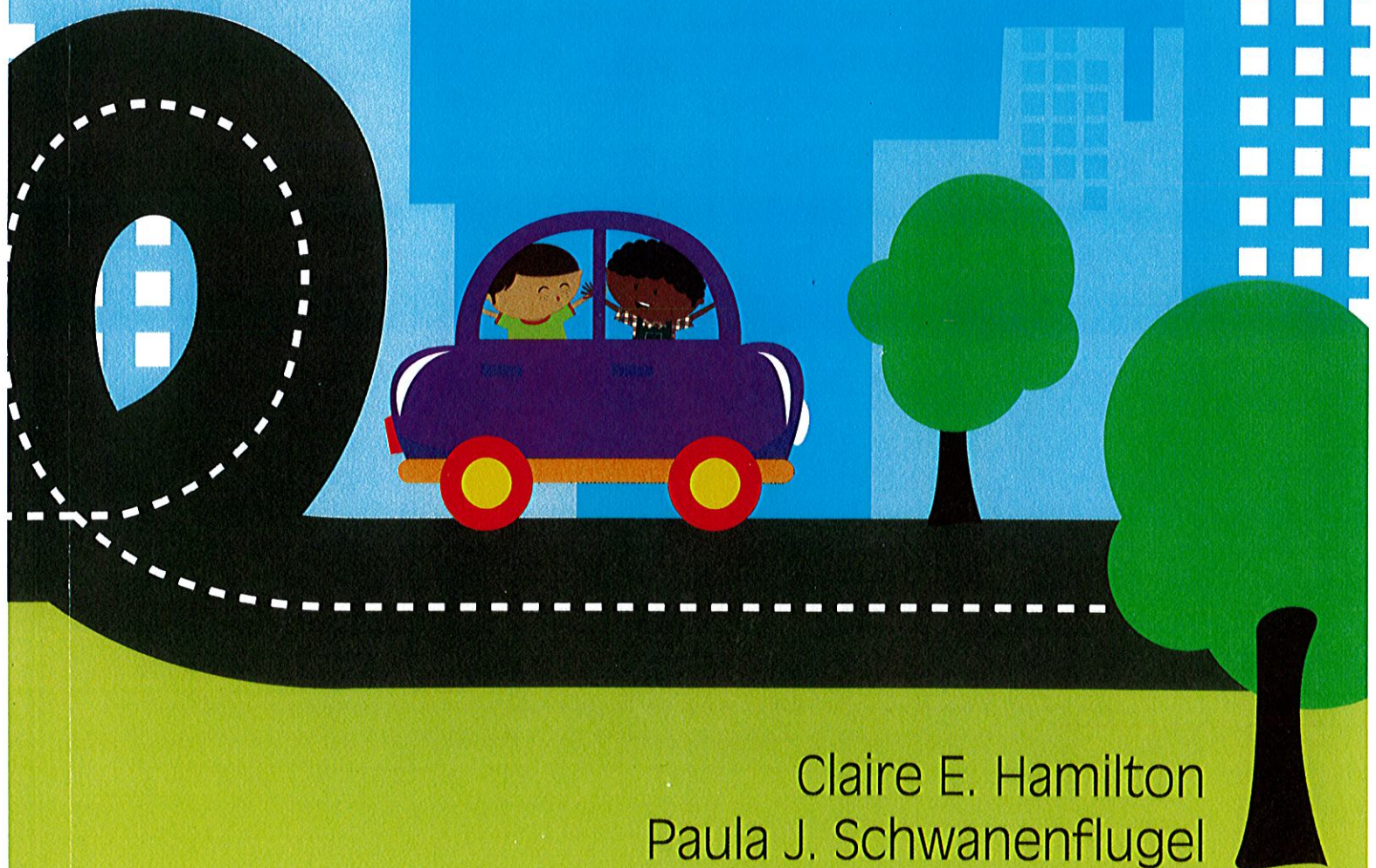


# PAVED for Success



Building Vocabulary and  
Language Development  
in Young Learners



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www.brookespublishing.com

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Typeset by Auburn Associates, Inc., Baltimore, Maryland.  
Manufactured in the United States of America by  
Versa Press, Inc., East Peoria, Illinois.

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The project on which this book is based was funded by Grant S349A010167 from the U.S. Department of Education, Office of Elementary and Secondary Education, Early Childhood Educator Professional Development Program; and by Grant ED-06C0-0028 from the U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, administered by the Regional Educational Laboratory Southeast, administered by the SERVE Center at the University of North Carolina at Greensboro. However, the content does not necessarily reflect the position of the U.S. Department of Education, and no official endorsement should be inferred.

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**Library of Congress Cataloging-in-Publication Data**

Hamilton, Claire E.  
PAVEd for success : building vocabulary and language development in young learners / by Claire E. Hamilton and Paula J. Schwanenflugel.  
p. cm.  
Includes bibliographical references.  
ISBN-13: 978-1-59857-172-1  
ISBN-10: 1-59857-172-9  
1. Language arts (Early childhood) 2. Vocabulary—Study and teaching (Early childhood) I. Schwanenflugel, Paula J. II. Title.

LB1139.5.L35H353 2011  
372.6'049—dc22

2011009017

British Library Cataloguing in Publication data are available from the British Library.

2015 2014 2013 2012 2011

10 9 8 7 6 5 4 3 2 1



# **An Introduction to *PAVEd for Success***

***Building Vocabulary and Language  
Development in Young Learners***

# What Is Early Literacy?

**T**his book is a guide for building a strong foundation for reading during the early childhood years. We have collaborated with classroom teachers to design clear, realistic, practical, and successful strategies that work in real classrooms with real teachers and real students. Our basic premise is that 1) children's later reading success depends to a large degree on a strong foundation, which is built during the preschool and kindergarten years; and that 2) early childhood teachers can easily master skills that will help them fortify this foundation and, thus, make huge strides in bridging the achievement gap. The newly revised guidelines for developmentally appropriate practice suggest, "To be an excellent teacher means...being intentional" (Copple & Bredekamp, 2009, p. 33). The PAVE approach (derived from *phonological awareness and vocabulary enhancement*) is designed to help preschool and kindergarten teachers build children's vocabulary and oral language skills with intentionality.

Because thoughtful, thorough research underlies every successful educational practice, in this chapter we explore the research that underlies the development of the *PAVEd for Success* program. First we look at how this program coincides with research on early literacy in general, and then we describe the specific research process behind *PAVEd for Success*.

## LITERACY RESEARCH

The basic language and cognitive early literacy competencies that children need to become good readers are called *foundational skills*; that is, they lay the foundation for formal reading instruction. Research confirms what we know instinctively—a strong foundation of language and cognitive competencies or skills leads to strong literacy skills once formal literacy (reading) instruction begins. A weak foundation crumbles when formal literacy instruction begins, potentially placing children at risk for early reading difficulties (Whitehurst & Lonigan, 1998).

But what does research say about the specific literacy skills teachers should focus on in their prekindergarten (pre-K) and kindergarten classrooms? Early literacy is composed of two interrelated sets of underlying abilities: 1) code-related skills and 2) oral language skills

(National Early Literacy Panel, 2009). Code-related skills allow children to crack the code for deciphering the written word and include skills such as learning the letters of the alphabet and phonics rules. Children who have these skills prior to learning to read do better on early assessments of reading than children starting out with poor knowledge in these areas. All quality early childhood programs should provide children with instruction in these literacy areas. Code-related skills are relatively small sets of knowledge that can be mastered rather quickly by most children in a year or two. After all, there are only 26 letters in the English alphabet, and some people estimate that the number of reliable phonics rules that children need to be taught might be as small as 18 (Clymer, 1963)! In our experience, many early literacy programs do a pretty good job of teaching these skills, so we do not focus on them here. However, we include in Appendix B an annotated list of resources for teachers who would like more information on early literacy in general and code-related skills in particular.

However, research also suggests that attending to code-related skills may not be enough to ensure early reading success. Although teaching code-related skills may help children learn how to read words, it does not fully prepare them to tackle the main goal of reading—comprehending text. That’s where oral language skills, the other set of underlying abilities for early literacy, come in. Oral language skills include comprehending and producing complex sentences, inferring (i.e., determining important information not stated directly in the text but necessary for comprehension), general listening abilities, and—perhaps most important—vocabulary skills. Indeed, it appears that oral language skills in and of themselves underpin reading and listening comprehension during kindergarten and preschool (Lynch et al., 2008). In our experience, many early literacy programs do not focus nearly enough on oral language skills.

Although children can master code-related skills in a year or two, oral language skills are continually developed throughout one’s lifetime. They are much more complicated because they require both the integration of vocabulary, oral, and written language skills and an underlying and expanding knowledge base. Because of this extended developmental time frame, oral language problems can be more long lasting (Paris, 2005). Children with insufficient oral language may struggle in later grades as they encounter what Stahl called “heavy texts” (2007, p. 56), or long books with well-developed themes, complex plots and sentence structure, and complex vocabulary. Thus, it makes sense that teachers get as early a start as possible on improving their students’ vocabulary and oral language skills.

Vocabulary is important even for such a “simple” thing as reading words. “A child just learning to read conventionally might approach [a] word...by sounding it out...Not infrequently, one can hear a beginning reader get that far and be stumped, even though all the letters have been sounded out correctly” (Whitehurst & Lonigan, 1998, p. 849). In reading, young children must be able to map the written letters and sounds of a word onto the meaning of a word they know. When children have difficulty retrieving the meaning of a particular word they have successfully sounded out, comprehension (Stahl, 1999) and word recognition (Nation & Snowling, 2004; Schwanenflugel & Noyes, 1996) suffer. Vocabulary, then, is important for every aspect of learning to read.

As researchers, we are still trying to untangle the relationship between preschool vocabulary and oral language skills and later reading ability. Different researchers have different findings, but all agree that vocabulary is critical. Some researchers have found that although children with good vocabularies tend to be better readers, vocabulary skills do not say much about who will end up a good reader once phonics and alphabet skills are taken into account (Muter, Hulme, Snowling, & Stevenson, 2004). Others have found that both vocabulary knowledge and oral language skills are important in learning to read (Dickinson, McCabe, Anastasopoulos, Peisner-Feinberg, & Poe, 2003). The National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network (2005) followed 1,100 children from age 3 to third

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grade. This large study found that preschool oral language skills helped children to learn code-related skills as well as build later reading comprehension. Yet other theories say that preschool oral language and vocabulary skills operate by helping children discriminate words by sound (e.g., consider the distinction between the words *bait* and *bat*), which later helps them learn to read (Bracken, 2005; Metsala, 1999).

Although we may not be sure which of these views is correct, we do know that vocabulary skills are central to early literacy. Research overwhelmingly supports the role of preschool vocabulary in later reading comprehension (NICHD Early Child Care Research Network, 2005; Storch & Whitehurst, 2002). Common sense says that having a good vocabulary and strong oral language skills is important for success in school. We also know that classroom interventions can be quite effective at improving children's oral communication skills (National Early Literacy Panel, 2009).

## THE PROBLEM WITH VOCABULARY AND ORAL LANGUAGE SKILLS

Conversational language skills are what most people think of when they think of oral language skills.

### Conversational Language Skills

Children who have oral language problems and who speak in ungrammatical sentences using limited vocabulary often have later reading problems (DeThorne, Petrill, Schatschneider, & Cutting, 2010; Scarborough, 1990). Unfortunately, many children come to preschool and kindergarten having had in their home fairly limited conversations with adults of the kind that promote language development (Hart & Risley, 1995). Interventions that focus on conversational skills can have a dramatic impact on the development of oral language (Ruston & Schwanenflugel, 2010). For this reason, conversational language skills are discussed in Chapter 2.

### Listening Comprehension Skills

Good listening comprehension skills during preschool are strong indicators of good reading comprehension later (Lynch et al., 2008; Verhoeven & van Leeuwe, 2008). One of the most common ways in which children develop good literacy-related listening skills is through adults reading to them. Adults who read storybooks to children have a profound impact on the children's development of listening comprehension skills. Experience with being read to has been directly linked to good general literacy and language development (Mol, Bus, & de Jong, 2009; Snow, Burns, & Griffin, 1999). Interactive reading, in which adults engage in open-ended, inference-inducing interactions while reading to children, is particularly beneficial for preschoolers (Beck & McKeown, 2001; Senechal, Thomas, & Monker, 1995; Whitehurst et al., 1994). Unfortunately, many families have remarkably limited access to children's books in their homes and neighborhoods (Neuman & Celano, 2001), making it difficult for extensive book reading to occur. We talk about how to implement effective storybook reading in the classroom in Chapter 3.

### Vocabulary Skills

Many children come to school lacking the vocabulary they need for early academic success. By the time they enter pre-K or kindergarten, their peers may already know several thousand more words than they do (Hart & Risley, 1995). These children are behind before they have even begun, having as much as a 1- or 2-year achievement gap in terms of vocabulary before they even

enter first grade. Unless teachers intentionally focus on building vocabulary skills, the needs of these children may go unmet even in the best early childhood programs.

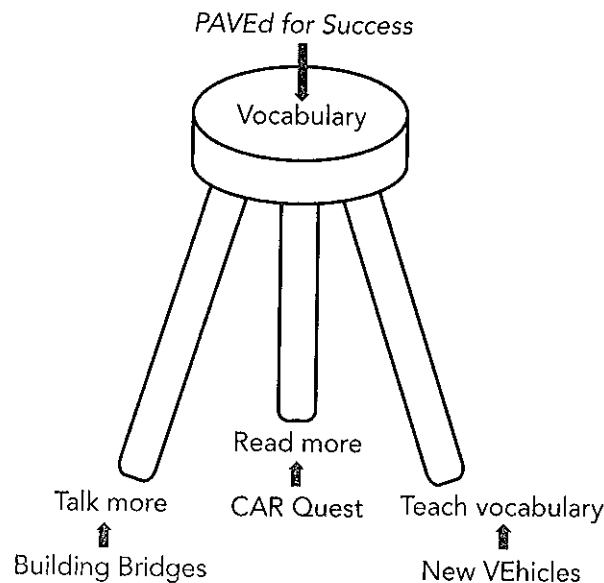
## THE *PAVEd FOR SUCCESS* PROGRAM

The *PAVEd for Success* program provides a set of classroom strategies and materials that focus on improving children’s vocabulary and oral language skills. In our experience, teachers are often given pretty general advice regarding how to support the growth of children’s vocabulary and oral language skills. Generally speaking, teachers are told to 1) talk more with children, 2) read books to children, and 3) target specific vocabulary. We have come to think of this advice for supporting vocabulary growth in terms of the three-legged stool depicted in Figure 1.1. We agree with this general advice but recognize that more clarity is needed regarding better and worse ways of carrying it out in the classroom. The *PAVEd for Success* program is designed to formalize this advice with effective practices that can be used in classrooms. In each chapter we explain in great detail classroom practices designed to help children develop vocabulary and oral language skills.

On the left-hand leg of the stool is the advice “Talk more.” We describe what our research has shown to be effective ways of talking with children in Chapter 2, *Building Bridges*. On the middle leg is the advice “Read more.” We describe recommended practices for reading books in Chapter 3, *CAR Quest*. Finally, on the right-hand leg is the advice “Teach vocabulary.” We discuss how to select vocabulary and choose activities that support the learning of new vocabulary in Chapter 4, *New VEHICLES*.

### Research Validation of *PAVEd for Success*

Since the early 2000s, we have been engaged in studies designed to evaluate the effectiveness of the *PAVEd for Success* program for developing vocabulary and oral language in pre-K and kindergarten children. We have taken a value-added approach to the development of the program. That is, our guiding question has been whether the addition of some practices is really worth it



**Figure 1.1.** Illustration depicting the organization of the *PAVEd for Success* program. Each leg of the vocabulary “stool” represents an element: *Building Bridges* (talk more), *CAR Quest* (read more), and *New VEHICLES* (teach vocabulary).

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in terms of producing growth in children compared with not having those practices. Are teachers able to carry out the program? This question is important because a program that does not work for teachers cannot possibly work for children. Our goal in developing *PAVEd for Success* was to provide teachers with research-based practices that could be adapted to their unique classroom structures and that built on their professional expertise. Furthermore, we are very aware of the many demands on teachers for the valuable “real estate” of the school day. So the practices we recommended had to be effective. We developed solutions to problems of program implementation based on input and feedback from teachers every step of the way.

We evaluated variations of the program in a major study carried out with pre-K teachers and children (Schwanenflugel et al., 2010). We considered some practices so central to children’s literacy readiness that no credible preschool literacy program could be without them. These practices included an emphasis on storybook reading, teacher conversation, alphabet instruction, and a classroom environment rich in print. We provided all teachers in the experimental condition with professional development in these practices. Some teachers also received professional development in carrying out phonological awareness (PA) activities. Some other teachers, however, received professional development in explicit vocabulary enhancement (VE) strategies. Still others received training in all practices (PAVE). It all clicked—we’re paving the road for our students’ success, hence the name *PAVEd for Success*. The full pre-K *PAVEd for Success* program included CAR Quest, New VEHICLES, Building Bridges, and code-related activities. We followed children and their teachers throughout the pre-K year and just the children into kindergarten.

By the end of the pre-K year, children in the pre-K *PAVEd for Success* program demonstrated better expressive vocabularies than did children in the control group who were enrolled in early childhood settings of similar quality. The *PAVEd for Success* children, who began the year well below the national average on standardized tests of expressive vocabulary (i.e., they entered school testing on average at the 32nd percentile), ended the year at the 47th percentile, quite close to the national average (i.e., the 50th percentile). Nonprogram children did not make nearly as much progress (i.e., they ended the year at the 37th percentile). Expressive vocabulary represents an important aspect of vocabulary knowledge—the ability to name and use vocabulary words. These impressive results suggested that all of the extra attention to vocabulary was indeed worth it.

Unique to the *PAVEd for Success* program, however, is its effect on early literacy skills directly related to reading, particularly for those children who had entered pre-K with very low levels of literacy skills and knowledge. Such children are vulnerable to reading difficulties and may need special reading services later on. By the end of kindergarten, the kindergarten Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002; Kaminski & Good, 1998), a widely used screener for early literacy problems, showed that, compared with children in a control group, fewer of these children were designated as needing substantial intervention. Furthermore, an early decoding test showed that, unlike children in the control group, they had already started to read a substantial number of simple words, a very good sign indeed. Given the stability of such skills across early elementary school (Juel, 1988), it is reasonable to assume that children who show an early ability to read will likely continue to develop those skills later! We knew we were on to something.

To develop a better program, we talked with teachers about the challenges they had using the program in their classroom. We observed successful teachers to identify classroom practices that worked. Most important, we listened to teachers’ suggestions about how to improve the program. For example, teachers indicated that having to pull together the various New VEHICLES components (i.e., the words, pictures, books, and activities) was too time consuming, although they saw the value in it. They suggested that we supply these things to teachers. When we did so in a subsequent federal study with Mississippi Delta region kindergartens (SERVE



Center, 2010), teachers did indeed use them to good effect. These classroom materials are supplied in the units provided with this program and on the accompanying CD-ROM.

The federal evaluation of the use of the *PAVEd for Success* program for kindergarten classrooms found positive impacts for children (Goodson, Wolf, Bell, Turner, & Finney, 2010). Like the pre-K study, the evaluation found that the program had positive impacts on expressive vocabulary. Also, because the link between vocabulary and general knowledge base is a strong one (DeMarie, Aloise-Young, Prideaux, Muransky-Doran, & Gerda, 2004), the program benefited the development of general academic knowledge by the end of the school year. Moreover, this increase in vocabulary skills and academic knowledge did not come at the expense of classroom time spent on other important literacy skills.

We saw that some teachers had difficulty keeping records and scheduling the many small groups associated with the program. We also saw that some teachers successfully solved these problems by having a more or less fixed schedule for the children that they used consistently from week to week. For example, for Building Bridges, one teacher displayed a master schedule for conversations using Talking Center and Eat with the Teacher days. Her children really looked forward to “their day.” She was able to say, “Can you tell me about it at the Talking Center tomorrow? I can’t wait to hear it!” and children saved up things to talk about with their teacher. Thus, we have included examples of typical schedules that can be adapted for other classrooms in Chapter 5.

We also learned that successful teachers connected their vocabulary activities with other aspects of the curriculum. With this in mind, we have designed the units to connect to common state preschool and kindergarten science and social studies standards (primarily) as well as national literacy standards. In fact, teachers in our Mississippi Delta study often commented that the units supplied with this program helped them carry out their science and social studies curricula. It allowed them to better understand how important literacy concepts can be integrated throughout the day.

## ORGANIZATION OF THE BOOK

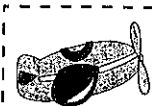
In Chapters 2, 3, and 4 we present research-based evidence supporting each of the PAVE strategies and discuss how each component of the program can be implemented in a pre-K or kindergarten classroom. To further illustrate the importance of supporting the development of children’s vocabulary and oral language skills, we introduce each of the chapters with a brief case example of an individual child’s experiences. Steve is meant to be representative of the many children we have had in our early childhood classrooms. We characterize Steve as a child with somewhat less-competent language skills, living not in poverty but in a working-class family. Steve may not be the first child we think of when we think about children who have less than ideal language skills—he is not language delayed, nor is he receiving early intervention or special education services. He is simply a quiet child who, without the necessary support, is far too likely to fall behind. Fortunately for Steve, his teachers can make a difference. In the later chapters we discuss how teachers can integrate PAVE into their existing literacy program and class routines (Chapter 5), create their own vocabulary units if they so desire (Chapter 6), and use PAVE successfully with diverse learners (Chapter 7). Throughout the book we provide classroom examples to illustrate how different teachers use PAVE within their classrooms. We have drawn on many discussions with and observations of teachers in writing these classroom examples, and we appreciate how willingly teachers have shared their ideas with us.

*PAVEd for Success* is a program evaluated to have positive impacts on children’s vocabularies, designed by and for preschool and kindergarten teachers. We hope you will find this program as beneficial as your peers have, and we thank you for your dedication to children.

# 11 Trains and Bridges

## Vocabulary

arch	locomotive
bay	track
cable	trestle
caboose	tunnel
engineer	whistle



## New VEHICLES— N3C Vocabulary Introduction

### Initial Presentation

Find pictures for all vocabulary words listed below as well as the two known words paired with each vocabulary word. The known words should be in children's vocabularies. If not, substitute another from the set of pictures that your students are likely to know. In the large-group setting show all three pictures (the vocabulary word and the two known words) randomly to the children and ask them, "Which one is \_\_\_\_\_?" (insert vocabulary word). The children should be able to infer that the vocabulary word refers to the unknown picture among the three. If you wish, the quick definitions can be introduced then as well. All pictures are included in the accompanying CD-ROM.

Vocabulary words	Known words
arch	bus, door
bay	bib, foot
cable	baseball, bottle
caboose	bike, boat
engineer	clown, doctor
locomotive	road, horse
track	square, run
trestle	scissors, house
tunnel	triangle, house
whistle	bike, phone

### Subsequent Presentation

After the initial presentation the pictures of the known words can be put away. The rest of the week, display only the pictures of the vocabulary words and say to children, "Show me \_\_\_\_\_" (insert vocabulary word) or "What's the word for this?" (point at picture).

## Quick Definitions

**arch** a circle-shaped opening you sometimes see in bridges, tunnels, and doorways

**bay** a part of the ocean between two pieces of land

**cable** a thick strong wire used to hold something up

**caboose** the last car on the train

**engineer** a person who drives trains

**locomotive** the front part of the train that pulls it along

**track** the metal path the train runs on

**trestle** a bridge for a train

**tunnel** an underground road

**whistle** you blow on it to make a loud sound to warn people



## CAR Quest

The following are questions that you can ask students about the story you are reading. We suggest reviewing the text beforehand and using sticky notes to mark appropriate places to pause for discussion. The questions are labeled according to the types described in Chapter 3.

### Books

Neitzel, S. (2000). *I'm taking a trip on my train*. New York: Scholastic.

Hunter, R. (1999). *Cross a bridge*. New York: Scholastic.

Page location describes the picture (illustration or photo) that relates to the individual CAR Quest question. Unknown vocabulary words are *italicized*.

### *I'm Taking a Trip on My Train*

Page location: Picture of striped *engineer* cap

**Abstract:** Where do you think the *engineer* is going on the train?

**Competence:** What is the *engineer* wearing?

Page location: Picture of *locomotive*

**Competence:** Where is the *locomotive*?

Page location: Picture of *tunnel*

**Relate:** Have you ever been through a *tunnel*?

Page location: Next to the picture of a *tunnel*

**Abstract:** Why does the train need a *track*?

**Relate:** Have you ever seen train *tracks*?

### *Cross a Bridge*

Page location: First picture, a bridge over water and a bridge over land

**Competence:** What kinds of animals live in the *bays*, rivers, and streams?

Page location: A river forms natural *arches* through stone.

**Relate:** Where have you seen an *arch*?

Page location: A train crosses a *trestle*.

**Competence:** What color is the *trestle*?

**Abstract:** How does the *trestle* help the train get to the other side?

Page location: Bridge over the Arkansas River in Colorado

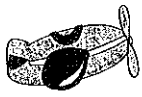
Relate: Have you ever been on a bridge with *cables*?

Abstract: How do the *cables* help the bridge to stay up?



## Building Bridges— Start 'em Up! Topic

Have you ever crossed a bridge or taken a train ride? Tell me all about where you went and what you did there.



## New Vehicles— Extension Activities

### Activity 1: Art Activity—Making Trains

**Materials:** Copy picture of a *locomotive* and *caboose* (provided) for each child, construction paper, scissors, markers/crayons/colored pencils, glue

**Description:** Have children create their own trains using the materials listed. Have children cut out circles for wheels and rectangles for boxcars. They can cut out the *locomotive* and the *caboose*. A separate sheet of construction paper could be used as a background. Encourage the children to label the different parts of the train (e.g., *locomotive*, *tracks*). Children should share their work with others at the end of the period.

### Activity 2: Map Drawing—Where Does the Train Go in Our Town?

**Materials:** Picture of a town (provided), crayons or color pencils

**Description:** Have children draw their own trains and *tracks* leading to different parts of the town. Have each child talk about his or her work and where his or her train visited.

### Activity 3: Physical Activity—Let's Make a Class Train!

**Materials:** None

**Description:** Have children spread out throughout the classroom so that they cannot touch one another with hands outstretched. Select one child as the *locomotive* and another as the *caboose*. The *locomotive* will pretend to blow a *whistle* ("Toot! Toot!") and start walking near other children, picking them up along the way (the children should place their hands onto the moving child's shoulders). This should continue until the *caboose* is picked up last, possibly ending in one complete loop around the room. The children can pretend to go over a bridge held up by a *cab* across the *bay*, under the *arch*, through a *tunnel*, over a *trestle*, and so forth. The teacher (or lead child) can talk about where they are going using the vocabulary. The activity can be repeated using others as the *locomotive* and *caboose*.

## Communication

We provide two types of communication: a classroom posting for students and visitors and a parent letter to be sent home. These are found on the next two pages and on the accompanying CD-ROM.

# Trains and Bridges Vocabulary Words

arch

bay

cable

caboose

engineer

locomotive

track

trestle

tunnel

whistle

Dear Parents,

This week we will be focusing on vocabulary words for Trains and Bridges. We will be reading stories and carrying out activities to help your child learn the meanings of these words. By pointing out examples of these words at home and in the community, you can help your child expand his or her vocabulary. This week's words (with simple definitions that children can understand) are as follows:

arch	a circle-shaped opening you sometimes see in bridges, tunnels, and doorways
bay	a part of the ocean between two pieces of land
cable	a thick strong wire used to hold something up
caboose	the last car on the train
engineer	a person who drives trains
locomotive	the front part of the train that pulls it along
track	the metal path the train runs on
trestle	a bridge for a train
tunnel	an underground road
whistle	you blow on it to make a loud sound to warn people

Please post this where you and your child can see it. Thanks!

Sincerely,

Your child's teacher