



The Key to Balanced Living

Polymer Chemistry

A Teaching Package for Pre-college Teachers

Designing and Drafting for Handweavers

Teaching Science Through Trade Books

A Guide for Elementary and Middle School Teachers

This entertaining examination of everyday science from the fanciful to the factual covers topics ranging from pesticides and environmental estrogens to lipsticks and garlic. Readers are alerted to the shenanigans of quacks and are offered glimpses into the fascinating history of science. The science of aphrodisiacs, DDT, bottled waters, vitamins, barbiturates, plastic wraps, and smoked meat is investigated. Worries about acrylamide, preservatives, and waxed fruits are put into perspective, and the mysteries of bulletproof vests, weight loss diets, green-haired Swedes, laughing gas, and " mad honey " are unraveled. Even those with very little knowledge of science will come away informed and delighted at those humorous and accessible explanations.

Remember the first time you planted a seed and watched it sprout? Or explored how a magnet attracted a nail? If these questions bring back memories of joy and wonder, then you understand the idea behind inquiry-based science--an approach to science education that challenges children to ask questions, solve problems, and develop scientific skills as well as gain knowledge. Inquiry-based science is based on research and experience, both of which confirm that children learn science best when they engage in hands-on science activities rather than read from a textbook. The recent National Science Education Standards prepared by the National Research Council call for a revolution in science education. They stress that the science taught must be based on active inquiry and that science should become a core activity in every grade, starting in kindergarten. This easy-to-read and practical book shows how to bring about the changes recommended in the standards. It provides guidelines for planning and implementing an inquiry-based science program in any school district. The book is divided into three parts. "Building a Foundation for Change," presents a rationale for inquiry-based science and describes how teaching through inquiry supports the way children naturally learn. It concludes with basic guidelines for planning a program. School administrators, teachers, and parents will be especially interested in the second part, "The Nuts and Bolts of Change." This section describes the five building blocks of an elementary science program: Community and administrative support. A developmentally appropriate curriculum. Opportunities for professional development. Materials support. Appropriate assessment tools. Together, these five elements provide a working model of how to implement hands-on science. The third part, "Inquiry-Centered Science in Practice," presents profiles of the successful inquiry-based science programs in districts nationwide. These profiles show how the principles of hands-on science can be adapted to different school settings. If you want to improve the way science is taught in the elementary schools in your community, Science for All Children is an indispensable resource.

The purpose of Inquiry in Action is to give elementary and middle school teachers a set of physical science activities to help teach the major concepts in the study of matter. The activities were developed to lend themselves to a guided-inquiry approach and to work across the range of Grades 3-8. To be effective over such a wide grade range, the activities are designed to cover basic concepts but have the flexibility to be modified by teachers through varying questioning strategies, the degree of guidance given students, and the vocabulary used. The materials for all activities are very common, safe, and inexpensive and are available at any grocery store.

Preparing Teachers for Equity and Social Justice

Biology Teachers' Handbook

Financial Trading and Investing

Textbook of Polymer Science

The Essentials of Science and Literacy

Fins Are Forever

A Guide for Professional Development Leaders

Introduction to Polymer Chemistry provides undergraduate students with a much-needed, well-rounded presentation of the principles and applications of natural, synthetic, inorganic, and organic polymers. With an emphasis on the environment and green chemistry and materials, this fourth edition continues to provide detailed coverage of natural and synthetic giant molecules, inorganic and organic polymers, elastomers, adhesives, coatings, fibers, plastics, blends, caulks, composites, and ceramics. Building on undergraduate work in foundational courses, the text fulfills the American Chemical Society Committee on Professional Training (ACS CPT) in-depth course requirement

In response to requests from science education professionals, this is the perfect vehicle for implementing and assessing this concept of whole-class inquiry in your classroom. This is a must-have package for preservice and inservice middle and high school science teachers.

The author and the Seattle Science Notebook Program have outlined the strategies of using science notebooks with a diverse population of students and documented their effectiveness. The thoughtful approach, well explained in the book, keeps the goals of inquiry-based science and writing clearly focused and mutually supportive. - Harold Pratt Former President, National Science Teachers Association This book does more than make a case for science notebooks. It provides specific teaching guidelines, strategies, activities, and rich examples of student work that teachers can use to craft their own notebook program. - Karen Worth Author of Worms, Shadows, and Whirlpools 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.

Odd Ocean Critter Poems

Outdoor Science

Multicultural Science Education

75 Practical Strategies for Linking Assessment, Instruction, and Learning

A Problem-Solving Approach

Inquiry Into Biology: ... Computerized assessment bank CD-ROM

Science and Literacy, a Natural Fit

With such a wide diversity of properties and applications, is it any wonder that industry and academia have such a fascination with polymers? A solid introduction to such an enormous and important field is critical to the modern polymer scientist-to-be, but most of the available books do not stress practical problem solving or include recent advances. Serving as the polymer book for the new millennium, Introduction to Polymer Science and Chemistry: A Problem Solving Approach unites the fundamentals of polymer science and polymer chemistry in a seamless presentation. Emphasizing polymerization kinetics, the author uses a unique question-and-answer approach when developing theory or introducing new concepts. The first four chapters introduce polymer science, focusing on physical and molecular properties, solution behavior, and molecular weights. The remainder of the book explores polymer chemistry, devoting individual, self-contained chapters to the main types of polymerization reactions: condensation; free radical; ionic; coordination; and ring-opening. It introduces recent advances such as supramolecular polymerization, hyperbranching, photoemulsion polymerization, the grafting-from polymerization process, polymer brushes, living/controlled radical polymerization, and immobilized metallocene catalysts. With numerical problems accompanying the discussion at every step along with numerous end-of-chapter exercises, Introduction to Chemical Polymer Science: A Problem Solving Approach is an ideal introductory text and self-study vehicle for mastering the principles and methodologies of modern polymer science and chemistry.

"This book is about best practices in chemistry teacher education"--

In this essential resource, science educator Page Keeley provides teachers with guidance, suggestions and techniques for using formative assessment to improve teaching and learning in the science classroom.

Basic Principles of Cloth Construction

Science Notebooks

Project Based Inquiry Science (PBIS)

Science for All Children

Active Chemistry

70 Fascinating Commentaries on the Science of Everyday Life

Best Practices in Chemistry Teacher Education

In this " outstanding volume " (Boston Herald) that " ought to be at the top of everyone ' s must-read list " (Essence), Black women and men evocatively explore what could make a smart woman ignore doctor ' s orders; what could get a hardworking employee fired from her job; what could get a black woman in hot water with her white boyfriend? In a word: hair. In a society where beauty standards can be difficult if not downright unobtainable for many Black women, the issue of hair is a major one. Now, in this evocative and fascinating collection of essays, poems, excerpts, and more, Tenderheaded speaks to the personal, political, and cultural meaning of Black hair. From A ' Leila Perry Bundles, the great-granddaughter of hair care pioneer Madam C.J. Walker celebrating her ancestor ' s legacy, to an art historian exploring the moving ways in which Black hair has been used to express Yoruba spirituality, to renowned activist Angela Davis questioning how her message of revolution got reduced to a hairstyle, Tenderheaded is as rich and diverse as the children of the African diaspora. With works from authors including Toni Morrison, Alice Walker, bell hooks, Henry Louis Gates Jr., and more, this " remarkable array of writings and images " (Publishers Weekly) will stay with you long after you turn the final page.

"Once Upon a Physical Science Book shows you how to integrate reading, writing, and physical science. Practical and easy to use, the book provides everything you need to boost students' skills in both science and reading. It starts with advice on teaching reading comprehension strategies to middle school students. Then, the book features 12 lessons. Each lesson consists of a science activity, a reading about an important physical science concept (based on a standard from the Next Generation Science Standards [NGSS]), a writing activity that asks students to connect what they did with what they read, and a Thinking Mathematically activity that helps them see how these science concepts connect with mathematics"--

Communication

Inquiry in Action

Natural and Synthetic Polymers