Foreword

When my stepson, Matt, was nine years old, he was not particularly interested in reading as a leisure pursuit. He preferred to spend his free time setting traps in the back yard, endlessly hoping to capture some sort of animal. One summer, to capitalize on Matt's interest in animals, his dad helped him build an ant farm. As they puzzled over how to provide the best environment for the ants, something interesting happened. On our weekly trip to the public library, Matt, the child who never picked up a book by choice, asked, "Do you think they will have any ant books?" I seized this literacy opportunity and helped Matt find and check out every book about ants he could find. Matt "read" each book, at times skimming for the answer to a question, at times looking at photos and reading the captions, and sometimes even reading the book cover to cover. Matt had discovered how books might be useful to him. His interest in science led him to this discovery. I have known many children like Matt, turned on by the natural world but disconnected from the school-based world of reading and writing. I suspect many of you know children like Matt as well.

Matt's story illustrates that science can be the entrée into reading and writing for many of our students. However, as Zhihui Fang and his colleagues make clear in this book, being motivated to read or write about science is only one part of the picture. Even motivated young scientists can be challenged by the language and discourse style of science reading and writing. These discourse challenges can make science seem difficult and inaccessible for all but the brightest. This is certainly not the message we want to send to our students about science. We want all students to believe that they can learn science, not just the elite few.

By using the ideas in *Language and Literacy in Inquiry-Based Classrooms,* teachers can help all students build fluency with reading

and writing science. The authors provide a thorough description of why science reading and writing are difficult. They also suggest a repertoire of strategies that teachers can use to help students become proficient with the language of science. Teachers who integrate these strategies into their practice increase students' opportunities to learn science; improve student motivation and self-efficacy to read, write, and do science; and increase the potential of student success, in both science and literacy.

We often think of the best science instruction as that which engages students in doing what scientists do—asking questions, collecting data, and formulating explanations from evidence. Yet reading and writing are also essential activities of scientists. As part of their professional community, scientists read the literature, write grant proposals, keep a science notebook, and present their findings. Therefore, it is not enough for the science classroom to be physically engaging. In addition to using hands-on instruction, teachers of science must engage students in reading, writing, thinking, and speaking like scientists. Knowing how and when to do so are keys to effective teaching. This book will support classroom teachers in carrying out this challenge.

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