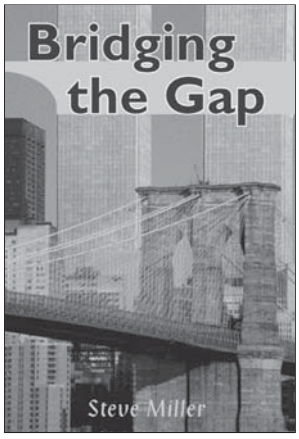
# Bridging the Gap

## by Steve Miller




### Book Summary

Whether they are big or small, all bridges are important – they "bridge the gap" and help us get to where we want to go. Bridge expert Steve Miller explores the topic of bridges with the help of a team of student engineers.

### Features of the Book

- Factual information presented in a narrative style
- Contents page, glossary, and index
- Labeled diagrams
- Specialized vocabulary – *span, truss, stringer*
- The bridge challenge in each chapter
- The model for a scientific investigation
- The varied layout – photographs, diagrams, fact files, different typefaces
- Additional information in fact files
- Background images to support meaning

### Purpose

*Bridging the Gap* can be used to introduce and reinforce the following skills:

- **S** making links between students' experiences and information in the book;
- **S** previewing photographs and text;
- **S** discussing the use of labeled diagrams;
- **S** using a glossary to clarify vocabulary;
- **S** identifying and summarizing main ideas;
- **S** following procedural text.

### The Guided Reading Lesson

- **S** Making links between students' experiences and information in the book
- **S** Previewing photographs and text
- **S** Discussing the use of labeled diagrams
- **S** Using a glossary to clarify vocabulary

#### Introducing the text

Discuss the title and the photograph on the cover.

- *What do you think this book is about?*
- *What is "the gap"?*

Read the blurb on the back cover together to confirm predictions.

- *What kinds of bridges do you know about?*
- *Are there any bridges near your house or our school? What do they look like?*
- *What kinds of things go across bridges?*

Ask the students to preview the photographs. To encourage the students' discussion, you may wish to ask questions, such as:

- *Where have you seen a bridge like this?*
- *Do you know of a bridge that goes over a river, valley, road, or railroad?*
- *What is the smallest/longest bridge you've seen?*

Choose several pages and ask the students to look at the way they are arranged in terms of text, photographs, and diagrams. Discuss how the layout can give you clues as to what the text is about.

### Reading and discussing the text

Ask the students to turn to the contents page and read the chapter titles together.

– *Can you predict what each chapter might be about?*

The students can now read chapter 1 independently. You could ask them to think about the following things as they read:

– *What different kinds of bridges are going to be explored in this book? Find the part of the chapter that tells you this and be ready to share it with the group.*

When the students have finished reading, discuss the terms "beam," "arch," and "suspension." Ask the students to predict the different shapes that these bridges will be and draw them for later reference.

The students can now read chapter 2. Ask them to note the special bridge vocabulary that is mentioned in the chapter ("truss," "pier," "beam") and to be prepared to define the terms.

– *Was our prediction about the shape of a beam bridge correct?*
– *What other shapes are used with beam bridges? Why?*

Look at the three labeled diagrams in the chapter and discuss the way these are drawn.

– *Why has a diagram been used rather than a photograph?*
– *Does the diagram tell you everything you need to know about the bridge? Where else would you look for information?*

Discuss the purpose of the fact files and bridge challenges. Encourage the students to look at these closely as they read the rest of the book independently. As they read, the students should note the words in bold type. Encourage the students to predict each definition before turning to the glossary to check.

## Revisiting the Text

The suggested activities below can be used immediately after the guided reading lesson if appropriate or could be taken as a mini-lesson at a later time.

**S** Identifying and summarizing main ideas

Each chapter in the book has its main ideas with additional information provided for interest and support. Look at chapter 2 together and note the main ideas.

– *Why is this a main idea? What would happen if this sentence were left out of the book? Would the chapter still make sense?*
– *Can you find a sentence that adds to this main idea and makes it more interesting?*

Encourage the students to share and build on each other's ideas. This could be played as a game, where you introduce each main idea as a phrase and ask the students to complete it. Let them know that there might be more than one right answer. You could use the phrases below as starting points:

– *People build bridges to …*
– *In the book, the three main kinds of bridges are …*
– *There are a lot of bridges in Venice because …*
– *To make a bridge strong, you can …*
– *Aqueducts are …*

**S** Following procedural text

Give the students the opportunity to work through a bridge challenge from the book (pages 15, 21, and 27). When they have finished, they could compare their results with those in the book.

✎ When the students have successfully completed one challenge, give them the opportunity to design and build their own bridge. They should:

• define the task
• list the materials
• explain the steps in the procedure
• write up the results.

They could use the blackline master on page 79 as a template for their report.