

## PREFACE

Humans are born inquirers. You can see it from the moment of birth: Babies use all of their senses to make connections with their environment, and through those connections they begin to make sense of their world. As children discover objects and situations that are puzzling or intriguing—things that provoke their curiosity—they begin asking questions and looking for ways to find answers, all in an effort to understand the world around them. This is the essence of the inquiry process.

This book is designed to help anyone interested in science education reform—teachers, school administrators, policymakers, and parents—understand the philosophy and practical applications behind science inquiry learning in the K–5 classroom. This publication brings together the thoughts and skills of many experts in the field.

It focuses on the real experiences of teachers and teacher educators who are charged with preparing our children for a future that promises to demand more and more scientific understanding.

There's no right way to use this book: you can read through the whole text, pick out the articles that interest you, or focus on specific practical lists and guides.

The PREFACE and INTRODUCTION present the concept of inquiry in science teaching and set the stage for the views and comments of experts in the field.



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CHAPTERS 1 through 4 look at the history and philosophy of inquiry in science, exploring the ways in which children think and learn—on their own as well as in structured settings—and their natural habits of questioning and curiosity.

CHAPTERS 5 through 10 explore the challenges of teaching inquiry science, from a comparison of three different types of hands-on activities to the experiences of teachers who have successfully introduced inquiry into their classrooms.

CHAPTERS 11 and 12 address the important and sometimes difficult process of assessing learning in the inquiry classroom.

CHAPTER 13, the End Paper, concludes by exploring the importance of assessing our own state of knowledge.

We hope that these essays, written by individuals who have both experienced and experimented with science inquiry learning, will help answer questions, deal with concerns, and provide a foundation for those who are considering introducing inquiry into the elementary classroom, or who have already begun the process.