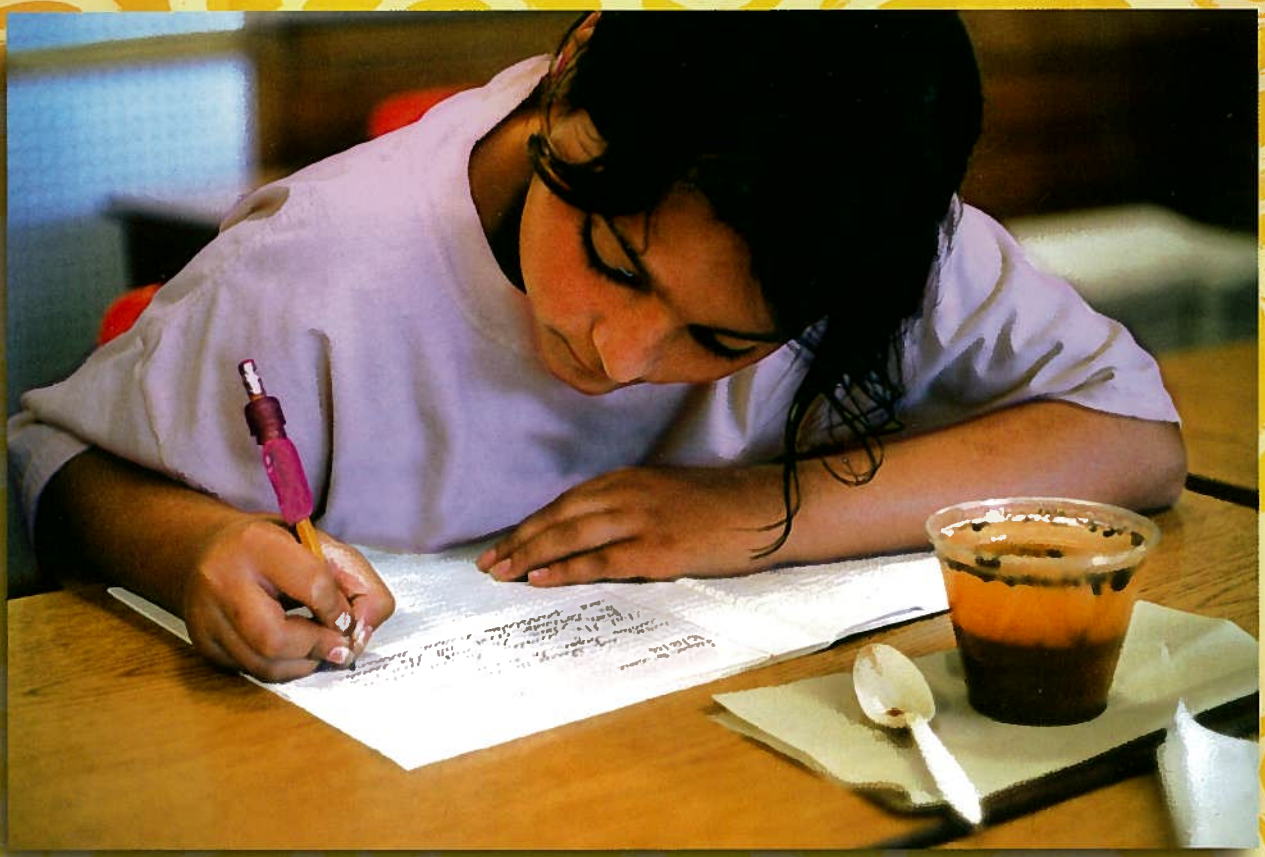
Writing in Science



How to Scaffold Instruction to Support Learning

Betsy Rupp Fulwiler

Foreword by Wendy Saul

Contents

Writing in Science

How to Scaffold Instruction to Support Learning

BETSY RUPP FULWILER • FOREWORD BY **WENDY SAUL**

Through this volume, Fulwiler makes all of us seeking salient connections between science and literacy better teachers.

—**WENDY SAUL,** author of *Science Workshop*

In the science classroom writing is much more than an exercise for students to document their steps during an investigation. It's an important vehicle for describing their thought processes and the evidence that supports their reasoning. *Writing in Science* shows you how to encourage students to grow as scientists and writers by moving beyond recounting *how* they completed their work and toward explaining *what* they learned.

Writing in Science shares proven methods for supporting improvement in how students write and think about science. It provides practical guidelines for using science notebooks in grades K–5 to teach and assess science writing in a way that develops students' conceptual knowledge and expository writing abilities as well as their thinking and scientific skills. Betsy Rupp Fulwiler shares strategies for scaffolding and modeling higher-level forms of scientific writing such as:

- observations
- cause and effect
- comparisons
- data analysis
- conclusions.

Fulwiler packs *Writing in Science* with numerous illustrations and tools to get you started, including:

- more than **50** entries from science notebooks, annotated with remarks about instruction and formative assessment
- scientific writing from English language learners and special-needs students
- examples and focus questions that apply to 18 popular units from the widely used STC, FOSS, and Insights kits
- 17 blackline masters of graphic organizers and writing frameworks
- specific assessment protocols and guidelines to help you analyze notebook entries and provide constructive, formative feedback to students
- planning guidelines that explain how to develop writing curricula for science units.

Best of all, Fulwiler's methods are not only backed by research but have also been successfully implemented in the Seattle Public Schools.

Help students develop their scientific thinking in an incredibly effective way: by writing. Push them away from detailing procedures and into writing that helps them grow as writers, scientific thinkers, and learners. And do it all while meeting inquiry-based science goals and supporting writing instruction across the content areas. Read *Writing in Science*—you'll discover that pencil and paper are among the most important materials in any scientific experiment.

Betsy Rupp Fulwiler is a veteran science curriculum consultant and developer of the nationally known Expository Writing and Science Notebooks Program in Seattle Public Schools. A former classroom teacher, reading specialist, and editor, she specializes in creating ways to teach students how to think and write scientifically.

Heinemann
www.heinemann.com

ISBN-13: 978-0-325-01070-0
ISBN-10: 0-325-01070-6
90000>
9 780325 010700