Spotlight on™ Reasoning & Problem Solving

Making Predictions & Inferences

by Paul F. Johnson & Carolyn LoGiudice

Skills	Ages
■ predicting ■ inferencing ■ reasoning	■ 6 through 12
	Grades
	■ 1 through 7

Evidence-Based Practice

According to the Clinical Guidelines of the Royal College of Speech & Language Therapists (www.rcslt.org/resources, 2005) and Speech-Language Guidelines for Schools with a Focus on Research-Based Practices (www.kansped.org/ksde/resources/speech-guide/pdf, 2005), the following therapy principles are supported:

- Oral language development, including semantic skills, has a direct bearing on literate language development.
- Difficulties with vocabulary can include understanding concepts, semantic relationships among words, and storage/retrieval of words.
- Children need good vocabulary skills in order to become independent learners.
- Children require strategic instruction to access the curriculum to the best of their abilities.
- Essential language skills that impact students' academic performance include the ability to verbalize semantic categories and specific features for words, compare/contrast skills, reading comprehension strategies, and problem-solving language skills.

The tasks in this book incorporate the above principles and are also based on expert professional practice.

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About the Authors

Paul F. Johnson, B.A., and **Carolyn LoGiudice**, M.S., CCC-SLP, are editors and writers for LinguiSystems. They have collaborated to develop several publications, including *Story Comprehension To Go*, *No-Glamour Sequencing Cards*, and *Spotlight on Reading & Listening Comprehension*. Paul and Carolyn share a special interest in boosting students' language, critical thinking, and academic skills.

In their spare time, Paul and Carolyn enjoy their families, music, gourmet cooking, and reading. Paul, a proud father of three children, also enjoys bicycling, playing music, and spending rare moments alone with his wife, Kenya. Carolyn is learning to craft greeting cards and spoil grandchildren.

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Introduction

Reasoning and problem solving are not simply life skills, they are *quality of life* skills. Throughout our lives, the abilities to reason and solve problems are the difference between succeeding or failing in academic pursuits, making good and bad everyday decisions, and improving or destroying social relationships.

The world assumes we come to it with well-developed reasoning and problem-solving skills, but that is not always the case. Because of language delays and other factors, many students lack basic skills to achieve positive outcomes in academic and everyday living situations.

The goal of *Spotlight on Reasoning & Problem Solving* is to build skills, step-by-step, using a focused instructional approach. The situations students will use for practice in these books are ones many of them have faced or will face throughout their lives. We support the approach that Richard Paul suggests in his landmark 1990 book, *Critical Thinking*:

> ". . . because we can form new ideas, beliefs, and patterns of thought only through the scaffolding of our previously formed thought, it is essential that we learn to think critically in environments in which a variety of competing ideas are taken seriously." (page xv)

Before students can reach and approach the kind of proficiency Paul describes, they must fully understand and master the building blocks of reasoning and problem solving. *Spotlight on Reasoning & Problem Solving* presents six crucial areas for developing the language-based thinking skills that, when mastered, provide students with the tools to become better thinkers and problem solvers:

- Causes & Effects
- Comparing & Contrasting
- Facts & Opinions
- Making Predictions & Inferences
- Sequencing
- Solving Problems

Most students will benefit from working through each book from beginning to end. Even if a student's proficiency is beyond the initial activities presented, the feeling of success he experiences by mastering them will motivate him to approach the more challenging activities that follow with confidence.

Students need to predict, determine causes, and make logical inferences in their daily lives as well as in academic situations. The tasks in this book are designed to help students consider their own experiences as well as their increasing knowledge of others' thoughts and experiences in order to make logical inferences. The beginning tasks ensure students are able to detect absurdities and to detect essential information from pictures. Next, students make predictions based on picture clues, including book cover information. Tasks then progress to making predictions without picture clues, first with a multiple-choice format and then without any answers provided. After practicing determining causes of events, students tackle making inferences with and without picture clues.

As you present these tasks, encourage your students to think about everything they know about each situation before they jump to conclusions. For multiple-choice formats, they should consider each choice carefully before selecting the best answer.

Here are some additional activities to develop students' skills in predicting and making inferences.

- To introduce inferences, demonstrate various ways of walking or sitting and ask your students to guess your mood along with a logical trigger for your mood (timid, adventurous, etc.). You can do the same thing by presenting snippets of people's voices or pictures of people in various contexts.
- Play Pantomime with your students, using stimuli of everyday activities or common emotional responses (brushing teeth, making a sandwich, feeling anxious about something, etc.). You can either have the whole group guess what a single performer is doing or divide the group into smaller teams. Notice whether individual students make logical guesses or off-the-wall guesses as well as whether they take adequate thinking time before making a guess.
- On the board or an overhead, make two columns headed "What We Know" and "What We Guess." Present pictures or short situations, including some from the tasks in this book, and have the group collectively add information to the appropriate columns to work toward a logical inference.
- Frequently ask your students, "Why are we doing/learning this?" to help them see the logical cause and effect of your instruction and their learning or enrichment.
- As often as possible when students make inferences, ask them, "How do you know that?" or "What clues make you think that?" Also model making good inferences orally by commenting on what you infer based on students' behavior or on information from a classroom lesson.

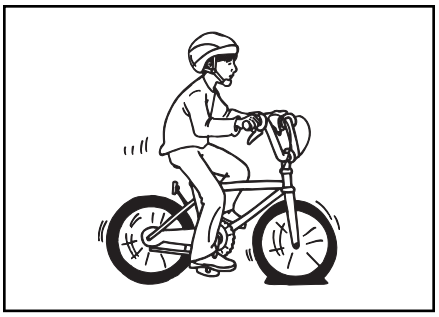
We hope you and your students enjoy working through these activities together, and we are certain that with your guidance, your students' reasoning and problem-solving skills will improve with each completed page.

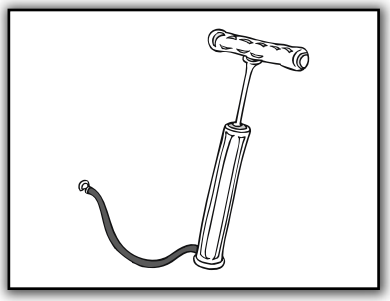
Paul and Carolyn

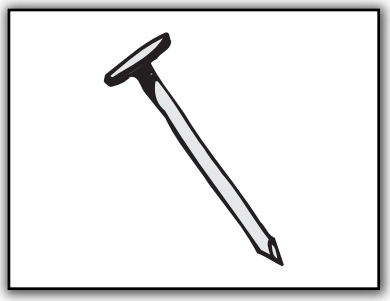
Solving Simple Problems ❷

➔ Look at each picture on the left. Say what that problem is. Then underline the picture in each row that would best solve the problem. Tell why you chose that item.

1.







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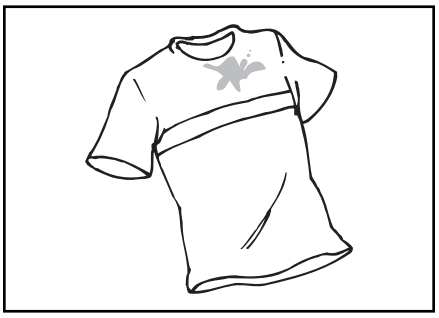

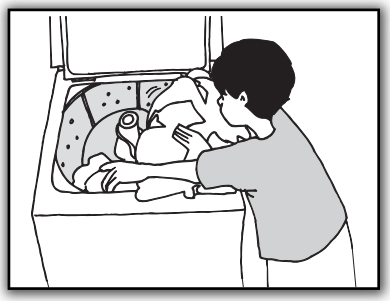

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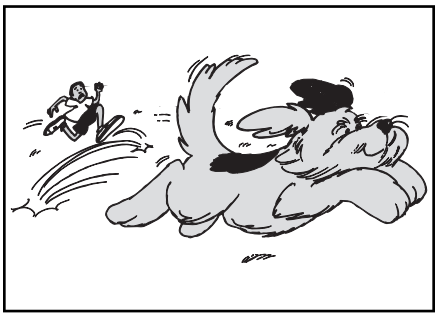

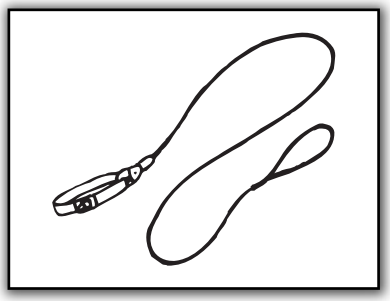

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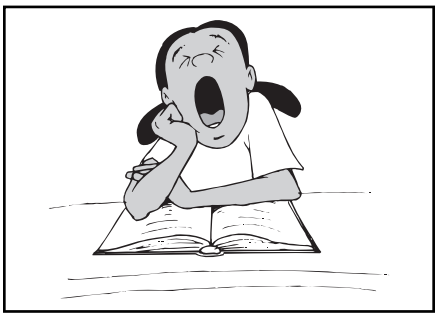
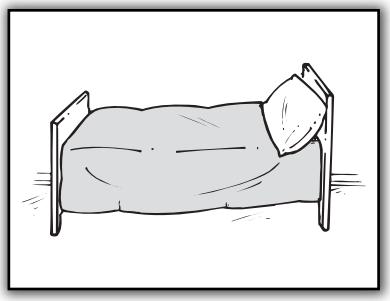
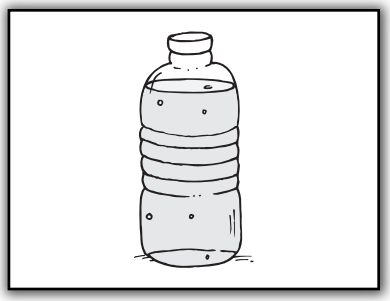


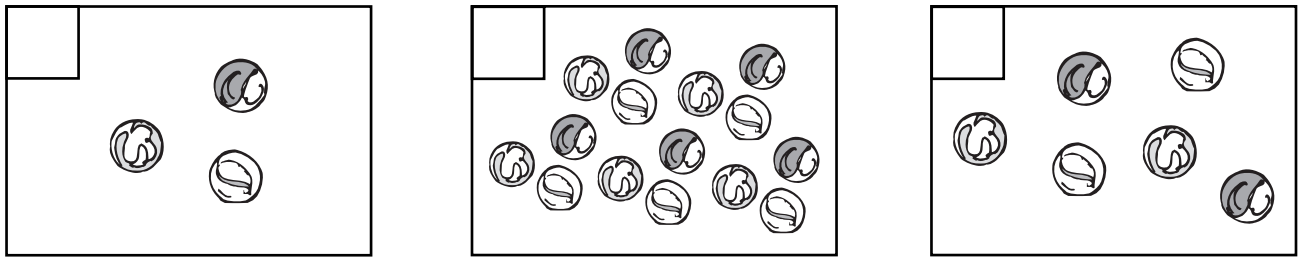




Sequencing by Quantity

➔ Write the numbers 1, 2, and 3 in the boxes to sequence the pictures in each row. Sequence them from the least to the most.

1.



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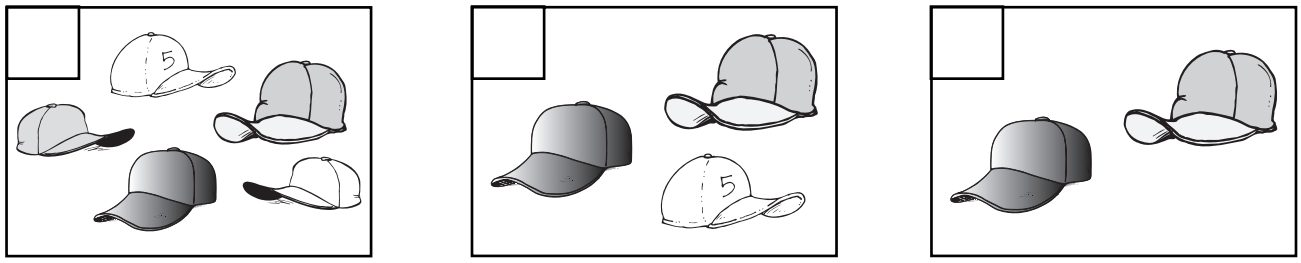

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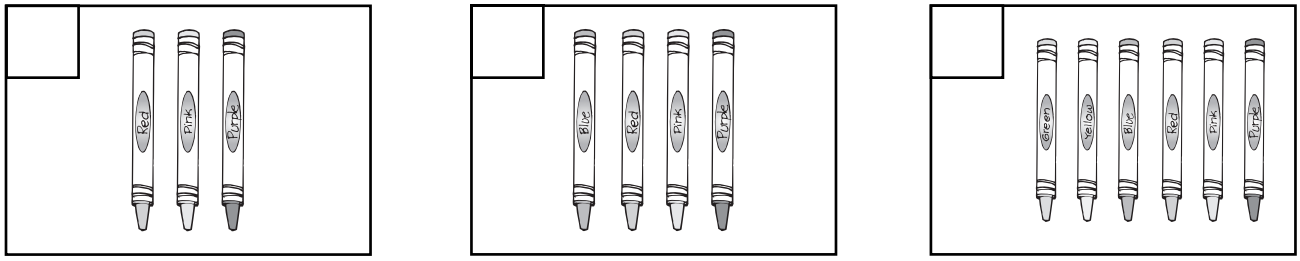

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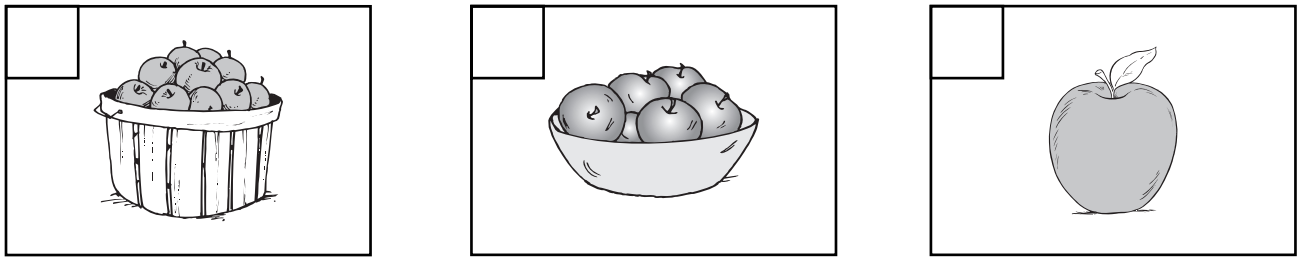

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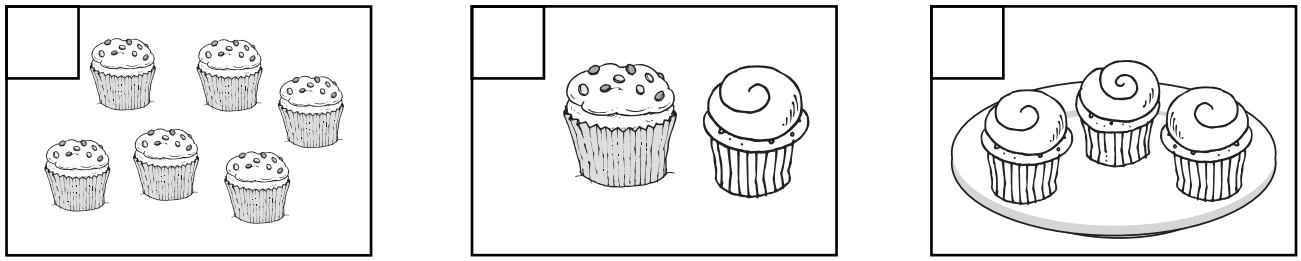

Matching Causes and Effects ❷

➔ An *effect* is what happened. A *cause* tells why it happened. Look at each group of causes and effects. Match each effect with its cause. Use the word *because* between each cause and effect to help you make the right connection.

Effect	Cause
_____ 1. Everyone stops playing and runs to line up.	a. The school day begins.
_____ 2. A student raises her hand to ask for permission to leave class.	b. The student has a question about the test.
_____ 3. The principal announces that school is letting out early.	c. The recess bell rings.
_____ 4. Students put away their coats and bags.	d. The student has to go to the bathroom.
_____ 5. A student walks up to the teacher's desk during a test.	e. A big snowstorm is coming.

_____ 1. A police officer has his car's siren on and is following a driver.	a. There is an accident and someone is injured.
_____ 2. The lights in a grocery store are off.	b. It's a warm, sunny day.
_____ 3. There is a long line at the post office.	c. Someone is speeding.
_____ 4. People pull off the road as the ambulance comes near them.	d. Lots of people are sending packages.
_____ 5. The park is full of people on a Saturday.	e. The place is closed.

_____ 1. Marsha feels happy.	a. She didn't sleep well last night.
_____ 2. Katie is tired.	b. Her car won't start.
_____ 3. Corinne is nervous.	c. She doesn't understand the game directions.
_____ 4. Mom is angry.	d. She just got a gift.
_____ 5. Treena is confused.	e. She didn't study for the test.