

# Practicing the Storage Strand Strategies

*New resource available for busy teachers*

**D**oes this sound familiar? Diane is a resource room teacher who has taught strategies in the Learning Strategies Curriculum for many years. She welcomes new strategies and believes that her students benefit from them. The Storage Strand Strategies—*The Paired Associates Strategy*, *The FIRST-Letter Mnemonic Strategy*, and *LINCS: A Starter Strategy for Vocabulary Learning*—are particularly useful to her students. She believes that student success is often enhanced by use of the strategies in both resource room classes and inclusive general education courses, especially as students add new strategies to their repertoire and learn to generalize the use of the strategies to a variety of settings.

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**The goal is to have supplemental materials closely matched to the Storage Strand Strategies.**

However, even with Diane's enthusiasm for new strategies, challenges seem to arise with the addition of each new strategy and each new student in her class. Among these challenges are that students just beginning to learn their first storage strand strategy may need extra practice, while those who have learned more than one strategy often need practice discriminating the best strategy to use for specific recall tasks.

For example, when Diane met with her students this fall, she found great diversity among her students and different levels of previous exposure to learning strategies. One challenge in her classroom was presented by Maria,

who was just beginning to learn the strategies. Maria was a willing learner but needed more controlled practice to master the Storage Strand Strategies than was provided for in the manuals. However, this meant additional work to find appropriate texts and to identify supplemental materials for Maria to use; the additional time often could not be found in Diane's already overloaded schedule. Therefore, a major challenge for Maria was to have access to **extra practice** to assure mastery of the strategy she was learning.

A second challenge in Diane's classes was that a number of students had already learned several of the strategies and were ready to use them individually but had difficulty discriminating the best one to use for different recall demands. For example, Jeremy had already learned the *Paired Associates Strategy* and the *FIRST-Letter Mnemonic Strategy*. This fall, he was eager to learn the *Vocabulary Strategy* and was making good progress. However, Diane noticed that Jeremy often applied the strategy they had most recently worked on even though another storage strand strategy might have been more effective with far less effort. For example, she noticed that he was trying to apply a *FIRST-Letter Mnemonic Strategy* to an item that could have been recalled quickly using a mental picture. Therefore, a major challenge for Jeremy was **discrimination among strategies**.

## Would more practice help?

The *Practicing the Storage Strand* manual was designed to respond to challenges such as these that teachers like Diane shared with us. The manual contains supplemental materials for three Storage Strand Strategies, which are part of the Learning Strategies Curriculum: *The Paired Associates Strategy* (Bulgren, Schumaker, & Deshler, 1996), *The FIRST-Letter Mnemonic Strategy* (Nagel, Schumaker, & Deshler, 1986), and *LINCS: A Starter Strategy for Vocabulary Learning* (Ellis, 1992). The materials have been designed so teachers can provide students with extra practice activities for each of the strategies as well as for using the three strategies in combination and for discriminating when each of the strategies is most appropriate for different recall tasks.

## How about activities for individual strategies?

We have included in the manual several types of practice activities, which can be grouped into two categories.

First, there are the **Single Strategy Activities**. These

**S**cientists spend a great deal of time classifying all living things. To “classify” means to sort things into groups. Birds, for example, are sorted into 27 different groups. Seventeen of these groups live in North America.

Birds belong to a group of living things called endotherms. An **endotherm** is an animal that keeps an even body temperature. This is very helpful to birds because they live in many parts of the world.



Figure 1

are designed for students like Maria who need extra practice to master each of the Storage Strand Strategies. To accomplish this, the manual contains six passages designed for students to use as they practice each of the three strategies. Each passage contains information that can be learned using one of the storage strand strategies and comprises one to three paragraphs.

Each passage related to the *Vocabulary Strategy* contains two definitions. A definition comprises a vocabulary word and its meaning. For example, in Figure 1, students are challenged to identify and recall

the definitions of “classify” and “endotherm.” These words are cued by quotation marks and boldface type to more closely approximate cues that might occur in regular texts.

Passages to provide students with practice in the *FIRST-Letter Mnemonic Strategy* include two lists, one with five items, and one with three items. For example, in Figure 2, students are challenged to identify and recall five groups of North American birds and three characteristics of birds.

Note that short passages in the *FIRST-Letter Mnemonic* and *LINCS* strategies have been designed to look like material that students might encounter in science or health classes.

Each of the passages designed to provide students with practice in the *Paired Associates Strategy* contains four pairs or trios. That is, the passages contain two or three related pieces of information. These passages can be used during the Advanced Practice Stage of instruction when a student is learning *Paired Associates*. See Figure 3 on page 3 for a sample of a passage containing pairs, including

**M**illions of birds live on our earth. Five groups of North American birds are the owl, hawk, loon, duck, and heron. Each group is made up of members who are a lot alike.

When scientists sort birds into groups, they must find some way to decide which bird belongs to which group. They do this by looking at the characteristics of birds. Three characteristics of birds are feathers, wings, and a warm body temperature.



Figure 2

In the early 1900s, several inventions changed what people did with their free time. For example, Thomas Armat made the movie projector. After that, many movies were made. People could now spend their free time going to the movies. One of the first “silent movies” was *The Great Train Robbery*. Soon there were famous movie stars such as **Mary Pickford**. Then, in 1906, music was first played on the radio. People could now hear music in their own homes. In the years that followed, many improvements were made to the quality of both movies and radio shows.

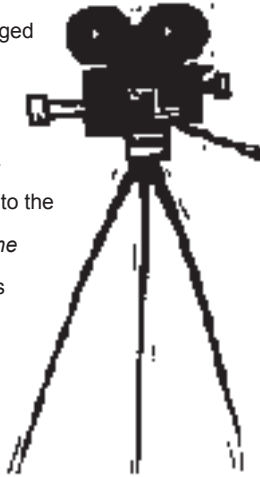


Figure 3

assign only sentences 8 and 10 if more practice were needed on definitions, sentences 9 and 11 if more practice were needed on *FIRST*, or any of the sentences designed to help students reach mastery on one of the recall devices in *Paired Associates*. For example, sentences 2 and 3 may be assigned to a student who needs extra practice mastering the “Make a Code” component of *Paired Associates*.

The manual also contains short integrated passages that consist of two or three paragraphs. Each of these passages contains one definition, one list, and four pairs or trios. See Figure 5 on page 4 for an example of a short integrated passage designed for practicing all three strategies. In this lesson about labor unions, practice is provided to learn a list associated with demands of the labor unions, a definition of the word “radical,” and four opportunities to practice the skills associated with *Paired Associates*: mental pictures, familiar association, boxing, and coding dates.

Finally, the Integrated Strategy Activities contain long integrated passages. These consist of five or six

the date of an event, names of people and their occupations or achievements, and information about topics such as the silent movies that might be found in a short passage from a social studies textbook, in this case an American History text.

### How about discrimination activities?

The second set of activities comprise the **Integrated Strategy Activities**. These are to be used after students have learned all three storage strategies. They are designed to help students learn how to use the three strategies in combination and how to discriminate which strategy is most appropriate for any set of information.

We have provided three different types of integrated activities for practicing all three strategies. For example, the integrated sentence lists contain 12 sentences. See Figure 4. Each sentence contains information to be learned through the use of one of the strategies. In Figure 4,

two sentences (8 and 10) contain definitions, two (9 and 11) contain lists, and eight contain pairs or trios, providing practice in each of the four techniques in the *Paired Associates Strategy*: mental pictures, familiar associations, boxing, and coding.

Teachers also can select sentences specific to *Paired Associates*, *FIRST*, or *LINCS* if even more individual strategy practice is required than is provided in the Single Strategy Activities. That is, from Figure 4, teachers could

1. Shippen wrote *A Bridle for Pegasus*.
2. Harvey described blood circulation in 1628.
3. Ford sold the first Model T car in 1909.
4. The author of *My Shadow Ran Fast* is Bill Sands.
5. Annie Jump Cannon was an American astronomer.
6. E. Eggleston wrote *Hoosier Schoolmaster*.
7. The Russian fleet was caught in the Black Sea.
8. An estuary is a zone between fresh water and salt water.
9. Primates include humans, monkeys, apes, tarsiers, and lemurs.
10. A farce is a comedy that is made up of exaggerated or ridiculous events.
11. American poets of the early 1900s include Frost, Sandburg, Elliot, Pound, and Lindsay.
12. Mary Reagan wrote *Forever Green*.



Figure 4

paragraphs, and each contains two definitions, two lists, and eight pairs or trios. See Figure 6 on page 7 for an example of a long integrated passage dealing with newspapers at the turn of the century. The materials in the long passages have been designed to be the most challenging of the practice activities because the information is embedded in a longer passage similar to one that might be found in a textbook.

The long integrated passages contain information similar to that found in the integrated sentence lists. That is, each contains two definitions, two lists of information, and eight pairs or trios. Each is designed to approximate a short lesson such as might be found in a history class. This provides further practice to get students ready to generalize the use of the Storage Strand Strategies to content instruction.

### How are the activities organized?


The activities have been numbered to provide a quick overview of the activity types. The activities that begin with numbers 1 through 6 are grouped as follows:

1. Practicing the **Vocabulary Strategy** with a single passage (1A-1F)
2. Practicing the **FIRST-Letter Mnemonic Strategy** with a single passage (2A-2F)
3. Practicing the **Paired Associates Strategy** with a single passage (3A-3F)
4. Practicing **all three strategies** with sentence lists (4A-4H)
5. Practicing **all three strategies** with short passages (5A-5H)

### 6. Practicing **all three strategies** with a long passage (6A-6D)

#### What else does the manual contain?

**S**ome of the changes labor unions wanted were shorter work days, stores owned by workers, higher wages, more free time, and safer working conditions. Management, however, did not want these changes. Thus, sometimes union members refused to work and went on strike. For example, in 1877, the Great Railroad Strike occurred. This strike began when many railroad workers lost their jobs or were forced to take pay cuts. Soon, union members became known as radicals. "Radicals" are people who favor basic changes or reforms. Union radicals were later blamed for the violence at the Haymarket Riot.



Sometimes the government became involved in labor disputes. President Woodrow Wilson, for example, tried to *limit the power of business*. He signed the Clayton Act that declared that labor unions had a right to exist.

Figure 5

activities described above, the manual also contains quizzes, answer keys for study cards, and answer keys for quizzes as described below:

- **Quizzes** are provided in a fill-in-the-blank format that students can be given to determine how well they learned the information in the practice activities.
- **Answer Keys for Study Cards** may be used to check the accuracy and usefulness of items selected by students and written on their study cards.
- **Answer Keys for Quizzes** are used when scoring the students' performance on each quiz.

#### How is this manual similar to the strategies manuals?

*Practicing the Storage Strand Strategies* is similar in several ways to the original Storage Strand Strategies manuals.

- **Visual cues.** Visual cues,

such as capital letter clues, number clues, boldface print, italics, underlining, and quotation marks, are incorporated into the passages or sentences to parallel instruction in looking for clues

in the strategies manual. This provides consistency between these supplemental practice activities and the strategy manual.

- **Use of study cards.** Each practice activity provides information that students can learn by using study cards, as they practiced in the original strategy. Study cards may be developed by students as they study information associated with each of the Storage Strand Strategies. Therefore, the Answer Keys for Study Cards have been provided for teachers to use as they teach and reinforce skills associated with notetaking that students already have learned in the Storage Strand Strategies.
- **Quizzes and Answer Keys to Quizzes.** The quizzes and answer keys to quizzes also have been developed in formats similar to those found in the strategy manuals so

*Continued on page 7*

## **Elf Helping Verbs**

Am, is, are, was,  
were, can, could,  
do,

Does, did, has, have,  
had, may, might,  
must,

Shall, should, will,  
would, be, been,  
being,

Are elf helping verbs.

Kim Schiffer, a Certified SIM Trainer from Connecticut, submitted this jingle on behalf of Carol Constantine. Carol is a sixth-grade teacher at Plainfield Central School in Plainfield, Connecticut, and has been teaching the Sentence Writing Strategy for several years. She developed this helping verb song, Elf Helping Verbs, which is sung to the tune of We Wish You a Merry Christmas.



# Index for Strategram Volume 10, Issues 1-6

## Issue 1

**Lead Article:** Key factors for reading comprehension: Combining elements for powerful programs, Julie Tollefson, KU-CRL. Michael Pressley of the University of Notre Dame explains seven elements essential for a good reading program during an address to the 1997 National SIM Trainers' Conference. Includes chart of seven factors.

**SIM Success Story:** Study shows benefits of strategy in general education classroom. David Katims, San Antonio, Texas, studied the effectiveness of the Paraphrasing Strategy in general education middle school classrooms.

Index for Strategram Volume 9, Issues 1-6. Summary of content presented in Volume 9 of Strategram. See page 7 for a back issue order form.

## Issue 2

**Lead Article:** Michigan team creates winning program: Intervention reaches low-achieving readers, Julie Tollefson, KU-CRL, and Sue Woodruff, Muskegon, Michigan. Sue Woodruff leads a team of teachers in Muskegon, Michigan, to improve reading skills of high school students.

**For the Classroom:** Introducing the Survey Routine. Gwen Berry, University of Kansas doctoral student, and teachers at Mt. Lebanon High School in Pittsburgh, Pennsylvania, contribute suggestions for introducing the Survey Routine to students.

Strategic Instruction Model Workshop Opportunities. Description of the workshops offered by the University of Kansas Center for Research on Learning during 1998.

## Issue 3

**Lead Article:** The Clarifying Routine: Elaborating vocabulary instruction, Edwin S. Ellis, University of Alabama, and Theresa Farmer, Oak Mountain

Intermediate School, Birmingham, Alabama. Description of the new Clarifying Routine, which focuses on ways teachers can help students understand and remember new terms. Includes guidelines for selecting vocabulary to be learned and figures depicting the Clarifying Table and Instructional Sequence.

**SIM Success Story:** Connecticut team studies widespread use of SIM. Alice Henley of Connecticut reports results from a study in which grade-level teams of teachers taught all students strategies. Includes chart of scores on the Connecticut Mastery Test.

## Issue 4

**Lead Article:** Focusing on what's best for students: Speaker shares concerns about educational trends, Julie Tollefson, KU-CRL. Summary of address by Rick Lavoie during the 1998 National SIM Trainers' Conference in which Lavoie shared his concerns about the field of education and some of the trends it seems to be following. Includes sidebar of Lavoie's position on inclusion.

Motivation misconceptions. Rick Lavoie presents several myths and misconceptions surrounding student motivation.

**For the Classroom:** The way to a teenager's heart, Elizabeth Catarius, Wethersfield, Connecticut. An activity using peanut butter, marshmallow fluff, and crackers to introduce compound sentences.

**For the Classroom:** Rapid-fire verbal rehearsal games, Karen Koskovich, Maquoketa, Iowa. Two versions of Tic-Tac-Toe to use to practice steps of a strategy.

## Issue 5

**Lead Article:** Using the Quality Assignment Routine: Improving assignment completion in diverse

classes, Joyce Rademacher, University of North Texas. Description of the new Quality Assignment Routine, which focuses on how teachers can plan, present, and evaluate assignments in partnership with their students to improve the quality of assignments produced by students as well as their rate of assignment completion. Includes figures depicting the Assignment Window and the Quality Assignment Planning Worksheet.

**For the Classroom:** Hands-on Visual Imagery, Carla Frasier, Dundee, Illinois. An activity featuring a "picture frame" and laminated scene and detail pieces that students use to construct pictures while reading sentences.

## Issue 6

**Lead Article:** The future of special education: Co-teaching, instructional delivery seen as key, Julie Tollefson, KU-CRL. Summary of address by Floyd Hudson during 1998 National SIM Trainers' Conference in which Hudson describes the changes he expects to see in the field of special education.

CWC implementation basics. Floyd Hudson, professor of special education at the University of Kansas, describes the basic elements of his Class-within-a-Class program. Includes a sidebar addressing the social integration aspect of CWC.

**For the Classroom:** Visual/tactile prompts, Linda Estes and Alberta Roth, Klein Independent School District, Klein, Texas. Linda and Alberta share bookmarks they designed to reinforce strategy instruction.

**For the Classroom:** Vocabulary activities. Pat Parrot shares two activities—Pinwheel and the Chain Game—for helping students learn vocabulary.

(Continued from page 4)

these supplemental materials can be used as a seamless transition to more practice of the strategies. Quizzes have been developed in a fill-in-the-blank format similar to the quizzes in the strategy manuals.

• **Readability levels.**

Readability levels for all the practice activities range from third grade to seventh grade,

and a chart listing those levels is provided in the manual for teachers to use as they select practice activities for students.

As described above, the *Practicing the Storage Strand* manual has been developed in response to needs expressed by teachers; the goal is to have supplemental materials closely matched to the Storage Strand Strategies. Teachers such

as Diane now have another resource to which they can turn as they respond to the daily challenges of student diversity and content demands in their ever more complex classrooms.

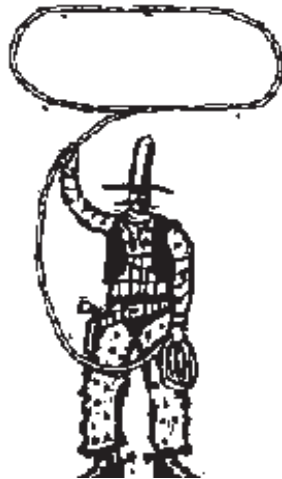
*Practicing the Storage Strand is available from Edge Enterprises, (785) 749-1473. The cost is \$8.*

**B**y 1900, newspapers in America were a "big business." This was because so many people read them! Some business people bought newspapers in different cities and grouped them together. These groups of newspapers were called "chains." One well-read newspaper of the period was the *New York Daily News*. It was filled with many exciting stories and pictures.

Success stories also became very popular at this time. One example of a success story was the "Tattered Tom" series. These books told how a poor boy beat the odds to achieve great wealth. People liked to read stories about poor people who had great

success. These stories gave hope that they, too, could succeed. As a result, millions of success stories were sold.

"Local color stories," or stories about different parts of the country, also became popular. Some of these stories, such as those by Edward Bellamy, dealt with life in American cities. Stories by Helen Hunt Jackson dealt with the hard



lives of the American Indians. Stories by Edward Eggleston told of life in Indiana. Local color stories were not always happy. They did let people know about life across America though.

Humorous stories were also written during these years. In 1865, Mark Twain wrote "The Celebrated Jumping Frog of Calaveras County." By the end of Twain's life, he was a world-famous author, lecturer, humorist, satirist, and reporter.

In addition, stories about our nation's history were popular. *The Red Badge of Courage* by Stephen Crane was a famous story about the Civil War. People who wrote specifically about the South included George Washington Cable, Kate Chopin, Grace King, Thomas Nelson Page, and Joel Chandler Harris.

Figure 6

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## Share your ideas!

If you have a classroom activity associated with learning strategy instruction or the use of Content Enhancement Routines and you would like to share it with other teachers, please send a detailed description to Julie Tollefson, *Strategram* editor, at KU-Center for Research on Learning, 3061 Dole, Lawrence, KS 66045. You also may e-mail a description of your activity to Julie at [jtollefson@ukans.edu](mailto:jtollefson@ukans.edu).

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