, C.A. (2002). "Oh excellent, excellent question!": Developmental differences and comprehension acquisition. In C.C. Block & M. Pressley (Eds.), Comprehension instruction: Research-based best practices (pp. 140–157). New York: Guilford.

- Snow, C.E., & Sweet, A.P. (2003). Reading for comprehension. In A.P. Sweet & C.E. Snow (Eds.), *Rethinking reading comprehension* (pp. 1–11). New York: Guilford.
- Stahl, S.A., & Nagy, W.E. (2006). *Teaching word meanings*. Mahwah, NJ: Erlbaum.
- Stanovich, K.E. (2000). Progress in understanding reading: Scientific foundations and new frontiers. New York: Guilford.
- Vacca, R.T. (1998). Let's not marginalize adolescent literacy. Journal of Adolescent & Adult Literacy, 41(8), 604–609. doi:10.1598/JAAL.41.8.1
- Wagner, R.K., Muse, A.E., & Tannenbaum, K.R. (Eds.). (2007).Vocabulary acquisition: Implications for reading comprehension. New York: Guilford.
- Williams, J.P. (2005). Instruction in reading comprehension for primary-grade students: A focus on text structure. *The Journal of Special Education*, *39*(1), 6–18. doi:10.1177/0022466905039 0010201

Dymock teaches at the University of Waikato, Hamilton, New Zealand; e-mail sdymock@waikato .ac.nz. Nicholson teaches at Massey University, Albany campus, Auckland, New Zealand; e-mail t.nicholson@massey.ac.nz.