



# INTRODUCTION

**THINK BACK TO** your first day of school in kindergarten or first grade and how nervous (and excited) you were. That's how nervous (and excited) you'll be on your first day as a science teacher! Even veteran teachers get a few butterflies on the first day when the door opens and the students come into the classroom or lab for the first time.

When you were student teaching or doing your practicum, you walked into a situation that was already set up for you. The classroom or lab was organized, the supplies were inventoried and stored, the safety routines were in place, and the students were accustomed to your cooperating teacher's style. But now you're on your own. It may sound like a paradox, but even though teachers are in a building full of people, teaching can be a lonely profession. It doesn't have to be, but new teachers may feel overwhelmed and hesitant to ask for suggestions or support.

We don't want you to leave this wonderful profession due to a lack of support. Statistics show that half of those who enter teaching leave within the first five years. That is simply unacceptable. We need high-quality teachers to support student learning. We know that the longer you stay in the profession, the more you'll add to and refine your teaching skills. This book was created to address the needs of teachers who are entering the science teaching profession. This includes those who have recently completed their undergraduate studies as well as those who are assigned to teaching a different subject or grade level for the first time. This book can also be helpful to those who are supporting new teachers as mentors or administrators.

## INTRODUCTION

We invite you to join us at Community School (CS), a K–12 consolidated school. The heartbeat of CS is in the teachers' lounge. This is where people gather in the morning to grab a cup of coffee and check their mailboxes. It is also where the staff gathers for short breaks, planning periods, and lunch. There always seems to be food available for anyone who wants a quick snack as well as the company of others who are interested in sharing a conversation. Everyone in the building joins in the varied conversations that take place at some point during the day. CS is a large school with many seasoned teachers, as well as several who are new to the school.

As you read the book, you will meet several of the administrators and other science teachers as they provide suggestions and personal comments. We would like for you to meet our new science teachers:



Alberto has been teaching high school biology for two years but is switching to middle school environmental science—new content and a new grade level. “I’m a little nervous about working with younger students. I think I’ll need some additional teaching strategies and assessment ideas, but I think my sense of humor will help.”



Heather has been a substitute teacher for a year and was recently hired as a full-time elementary science specialist. She will meet with all of the fourth and fifth graders. “This sounds like a dream job! But I’m wondering about how to manage working with all of these students and two different grade levels in the same lab—and the paperwork.”



Jason is a recent college graduate in his first teaching assignment, splitting his day between middle school physical science and high school physics classes. “I’m fine with the content, but with two different subjects and grade levels, I think I might get even crazier than I already am. I’d appreciate any ideas to help me get organized. Safety is also a big concern of mine.”



Sherrie worked as an industrial chemist for 15 years and is changing careers to be a high school chemistry teacher. “I’m really excited about sharing my real-world science experiences. I can manage a lab, but I need some suggestions on classroom management. I also need suggestions on getting to know 100-plus students and communicating with parents.”



Tanya is a recent college graduate beginning her first year as a high school Earth science teacher. “I did not have a lab when I did my student teaching, but at CS I do. (Yay!) I’ll need advice on setting up and maintaining a lab and inventories. Like Jason, I worry about safety. I have lots of questions. I hope that I can find other teachers to help me.”

The *NSTA Reports* column “Ms. Mentor” has been the inspiration for including Ms. Mentor as a contributor to the discussions. Ms. Mentor is a highly respected retired science teacher who volunteers to work with new teachers. The new teachers at CS have been urged to use her as a resource, and she’ll respond to their questions with insights and suggestions at the beginning of each chapter.

Enter the teachers’ lounge using the first three chapters of *Rise and Shine: A Practical Guide for the Beginning Science Teacher*. These chapters include suggestions for starting the first few weeks of school. The rest of the book covers safety, organization, teaching and assessment strategies, and professional development. A comprehensive discussion of these topics would take several volumes, but this book is designed to be an overview for the new teacher. Read through to the end or select chapters that meet your immediate needs and save the rest for later. We designed the book to provide you with the opportunity to start reading wherever it makes the most sense for you. We encourage you to discuss the ideas, suggestions, and strategies with a partner (in your school or through an online community) or share your insights with your mentor.

We have provided many lists of suggestions in the text. Some are ideas from which you can pick and choose, indicated by a bullet (•). Others are checklists of steps to follow as you proceed through a specific strategy, as shown by a check-off box (☐). You will also find frequent references to other sections of the book, as well as to additional resources at the end of each chapter and online appendixes, identified by the arrow (→). The resources can help you begin gathering the materials for your own professional library. We have provided most of the appendix documents in a word-processing format to allow you to personalize the materials. The online appendixes and internet resources can be accessed online at [www.nsta.org/riseandshine](http://www.nsta.org/riseandshine). The resources will be updated periodically to reflect newly available resources.

Although we wrote the book for you as you enter your new science position, we hope you will find the information valuable throughout your career, which we hope is long and successful. We both have had moments when we looked at our students as they were enthusiastically engaged in investigations and we thought, “It doesn’t get any better than this!”

Best wishes for great success and fulfillment,  
Linda and Mary

