

LYNN ALLEEN SMITH

# Think-Aloud Mysteries: Using structured, sentence-by-sentence text passages to teach comprehension strategies

*Comprehension strategies make sense for struggling readers when presented in this engaging format.*

Reading comprehension is a complex process during which good readers flexibly apply a variety of appropriate comprehension strategies to whatever text they are reading (Pressley, 2000; Wade, 1990). How does a teacher assist students in bridging the gap from phonemic awareness and knowledge of sight words to adequate fluency and comprehension skills? Furthermore, how can comprehension skills be taught to a typical class with a wide variety of reading abilities, without dumbing down either the task or the text until it bores almost everyone?

As a reading specialist, I teach students who have not gained independent reading or comprehension skills through the usual classroom experiences. Generally speaking, these students have not learned one or more critical steps that enable them to read competently, whether they are in kindergarten or fifth grade. My task is to ferret out the missing links and to teach these skills while continuously presenting these students with real text, both fiction and nonfiction, to which they can apply their improving reading foundation.

The technique of Think-Aloud Mysteries was developed within this setting. I've discovered that, because of their poorer reading abilities as compared with their peers in the general classroom, my reading lab and tutoring students have been unable to advance their comprehension strategies very much when using the text passages presented in the typical classroom. My challenge was to devise a

method that would highlight reading comprehension strategies in a simple, enjoyable way so that these reluctant students, who have previously experienced much failure, would participate willingly and learn these skills successfully.

It is too much to expect struggling readers to read and comprehend a long, complex passage with numerous words they cannot decode. Addressing comprehension strategies using such texts does not work for them because they cannot read the material adequately in the first place. They can barely get beyond identifying the main character or subject of the whole text, not to mention analyzing it.

But struggling readers, especially older students, need to learn comprehension strategies before their basic reading skills have caught up to their grade levels. Think-Aloud Mysteries have been my solution to introducing students to comprehension strategies. They not only have worked well, but also have been welcomed by my students, from kindergarten through eighth grade.

## Overview of the rationale for Think-Aloud Mysteries

- Think-aloud methods lend themselves to public consideration and modeling of thought processes of many kinds. Comprehension strategies easily fit this approach.
- Scaffolding approaches are those that enable a teacher to assist a learner in a new task by providing the overall organization and guidance while directing the learner how to achieve mastery of the component parts before assembling

them. Think-Aloud Mysteries provide the text material for the teacher to model and assist students in identifying and applying comprehension strategies and enable them to create such texts for their peers to use in the same learning process.

- Generally accepted comprehension strategies have been delineated in research from both reading acquisition theories and reading teaching fields. The following comprise the set modeled in the Think-Aloud Mysteries: (1) relating text information to prior knowledge; (2) predicting through use of prior knowledge, experience, and text cues; (3) questioning and rereading to clear up confusion and create a mental image of action, setting, character, and facts; and (4) seeking further clarification from outside sources about unknown words, facts, or understanding.

### **Think-aloud methods**

Think-alouds, or verbalizations of a person's thoughts while undertaking a cognitive activity, have been used for years as an *assessment* tool by psychologists and reading researchers to investigate the mental processes applied to various kinds of thinking, problem-solving, and reading comprehension tasks (Afflerbach, 2000; Brown, Campione, & Day, 1981; Newell & Simon, 1972). More and more frequently, think-aloud methods are being used in the classroom as an *instructional* approach by which teachers model comprehension strategies for students (Bereiter & Bird, 1985; Davey, 1983; Oster, 2001; Palincsar & Brown, 1984; Roehler & Duffy, 1984).

The think-aloud method draws out whatever strategies the reader or writer is using, because the person verbally explains the mental processes being used to make particular connections between facts, determine the significance of various parts of the text, make predictions, and draw inferences or conclusions about the overall meaning or goal of a particular text.

Oster (2001) presented a detailed account of how the think-aloud technique can be used in a high school classroom to model and elicit discussion of comprehension strategies with fairly difficult novels, such as *The Pearl* (2000, Penguin) by

John Steinbeck. Oster concluded that this approach is much better received, more deeply involving, and preferred by students far more than the traditional "read and answer the questions at the end of the chapter" approach. She also suggested that the method would be good for diagnosis of student comprehension strategy skills.

Oster's class initially read aloud text passages together, one paragraph at a time. Then students progressed to reading one chapter at a time at home at night. In each case, students were to take notes about the following: what they deemed to be important information, things they were figuring out about the story, questions they might have, and personal reactions to characters or events. Follow-up classroom discussions were developed from the students' written comments. Each day, after students had read another chapter for homework, Oster led a discussion in which the class members identified strategies they were using to comprehend the text, compared and contrasted one another's ideas and questions, and discussed major aspects of the novel until everyone reached a fairly complete understanding of the book.

The Think-Aloud Mystery approach essentially does the same thing that Oster did, except in a far simpler format using very brief, structured texts. Instead of focusing only on narrative texts, Think-Aloud Mysteries lend themselves to virtually any genre, from science texts, to fiction, to poetry.

Because of the simplicity of the format and the wide range of subject matter, students as young as kindergarten age can readily grasp comprehension concepts, a huge advantage for early comprehension instruction. Older students can learn more complex comprehension strategies and also how to apply structured text-writing techniques intentionally to elicit specific responses from readers. For example, the beginning of the mystery should be vague enough that the subject might be one of several possible topics that can be determined only by further reading of more specific details or through more complex investigative text analysis strategies.

### **Scaffolding approaches**

*Scaffolding* is a term that has been used at least since the 1970s to describe an activity in which an adult steps in to assist a child in learning how to do a new, complex task. The adult provides the



overall organization and guidance, while directing the child mainly to the subordinate parts that must be included in order to complete the whole task. Over time, the child becomes adept at all of the pieces and can attend both to completing the parts and to assembling them independently. Think-Aloud Mysteries are a simplified form of scaffolding for teaching comprehension strategies.

In a thorough, up-to-date discussion of scaffolding, Clark and Graves (2005) reviewed some of the more well-known, effective comprehension instruction frameworks: Questioning the Author (QtA; Beck, McKeown, Worthy, Sandora, & Kucan, 1996), The Scaffolded Reading Experience (SRE; Graves & Graves, 2003), Direct Explanation of Comprehension Strategies (DECS; Duffy, 2002; Duffy et al., 1987), and Reciprocal Teaching (RT; Palincsar & Brown, 1989).

All of these standard methods for teaching comprehension strategies describe teachers using direct explanations and modeling of specific strategies to profoundly and positively affect the growth of student comprehension abilities. The main differences between them and Think-Aloud Mysteries are that they are more complex and often more structured and demand more sophisticated student responses about more complex texts.

The Think-Aloud Mysteries approach was created specifically to highlight only comprehension strategies and to eliminate, for the initial stages at least, text issues that might prevent or divert struggling readers from understanding or focusing on the comprehension problems at hand. It also seems to help good readers begin to identify comprehension strategies more quickly as well.

Furthermore, because students think Think-Aloud Mysteries are fun, they spontaneously spread them among their friends and families, gaining extra confidence and practice along the way. It is a gratifying shock the first time a teacher comes across students demanding reasons from friends, parents, or siblings regarding preliminary guesses to Think-Aloud Mysteries they are presenting!

### **Generally accepted comprehension strategies**

The Think-Aloud Mysteries analytic process involves a small group of four to six students working together to identify the “mystery” subject as

they read the passage from sentence strips, presented one sentence at a time, and participate in a discussion of the “evidence” for their predictions and hypotheses. As students ponder each sentence, the teacher guides them through typical comprehension questions. These questions are initially viewed as “hints” to figuring out the solution to the mystery at hand, but gradually these strategies acquire names and become part of the students’ comprehension skills to be used for subsequent texts, either fiction or nonfiction.

Teachers are able to model, elicit, and identify fruitful comprehension strategies very simply and directly as they embed them into the discussion about the mystery topic. Fascination with the task itself, as well as evidence that these questions help solve the mystery, compel students from kindergarten through upper elementary and even middle school to begin to use and identify these same strategies willingly.

Hearing the reasons given for hypotheses proposed along the way can be not only educational, but also entertaining and competitive. For example, there can be many giggles about a potential pet’s identity when someone first guesses a fish and it turns out to be a dog. Students often vie to be the first to figure out the solution.

Teacher questions come from the standard educational comprehension strategies of relating text information to prior knowledge; predicting from prior knowledge or experiences and text cues; questioning and rereading when there is confusion and using “fix-up” strategies to figure out the problem (Davey, 1983); and clarifying with outside sources unknown words, facts, or topics. Commercial posters that list these strategies can be hung on the classroom wall for students to consult during lessons.

## **Creating Think-Aloud Mysteries**

Think-Aloud Mysteries are easily devised, short passages that demand critical analysis of meaning as the students separately read each sentence and gather evidence to discover the mystery subject. The teacher or student writer intentionally structures the text so that, first, general information is given, and then increasingly detailed facts are added until the reader finally can conclude what

the subject happens to be. The definitive, or clinching, evidence is withheld until the last sentence.

Initial sentences contain broad comments, such as general setting and seasonal clues. Subsequent sentences gradually increase in specificity of details. The middle sentences *must* be “fair,” in that they must give additional, relevant informational clues instead of remaining hopelessly vague. For example, it is fine to begin with a general reference to a type of activity, but that must be followed by more specific details, such as indoor or outdoor, free or admission, participant or audience, individual or group, spring or fall, and so on. Writers *must* give readers a chance to build workable hypotheses or make tentative guesses as they apply their attention to the facts and details that accumulate with each additional sentence to form a complete situation or object’s description. The last sentence *always* gives the unequivocal, detailed revelation of the “right answer” or correct identification of the “mystery.”

It is important to create texts that can remain fairly inconclusive until nearly the end, because this forces students to reveal the different strategies they are using to make predictions and hypotheses. Besides, students seem to enjoy arguing about alternatives. Furthermore, they will better remember this flexibility strategy of keeping an open mind in the future after they have experienced it firsthand—especially if they have guessed wrong because they did not keep their options open.

Happily, just about any subject or scenario is fair game for Think-Aloud Mysteries. For example, if the text is about a pet or wild animal, clues can be given to indicate size, color, or habits. If it is a sports activity, there are different sports seasons, many sports that use padding, involve contact, or use balls, thus giving many opportunities for readers to develop conflicting hypotheses or guesses about the ultimate true subject. Trips to the mall, the beach, or a movie theater give all manner of possibilities for including both general and specific activities, sights, and sounds at these sites. Identifying a particular food can be a fun challenge as well. Table 1 is an example of a Think-Aloud Mystery.

The sports text in Table 1 was one of those that taught students the value of keeping an open mind until all the facts are in. The boys, considering themselves the sports experts, quickly settled upon the solution as a football game. They were horrified

**TABLE 1**  
**A typical Think-Aloud Mystery about sports**

**Think-Aloud-Sports**

1. The players all came out eager to begin the winter game.
2. One team wore gold, black, and white uniforms, the other, black, orange and white.
3. It was obvious that all the players were strong and fit. Quite a few of them were very big, too.
4. When the game began, I was glad they wore protective gear because the game was very rough.
5. The sound of the crowd almost drowned out the noise of the helmets and body pads hitting into each other as the teams played.
6. Pittsburgh and Philadelphia might both be cities in Pennsylvania, but their teams fought furiously against each other in the icy cold.
7. One team scored a goal. Mario Lemieux raised his stick in triumph, and the fans went wild. A Flyers vs. Penguins hockey game is always fun.

to realize that, because the girls were willing to consider both football and hockey, they came to the correct solution first. This was a valuable lesson about not jumping to hasty conclusions and was referred back to by students during future classes.

## Top-down and bottom-up cognitive processing strategies

It is very important to remember that general comprehension strategies encompass two main categories of cognitive processing: *top-down* and *bottom-up* strategies (Wade, 1990). These two kinds of processing may be addressed through any of the standard comprehension strategies. When students give reasons for their hypotheses they should include both a description of one of the standard strategies and a rationale from either the top-down or bottom-up processing categories.

- Top-down processing is the set of overarching ideas and facts—schemata—that we develop when thinking about any given situation or subject (Rumelhart, 1980). These schemata provide the outline for the related details we expect to find. For example, our “going to the dentist” schema would include reasons for the

visit, making an appointment, experiences at the dentist's office, and coming home, perhaps to eat soft food for dinner. As opposed to the narrative schema of the dentist's visit, a nonfiction, or expository, example consists mostly of facts about the subject. For example, our schema about "beavers" includes wild animals, thick fur, broad scaly tails, living by streams in forests, chomping through trees with strong teeth, making dams and lodges of branches and mud, creating ponds with the dams, and eating bark.

- Bottom-up processing includes important clues given in the details of the text itself. There are particular words used, sometimes called "signal words," that help readers determine the importance of information and further delineate the subject from similar ones: causation (as a result, because), ordering (first, then), comparison (in contrast, at other times), descriptors (size, color, shape), and so on (Meyer, 1984).

Think-Aloud Mystery analysis must include both the traditional comprehension categories and the supporting cognitive process details. For example, a student can hypothesize (from prior knowledge) that football is a sport played in the winter and can back up the guess from bottom-up text evidence saying that the weather is cold. Or a student can hypothesize another student's error (questioning) by citing evidence from text details or illogical connections.

Teachers must continue to specifically shape students' discussions so that they include both the guesses that students find so enjoyable and the reasons behind those guesses. As students analyze several Think-Aloud Mysteries, they begin to glance at the comprehension strategy poster or to use shortcut labels for their rationale, such as "I know from experience and the text said these three things...."

A conversation about a Think-Aloud Mystery might be something like the following:

Teacher: Why do you think it is summer?

Student: The sun was shining, it was hot, and people were wearing bathing suits.

Teacher: So you know from your experience what summer is like and you noticed that the text included some details that point to summer?

Student: Yeah, summer has to have all that stuff in it, or it would be some other time of year.

Teacher: You made good connections between your experiences and the details in the text.

Students themselves do not need to know that they are doing top-down or bottom-up processing, only that they are giving concrete evidence for their hypotheses according to those on the standard comprehension strategies list. However, it is very important for teachers to model both top-down and bottom-up cognitive processes and the related comprehension strategies. Otherwise, students might miss out on one or the other viewpoint when reading or writing.

A good reader can neither carelessly impose or assume the correct subject matter in a top-down manner only, nor simply add up the details in a bottom-up fashion without placing these details into meaningful groupings. If the original schema is incorrect, the conclusion will be invalid, leading to snow versus hail or football versus hockey. Likewise, if all of the details do not add up to higher order concepts, the text mystery remains an incomprehensible confusion of separate facts. It is only when both the top-down schemata and the bottom-up facts are integrated that the reader can reach the correct conclusion.

Bottom-up signals can be used to teach younger children how to notice the details as well as which facts are more important. This is a first step for developing any top-down schema because it builds evidence for a particular context. Although initial bottom-up processing often is characterized by a lack of ability to string together facts and make inferences about the overall subject, it contributes significantly to teaching children how to comprehend a general topic through supporting facts.

As a significant corollary, students cannot summarize unless they first are able to determine which information is the most important, the next most important, and so on, down to least important (Brown & Day, 1983; Rinehart, Stahl, & Erickson, 1986).

## Sample Think-Aloud Mysteries transcript

The following is an example of a fifth-grade struggling reader processing one of her first Think-

Aloud Mysteries. She is in the earliest stage of learning how to apply comprehension strategies to text passages. It is an individual situation because she was one of the pilot project students to whom the teacher presented a few Think-Aloud Mysteries before introducing them to small groups of students in the reading lab.

The transcript demonstrates initial gentle prompting about prior knowledge, checking the facts in the text, making comparisons to life experiences, probing word definitions in context, encouraging the student to reread segments for clarification, comparing various facts within the passage to see how to make sense of it, reviewing segments within and at the end to prove points, and a little bit of summarizing about the process. In this true scaffolding approach, the student at first cannot take in much more than suggestions for questions; later on, the teacher will be able to label types of questions and strategies as the student grows beyond just learning the general procedures.

## **Weather**

1. *Suddenly I could hear it making noise pounding on the roof of the house.*

Teacher: What do you know from your experience that does that?

Student: A storm.

Teacher: Good.

2. *Thunder boomed and lightning flashed.*

Teacher: Anything else?

Student: Oh, yeah, still thundering and raining.

Teacher: Yes, I like your noticing details like that.

3. *My dog and cat ran under the bed.*

Student: Hey, my dog does that!

Teacher: My cats do, too.

4. *I wanted to see the storm, so I timidly peeked out into the night from my bedroom window.*

Student: What does *timid* mean?

Teacher: Shy or scared. Which do you think it means here?

Student: Scared.

Teacher: Probably so, but why do you think so?

Student: Well, the dog and cat were scared, and it was night.

Teacher: Very good reasoning; I like the way you're adding up facts.

5. *I could see something bouncing onto the sidewalk and gathering into little white piles.*

Student: Still thundering and raining....

Teacher: Well, what are those white piles?

Student: Huh? [rereads] Hah. Snow!

Teacher: Really? What does it say besides "white piles"? Is there another clue?

Student: Gathering...bouncing? Let's see what the next sentence says.

Teacher: Good thinking! Keep your mind thinking while you read more. This next one might really throw you.

6. *It was summertime, but cold bits were falling from the sky.*

Student: Oooh, so it was raining?

Teacher: What makes you think so? Does that fit with what you read right before?

Student: Uh huh.

Teacher: But you said "snow" right before.

Student: Oh, man, snow.

Teacher: Okay, let's review what we've read so far. So you have a storm. What else do you have?

Student: Ice.

Student: [laughs delightedly and reads next sentence.]

7. *I've heard that sometimes it could get the size of golf balls or break car windshields.*

Student: Oh, I know it...but I can't get the word out for it!

Teacher: What's it like?

Student: Hail!

Teacher: You think?! All right, let's see.

8. *But ours was only the size of peas.*

Student: [reads *pears* instead of *peas*]

Teacher: No, look at it; does it say *pears*? There's no *r* in it.

Student: Oh. Peas.

Teacher: Hmm. Green peas?

Student: Peas?

Teacher: No.

Student: What?

Teacher: You said it was hail....

Student: Uh huh, I've seen some before.

Teacher: So that's what you're thinking of?

Student: Uh huh, 'cause it can break cars' windows.



9. *After the storm was over, Mother let me go outside to get a few pieces. I watched them melt away in my hand.*

Student: Still hail.

10. *Hail certainly is an odd kind of weather.*

Student: [reads first word] Hail!!!! [laughs delightedly]

Student: [difficulty with soft /c/ sound of word *certainly*]

Teacher: Try with a soft /c/...sounds like *celery* like from the other day?

Student: [triumphantly reads the last sentence and teacher and student laugh together]

Teacher: You got that one, didn't you?!

Student: Yeah. At first I thought it was rain, but then I thought it was snow, and then I changed my mind to hail.

Teacher: That's right; you did. You put together all those details to come up with the right answer. It was good that you started to realize when it didn't make sense and went back to reread and review your facts.

Did you have any different pictures of those things in your mind when you were trying to figure it out?

Student: Yeah, I sure did.

Teacher: Do you know they say that Eskimos have a whole bunch of different words for snow, for all the different kinds of snow?

Student: Yeah, when it was really cold, you could hear that squeaky sound in my shoes. Mrs. T [regular classroom teacher] asked us, "Can you hear that?" and I said, "Yeah, 'cause I hate that sound!"

Teacher: Very good work today!

Student: OK. See ya. Hope we can do this kind of lesson again! The other kids would like it, too. We ought to let all of 'em do it.

This particular text about hail inspired all the students who read it, ranging from kindergarten to fifth grade, to compare the storm with their prior experiences; to notice conflicting details that fit several scenarios, such as that both snow and hail are produced in storms and are a cold precipitation consisting of pieces with different characteristics; and to imagine a scene that would fit a "storm" schema that should include natural phenomena, reactions of people and animals, types of precipitation, and seasonal variations. Among the small-group students,

there were several initial arguments that were resolved as details became clearer. This weather text was a good example to begin the strategy demonstrations, because almost every student was stumped initially but correctly guessed the answer before the very end. Also, every student was able to come up with demonstrably strategic reasons for each prediction.

## Students writing Think-Aloud Mysteries themselves

As students continue to hear comprehension queries, they become more adept at evaluating aspects of the text and context cues for productive avenues. When they experience success at making correct predictions, they begin to acquire enough proficiency to construct their own Think-Aloud Mysteries.

It is in applying what they have seen in others' texts that students really get to the crux of comprehension construction. Now they must produce a general-to-specific set of statements or clues for their own mysteries. While they want to prevent their peers from guessing the answer too quickly, they also must comply with the requirement for giving gradually more detailed evidence. What really is the difference between a general idea and a follow-up statement or increasingly specific detail? There must be a setting or context in which something is based, whether it is an activity or a time or place.

Students can struggle side by side in the classroom and use the teacher for a consultant so long as secrecy is maintained. By the time they finally have produced an approved rough draft of their Think-Aloud Mystery, written it down on sentence strips, and presented it to the whole group, they are just about bursting with pride in their accomplishment and eager both to show their own work and to accept the challenges of their classmates.

## Integrating Think-Aloud Mysteries with a general language arts curriculum

Think-Aloud Mysteries are an introductory method that allows teachers to model and identify

comprehension strategies very simply and directly, and to compel kindergarten through upper elementary school students to use and identify these same strategies willingly. After interpreting and writing a combined total of five to eight Think-Aloud Mysteries, students are ready to apply the same comprehension strategies to other texts in their regular classroom activities or reading-lab materials, the first step to study skills development. They become able to identify the overarching themes in their stories or textbook passages and are on their way to identifying the varying subordinate levels of details that fill out those major concepts. Now it makes sense to observe the text subheadings for major ideas and to notice what facts are under each one. In language arts, the analysis of a story into characters, setting, plot, climax, and conclusion now seems a great deal more logical and relevant.

The next step is to introduce students to the use of general outlines for writing original compositions, reports, and stories about information from other text passages they have read. For example, I have assigned students to write an expository report describing what they think other students should know (voice is a fairly easy concept to emphasize in this context) about what they have learned about volcanoes. Students first read scientific accounts of volcanic activity and the story of Vesuvius's destruction of Pompeii. Students must fill out their prewriting outline with the various types of facts requested before they may begin writing.

After we have read even more about volcanic activity described on the Hawaii Volcanoes National Park website ([www.nps.gov/havo](http://www.nps.gov/havo)), I have asked the same students to write a fictional story about visiting a place where there is an active volcano. They have come up with great stories of fictional vacations and imaginative fantasies of heroic actions from themselves and others during a volcanic eruption somewhere.

A common student failing at this point is being unable to add enough specific facts. To combat this, I sometimes introduce a charming but obviously easy-to-read book such as Syd Hoff's *Mrs. Brice's Mice* (1991, HarperTrophy). Most students enjoy the story, especially if I suggest they read it to a younger friend or sibling. After reading it, we close the book, and they each list as many details as they can remember from the story. Usually they are able to come up with 20–30 details from that particular

book. When I mention that if a first-grade book can have so many details, surely their writing can include some more, they generally respond positively with an increased effort at adding details that flesh out their work. After all, they comment, their Think-Aloud Mysteries consisted of strings of details.

### **Possible problems**

Students initially may not be willing to pinpoint the strategy they used for their reasoning about guesses, but gentle modeling and insistence usually correct that issue. Besides, other students in a group setting generally are more than willing to offer their suggestions. A wall chart listing comprehension strategies will go a long way toward validating that this is an "ordinary" skill all students must learn.

Ironically, one of the big drawbacks to the Think-Aloud Mysteries approach is that students want to keep doing it over and over again with new texts. The teacher must help them move to the next step of writing their own mysteries. After they have agonized over these self-created texts, they understand that it is not as easy as it looks and proudly take their mysteries to relatives, teachers, and other students to see how long it takes each reader to guess their puzzles. By this time they understand the writing challenge involved, have acquired at least rudimentary understanding of various comprehension strategies, and are ready to apply their new strategies to regular text passages in other areas.

Taking the strategies to wider reading experiences situates their growing skills in the general reading curriculum after having gotten the students off on a positive introductory note. They often refer back to particularly well-liked text passages and even compare them to more complex ones well past the Think-Aloud Mysteries experiences.

Children in the early elementary grades are not cognitively ready to create their own Think-Aloud Mysteries; that generally becomes appropriate only in about the fourth grade. That makes it a little more difficult to help children transfer their strategies to other reading materials, but they never seem to forget the mysteries and often refer back to them.

### **Advantages**

It is fairly easy to write structured, sentence-by-sentence Think-Aloud Mysteries. Teachers as





well as middle or upper elementary students can produce quite a few creative texts. The possibilities are limited only by the students' and teachers' imaginations, without having to rely on expensive commercial educational materials.

Because texts used in Think-Aloud Mysteries can vary greatly from a basic narrative format to nonfiction (expository) genres, and because students must learn to read and study many types of texts, the Think-Aloud Mysteries approach is an easy way to introduce a variety of texts. It is a somewhat "natural," or intuitive, way for students to begin to recognize different comprehension strategies and their importance.

The gradual accumulation of evidence to solve a "mystery" further ingrains in students' minds that reading comprehension is a cumulative, interactive process. They have learned that a good reader does not comprehend solely in a top-down manner, nor simply add up the details in a bottom-up fashion. It is only when both the top-down schema and the bottom-up facts are integrated that accurate comprehension is achieved.

Learning by doing means that every student is actively involved, whether reading aloud, writing, or guessing and explaining reasons. Students hear others' ideas and thought processing out loud and quickly begin to imitate these strategies. There are plentiful opportunities for the teacher to label and model the strategies used in a formal, conscious manner so that students take away specific, overt definitions of what they have been doing. And, of course, students are quite willing to "help others out" when they cannot quite identify a rationale for their ideas.

When students begin to write their own Think-Aloud Mysteries, they practice distinguishing between general and specific details and must evaluate the clues each type will give a reader. A further bonus is getting students to add details to their writings, one of the most difficult tasks a teacher has. Think-Aloud Mysteries provide an obvious way to make clear just how important details are and the variety of effects different types of details contribute to understanding a text's message.

Certainly there is a possibility for use of this approach to diagnose students' comprehension skills as Oster (2001) suggested, but I devised and used the method mainly for students who were already identified as struggling readers and who

could neither read very well nor use comprehension strategies to any significant extent.

A major advantage to the Think-Aloud Mysteries is that they are an intuitively grasped method that avoids complicated text passages with their related reading issues for struggling readers. They also do not require that the teacher learn a prescribed process for carrying out the activity.

In my use of this approach with students from several school districts and a variety of socioeconomic strata, I have yet to ascertain that struggling reading students have previously understood formal comprehension strategies in a significant way from their regular classroom lessons. It always appears to be "new information" and definitely not a review of anything they have learned before.

A big advantage of this Think-Aloud Mystery approach is that struggling readers above third grade can make good use of it. Because they usually are not able to read at their own grade level, they often miss out on the regular classroom comprehension instruction that uses grade-level text passages approached in large chunks. Too much of their cognitive processing energy is being consumed by their inefficient reading skills for them to be able to attend to the comprehension strategies being addressed. When the focus is brought down to sentence level, they readily grasp the comprehension concepts and apply them appropriately to texts within their achieved reading levels.

## **Solving the comprehension mystery**

Think-Aloud Mysteries have been an effective, productive resource for teaching comprehension strategies to elementary students, and could be used even in middle school. It is especially beneficial for older struggling reading students who otherwise miss comprehension instruction until quite a lot later in their education, if at all. It circumvents decoding problems because of the simple texts, used to highlight only comprehension strategies instead of basic reading skills.

Research supports the techniques of scaffolding and direct modeling of instruction techniques (Clark & Graves, 2005) that are embedded within the Think-Aloud Mysteries discussions. Students are compelled to notice and use the comprehension strategy rationale for making their guesses and

predictions. The learn-by-doing aspect and the fun are added bonuses.

As a basic foundation upon which to build a variety of other language arts skills, Think-Aloud Mysteries show much promise. For example, research has shown that students have trouble determining important facts and summarizing text material (Brown & Day, 1983; Rinehart et al., 1986). Furthermore, Think-Aloud Mysteries not only help develop comprehension strategies but also provide a first step toward learning how to determine the hierarchical importance of various facts within a text passage—the foundation of any successful summary, outline, or studying approach.

Think-Aloud Mysteries may look simple, but they provide a powerful, efficient, and effective teaching tool for comprehension activities involving reading and writing in the classroom. That even poor readers can access the benefits is a monumental boon in itself. Finally, even though Think-Aloud Mysteries are named after the think-aloud method, their major effects seem to derive from the scaffolding and direct teaching of comprehension strategies in a straightforward, intuitive manner.

**Smith is a reading specialist in Pennsylvania. She may be contacted at 311 Chestnut Street, Rear, Sewickley, PA 15143-1811, USA. E-mail to [lynnasmith55@att.net](mailto:lynnasmith55@att.net).**

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