NSTA RECOMMENDS
Professional Resources for Science Educators

Fall 2019

National Science Teaching Association
What NSTA Press Readers Love About Teaching Science!

“I love that teaching science requires students to critically think and come up with their own interpretations. I learn as much from my students as they learn from me.”—Thad K.

“The excitement in the students when they discover the unexpected and want to know more!”—Deb A.

“Teaching science for me is a passion. I love wondering and asking questions. Passing this passion on to my students is both fun and challenging! There is absolutely never a dull moment.”—Christine V.

“Students’ never-ending questions” —Geneva A.

“I love seeing my students wanting to know more!” —Sonya J.

“Nothing makes my day better than watching a student have an aha moment.”—Laura M.

“I could be teaching a future scientist who just might solve one of the problems facing us today.”—Ruth Z.

“Being able to get my hands dirty with kids and study real-world topics” —Sydney Z.

“Being hands-on and teaching problem-solving skills”—Sarah P.

“I love my students and their passion for chemistry. To me, nothing is more invigorating than hearing them engage each other in making sense of what they are learning.”—Sarah E.
<table>
<thead>
<tr>
<th>BESTSELLERS at a GLANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The NSTA Quick-Reference Guide to the NGSS</td>
</tr>
<tr>
<td>3. Notable Notebooks</td>
</tr>
<tr>
<td>4. Disciplinary Core Ideas</td>
</tr>
<tr>
<td>5. Picture-Perfect STEM Lessons, 3–5</td>
</tr>
<tr>
<td>6. Stop Faking It! Light</td>
</tr>
<tr>
<td>7. Argument-Driven Inquiry in Fourth-Grade Science</td>
</tr>
<tr>
<td>8. Uncovering Student Ideas in Physical Science, Volume 3</td>
</tr>
<tr>
<td>9. Exemplary Evidence</td>
</tr>
<tr>
<td>10. Understanding Climate Change</td>
</tr>
<tr>
<td>11. Next Time You See a Bee</td>
</tr>
<tr>
<td>12. Eureka, Again!</td>
</tr>
<tr>
<td>13. The Feedback Loop</td>
</tr>
<tr>
<td>14. Discovery Engineering in Physical Science</td>
</tr>
</tbody>
</table>
NSTA Book Club Membership

Save up to 50% on our bestselling titles ...

While you’re browsing this catalog and tagging your favorites for purchase, think about our book club membership.

When you sign up for or renew your NSTA membership, select the book club membership option, choose three books from any grade level and on topics readers love—NGSS, STEM, literacy, assessment, and more—then wait for your favorite books to arrive on your doorstep while enjoying all of your other NSTA member benefits.

See all membership options, including regular, new teacher, and institutional memberships, at www.nsta.org/membership

Become an NSTA Book Club Member at www.nsta.org/bookclub
Instructional Sequence Matters, Grades 3–5
*Explore Before Explain*
Patrick Brown | NSTA PRESS, GRADES 3–5

Instructional sequence definitely does matter when it comes to helping children in grades 3 to 5 learn science. That’s why this book focuses on showing you how to do two things: (1) make simple shifts in the way you arrange and combine activities and (2) put the Next Generation Science Standards (NGSS) into practice. Like its popular counterpart for grades 6–8 (p. 35), the book gives you a complete self-guided tour to becoming an “explore-before-explain” teacher. When you adopt this teaching mindset, you’ll help your students construct accurate knowledge firsthand—an important part of science learning even for elementary-age children.

*Instructional Sequence Matters* is grounded in two research-based approaches: POE (Predict, Observe, and Explain) and 5E (Engage, Explore, Explain, Elaborate, and Evaluate). Author Patrick Brown starts by describing why the order in which you structure your lessons is so critical. Then you’ll learn how to plan and design these instructional sequences yourself. Ready-to-use lessons will help you turn theory into action when you’re teaching about heat and temperature, magnetism, electric circuits, chemical changes, ecosystems, and Earth processes. Detailed examples show how specific aspects of all three dimensions of the NGSS can translate in your classroom. Reflection questions throughout the book challenge you to embrace and adapt the new approaches. “Not only is *Instructional Sequence Matters* a delightful read, but it is also practical and helpful,” Rodger W. Bybee, author of *The BSCS 5E Instructional Model*, writes in the foreword. “What more could science teachers ask for?”

#: PB438X2 Members: $20.76 Non-members: $25.95
E-book #: PKEB438X2 Members: $15.57 Non-members: $19.46

Matter and Energy for Growth and Activity
AAAS/Project 2061 | NSTA PRESS, GRADES 9–12

How do our bodies get the “stuff” we need to repair a broken leg? Where do we get the energy—even while we sleep—to keep us alive and functioning? *Matter and Energy for Growth and Activity* helps your high school students explore questions like these while learning essential ideas about food, human body systems, matter and energy changes, and chemical reactions. The book provides 14 lessons that were developed by a team of scientists and science educators and then tested in classrooms. Building on the middle school unit *Toward High School Biology* (p. 46), *Matter and Energy for Growth and Activity* helps students deepen their understanding of changes in plants and animals and the role of chemical reactions in the growth, repair, and activity of living organisms.

*Matter and Energy* is teacher-friendly and designed to engage students in a rich variety of phenomena. It integrates all three dimensions of the NGSS. It targets important ideas in both physical and biological systems while prompting students to build their skills in computation and data interpretation. And it comes in a Student Edition as well as a Teacher Edition, which shows sample student answers and explains the design rationale of each activity. The detailed guidance for teachers is complemented by online resources, including interactive media, videos, and handouts.

*Matter and Energy for Growth and Activity, Teacher Edition*
© 2019; 978-1-68140-685-5; 420 pages
#: PB448XT Members: $35.96 Non-members: $44.95
E-book #: PKEB448XT Members: $26.97 Non-members: $33.71
Book/E-book Set #: PKE448XT Members: $43.15 Non-members: $53.94

*Matter and Energy for Growth and Activity, Student Edition*
© 2019; 978-1-68140-686-2; 200 pages
#: PB448XS Members: $15.96 Non-members: $19.95
E-book #: PKEB448XS Members: $11.97 Non-members: $14.96
Book/E-book Set #: PKE4E48XS Members: $19.15 Non-members: $23.94
Making Sense of Science and Religion
Strategies for the Classroom and Beyond
Joseph W. Shane, Lee Meadows, Ronald S. Hermann, and Ian C. Binns
NSTA PRESS, GRADES K–12

It’s inevitable: If your lessons deal with evolution, genetics, the origin of the universe, or climate change, some students are bound to question whether they can reconcile what you teach with what they believe about religion. Making Sense of Science and Religion is the book that will help you anticipate and respond to their questions—and help students learn science while maintaining their religious beliefs. Understanding that science and religion can co-exist can also make students more willing to learn, regardless of messages to the contrary that they may hear outside of your classroom.

This book is divided into three parts: (1) some historical and cultural background as well as a framework for addressing science-religion issues in a legal, constitutional manner; (2) guidance on teaching specific scientific concepts at every grade level; and (3) advice for engaging families, administrators, school boards, policy makers, and faith communities. The book’s authors are all personally and professionally invested in the subject. They are a mix of K–12 teachers, college professors, and experts from organizations such as the American Association for the Advancement of Science and the Smithsonian National Museum of Natural History. As the preface notes, their hope is that you’ll find “the concise yet comprehensive nature of this book useful to your everyday work and to your greater understanding of science and religion.”

#: PB447X Members: $20.76 Non-members: $25.95
E-book #: PKEB447X Members: $15.57 Non-members: $19.46

It’s Still Debatable!
Using Socioscientific Issues to Develop Scientific Literacy, K–5
Sami Kahn
NSTA PRESS, GRADES K–5

Is football too dangerous for kids? Do we need zoos? Should distracted walking be illegal? These are the types of real-world questions that young scientists can explore with It’s Still Debatable! The book uses science-related societal issues, or socioscientific issues, to help your K–5 students develop scientific literacy as you encourage them to become informed citizens. A research-based framework is the basis for 14 classroom-tested lesson plans that support the Next Generation Science Standards, link to the Common Core State Standards, National Curriculum Standards for Social Studies, and C3 Framework, and are developmentally appropriate for diverse elementary classrooms. The book also includes a chapter especially for use in methods courses and professional development programs.

Like It’s Debatable! its counterpart for grades K–12 (see p. 36), this new book is practical and content-rich. It engages students through hands-on investigations, research, debates, role-playing, and discussions. Because the book is specifically for elementary grades, the author was sensitive to your need for teach-ready resources that integrate science into your packed school days. You get clear and accessible background information, practical guidance on how to use the lessons, and developmentally appropriate assessments and handouts. The goal is to enable you to make science real for students even as you empower them to become agents of change in their schools and communities.

#: PB347X2 Members: $34.36 Non-members: $42.95
E-book #: PKEB347X2 Members: $25.77 Non-members: $32.21
Book/E-book Set #: PKE347X2 Members: $41.23 Non-members: $51.14

Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
Physics in Motion, Grade K
STEM Road Map for Elementary School

What if you could challenge your kindergartners to create a mini roller coaster? Physics in Motion turns a fun building project into an opportunity to investigate concepts such as energy, gravity, friction, and speed. Students will use the engineering design process while working collaboratively to design, build, and test marble track roller coasters. They will measure, compare, and evaluate numbers related to their project. They’ll use technology to do research and demonstrate their awareness of motion-related concepts. They’ll even craft a plan for making the roller coaster part of a theme park and then create a flyer to advertise it. The module is an entry point for students to explore the physics of motion through play and then decide which roller coaster design is best.

#: PB425X16  E-book #: PKEB425X16  Book/E-book Set #: PKE425X16

Influence of Waves, Grade 1
STEM Road Map for Elementary School

What if you could challenge your first graders to create instruments they can play in their own “Show Me the Waves” musical show? Influence of Waves introduces children to the concept of waves as disturbances that travel through space and substances to transfer energy. With this module, your students will conduct a variety of investigations using science as well as English language arts, mathematics, and social studies. Along the way, they’ll discover that different types of waves, such as water and sound, come from different sources and travel in various ways. They’ll find out that eyes, ears, and skin respond to sound and light. Then they’ll finish the module with a bang! By combining their voices and flashlights with guitars and drums they’ve made themselves, they’ll put on a show to demonstrate how to use sound waves and light to communicate and entertain.


Natural Hazards, Grade 2
STEM Road Map for Elementary School

What if you could challenge your second graders to help communities prepare for disasters ranging from floods and wildfires to earthquakes and hurricanes? With Natural Hazards, you can! The goal is for students to learn about the effects—including the economic kind—of natural hazards on people, animals, communities, and the environment. Then they’ll consider ways to minimize those threats. Working in teams, your second graders will use science, English language arts, mathematics, social studies, and the engineering design process to create a model of tornado winds, construct models of structures that can withstand earthquakes, find out about weather predictions, and even create their own tall tales related to natural hazards. In the end, the students will produce a plan to keep a community safe if a natural hazard strikes, including a public service announcement about how to be prepared.

#: PB425X18  E-book #: PKEB425X18  Book/E-book Set #: PKE425X18
New Releases

Discovery Engineering in Biology
Case Studies for Grades 6–12
Rebecca Hite, Gina Childers, Megan Ennes, and M. Gail Jones | NSTA PRESS, GRADES 6–12

Who knew that small, plant-eating mammals called pikas helped scientists find new ways to survive extreme weather events? Your students will learn about amazing scientific advancements like this when you use the 20 lessons in Discovery Engineering in Biology. The book is a lively way to blend history, real-world perspectives, 21st-century skills, and engineering into your biology or STEM curriculum.

Like the physical science volume (see p. 11), this book features case studies about observations and accidental discoveries that led to the invention of new products and problem-solving applications. After reading a historical account of an actual innovation, students explore related activities that connect to such topics as molecules and organisms, ecosystems, heredity, and biological evolution. They conduct research, analyze data, and use the engineering design process to develop products or applications of their own. Students are sure to be intrigued by investigations with titles such as “Vindicating Venom: Using Biological Mechanisms to Treat Diseases and Disorders” and “Revealing Repeats: The Accidental Discovery of DNA Fingerprinting.”

#: PB444X2 Members: $31.96 Non-members: $39.95
E-book #: PKEB444X2 Members: $23.97 Non-members: $29.96
Book/E-book Set #: PKE444X2 Members: $38.35 Non-members: $47.94

Creating Engineering Design Challenges
Success Stories From Teachers
Helen Meyer, Anant R. Kukreti, Debora Liberi, and Julie Steimle, Editors | NSTA PRESS | GRADES 6–12

The 13 units in Creating Engineering Design Challenges provide innovative ways to make science and math relevant to middle and high school students through challenge-based learning and the engineering design process. Content areas include biology, chemistry, physical science, and environmental science. Topics range from developing a recipe for cement to implementing geocaching to calculating accurate aim with slingshots and water balloons.

You can be sure the units are classroom-ready because they were contributed by the same teachers who developed, used, and revised them. They provide detailed accounts of their units as well as lesson plans and handouts. The book also offers guidance on fostering professional development to support and grow your school’s engineering education practice. Use it to help you change your classroom environment, empower students, and move toward a more student-centered classroom culture that leads to deeper learning.

#: PB451X Members: $31.96 Non-members: $39.95
E-book #: PKEB451X Members: $23.97 Non-members: $29.96
Book/E-book Set #: PKE451X Members: $38.35 Non-members: $47.94

Science Curriculum Topic Study
Bridging the Gap Between Three-Dimensional Standards, Research, and Practice, Second Edition
Page Keeley and Joyce Tugel | NSTA PRESS AND CORWIN, GRADES K–12

The second edition of this bestseller is newly mapped to the Framework and NGSS and has been updated with new standards and research-based resources. It will help science educators make the shifts needed to reflect current practices in curriculum, instruction, and assessment. The new edition also has an increased emphasis on STEM, particularly engineering. The methodical study process described in this book will help readers intertwine content, practices, and crosscutting concepts.

#: PA004E2 Members: $35.96 Non-members: $44.95

Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
Great news for third- and fourth-grade teachers: Here are the first books of their kind designed specifically to help you make the instructional shift to argument-driven inquiry (ADI). Now you can use this innovative approach to prompt elementary students to use argument to construct, support, and evaluate scientific claims. Like the bestselling ADI books for middle and high school (see pp. 16–17), these volumes are written by veteran teachers who know the importance of gathering instructional materials into one useful resource. Each lesson comes with teacher notes, investigation handouts, and checkout questions.

The investigations help students reach the performance expectations in the Next Generation Science Standards and develop the disciplinary-based skills in the Common Core State Standards for English language arts and mathematics. The books can also help emerging bilingual students meet the English Language Proficiency Standards with their tips for teaching English language learners. You’ll see how to emphasize “figuring things out” instead of “learning about things,” which will help your students develop the knowledge and skills they need to be proficient in science.

**Argument-Driven Inquiry in Third-Grade Science**

*Three-Dimensional Investigations*

Victor Sampson and Ashley Murphy | NSTA PRESS, GRADE 3

The 14 field-tested lessons cover motion and stability, molecules and organisms, heredity, biological evolution, and Earth’s systems. Your students will explore questions ranging from why wolves live in groups to how the climate changes as one moves from the equator toward the poles.


<table>
<thead>
<tr>
<th>#</th>
<th>Members: $38.36</th>
<th>Non-members: $47.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-book #: PB349X7</td>
<td>Members: $28.77</td>
<td>Non-members: $35.96</td>
</tr>
<tr>
<td>Book/E-book Set #: PKE349X7</td>
<td>Members: $46.03</td>
<td>Non-members: $57.54</td>
</tr>
</tbody>
</table>

**Student Workbook for Argument-Driven Inquiry in Third-Grade Science**


<table>
<thead>
<tr>
<th>#</th>
<th>Members: $15.96</th>
<th>Non-members: $19.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-book #: PB349X7S</td>
<td>Members: $11.97</td>
<td>Non-members: $14.96</td>
</tr>
<tr>
<td>Book/E-book Set #: PKE349X7S</td>
<td>Members: $19.15</td>
<td>Non-members: $23.94</td>
</tr>
</tbody>
</table>

**Argument-Driven Inquiry in Fourth-Grade Science**

*Three-Dimensional Investigations*

Victor Sampson and Ashley Murphy | NSTA PRESS, GRADE 4

The 15 field-tested lessons cover energy, waves and their application in technologies for information transfer, molecules and organisms, and Earth’s place in the universe and systems. Your students will explore questions ranging from how you can make an electric car move faster to why big waves block the entrance to some New Zealand harbors.


<table>
<thead>
<tr>
<th>#</th>
<th>Members: $38.36</th>
<th>Non-members: $47.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-book #: PB349X8</td>
<td>Members: $28.77</td>
<td>Non-members: $35.96</td>
</tr>
<tr>
<td>Book/E-book Set #: PKE349X8</td>
<td>Members: $46.03</td>
<td>Non-members: $57.54</td>
</tr>
</tbody>
</table>

**Student Workbook for Argument-Driven Inquiry in Fourth-Grade Science**


<table>
<thead>
<tr>
<th>#</th>
<th>Members: $15.96</th>
<th>Non-members: $19.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-book #: PB349X8S</td>
<td>Members: $11.97</td>
<td>Non-members: $14.96</td>
</tr>
<tr>
<td>Book/E-book Set #: PKE349X8S</td>
<td>Members: $19.15</td>
<td>Non-members: $23.94</td>
</tr>
</tbody>
</table>
Imagine what fun it could be for 3- to 7-year-olds to engage in a game of Prism Play or Magnetic Scavenger Hunt or Where Did the Shadows Go? Then imagine how convenient it would be for you if such activities came with the connections, standards, and assessments today’s early childhood educators need most. Your dream resource comes to life in this revised and expanded edition of *A Head Start on Science: Encouraging a Sense of Wonder*. It builds on children’s innate curiosity through 89 developmentally appropriate, teacher-tested activities in life, Earth, and physical science.

Like *A Head Start on Life Science* (p. 44), this book emphasizes child-centered development of science practices and skills. Children can explore the natural world as they take advantage of lively opportunities for science learning. But here’s what sets this book apart: It’s an all-in-one resource for caregivers and teachers from preK to grade 2. Each lesson includes a follow-up activity, connections to centers and children’s literature, assessment guides, and bonus activities written in Spanish and English that let families continue the fun—and the learning—at home. Each activity also supports both the 2015 Head Start Early Learning Outcomes Framework and the *Next Generation Science Standards*. Whether your young scientists are building bird nests or making bubbles, *A Head Start on Science, Second Edition* will enrich what the editors call “your noble and indispensable work—providing children with opportunities to follow their own curiosity as they joyfully explore the natural world.”


---

**Uncovering Student Ideas in Physical Science, Volume 3**

*32 New Matter and Energy Formative Assessment Probes*

**Page Keeley and Susan Cooper | NSTA PRESS, GRADES 3–12**

*Uncovering Student Ideas in Physical Science, Volume 3* offers 32 new formative assessment probes to help you understand how your students (and even you!) think about matter and energy core ideas. The 11th book in the *Uncovering Student Ideas in Science* series (see pp. 18–19), this volume delivers the same teacher-friendly features that have made the series a bestseller among educators at all grade levels. It also provides all 32 probes in both Spanish and English.

This new volume is organized into four sections: (1) the concept of matter and particle model of matter; (2) properties of matter; (3) classifying matter, chemical properties, and chemical reactions; and (4) nuclear processes and energy. The probes are short and easy to administer. They’ll help you uncover students’ existing beliefs about everything from a particle model of matter to ways of describing energy.

Armed with insights into your students’ thinking, you can use the teacher materials to make informed instructional decisions. Because the content is explained in clear, everyday language, science novices can improve their own understanding of the content they teach. With *Uncovering Student Ideas in Physical Science, Volume 3*, you’ll be ready for the important next step: choosing the instructional path that will work best with your learning goal, your students’ preconceptions, and the diverse learners in your classroom.


---

**A Head Start on Science, Second Edition**

*Encouraging a Sense of Wonder*

**William C. Ritz and William Straits, Editors | NSTA PRESS, GRADES PREK–2**

Imagine what fun it could be for 3- to 7-year-olds to engage in a game of Prism Play or Magnetic Scavenger Hunt or Where Did the Shadows Go? Then imagine how convenient it would be for you if such activities came with the connections, standards, and assessments today’s early childhood educators need most. Your dream resource comes to life in this revised and expanded edition of *A Head Start on Science: Encouraging a Sense of Wonder*. It builds on children’s innate curiosity through 89 developmentally appropriate, teacher-tested activities in life, Earth, and physical science.

Like *A Head Start on Life Science* (p. 44), this book emphasizes child-centered development of science practices and skills. Children can explore the natural world as they take advantage of lively opportunities for science learning. But here’s what sets this book apart: It’s an all-in-one resource for caregivers and teachers from preK to grade 2. Each lesson includes a follow-up activity, connections to centers and children’s literature, assessment guides, and bonus activities written in Spanish and English that let families continue the fun—and the learning—at home. Each activity also supports both the 2015 Head Start Early Learning Outcomes Framework and the *Next Generation Science Standards*.

Whether your young scientists are building bird nests or making bubbles, *A Head Start on Science, Second Edition* will enrich what the editors call “your noble and indispensable work—providing children with opportunities to follow their own curiosity as they joyfully explore the natural world.”


---

**SAVE! Buy with A Head Start on Life Science!**

**Page Keeley and Susan Cooper | NSTA PRESS, GRADES PREK–2**

*Uncovering Student Ideas in Physical Science, Volume 3* offers 32 new formative assessment probes to help you understand how your students (and even you!) think about matter and energy core ideas. The 11th book in the *Uncovering Student Ideas in Science* series (see pp. 18–19), this volume delivers the same teacher-friendly features that have made the series a bestseller among educators at all grade levels. It also provides all 32 probes in both Spanish and English.

This new volume is organized into four sections: (1) the concept of matter and particle model of matter; (2) properties of matter; (3) classifying matter, chemical properties, and chemical reactions; and (4) nuclear processes and energy. The probes are short and easy to administer. They’ll help you uncover students’ existing beliefs about everything from a particle model of matter to ways of describing energy.

Armed with insights into your students’ thinking, you can use the teacher materials to make informed instructional decisions. Because the content is explained in clear, everyday language, science novices can improve their own understanding of the content they teach. With *Uncovering Student Ideas in Physical Science, Volume 3*, you’ll be ready for the important next step: choosing the instructional path that will work best with your learning goal, your students’ preconceptions, and the diverse learners in your classroom.


---

**Uncovering Student Ideas in Physical Science, Volume 3**

*32 New Matter and Energy Formative Assessment Probes*

**Page Keeley and Susan Cooper | NSTA PRESS, GRADES 3–12**

*Uncovering Student Ideas in Physical Science, Volume 3* offers 32 new formative assessment probes to help you understand how your students (and even you!) think about matter and energy core ideas. The 11th book in the *Uncovering Student Ideas in Science* series (see pp. 18–19), this volume delivers the same teacher-friendly features that have made the series a bestseller among educators at all grade levels. It also provides all 32 probes in both Spanish and English.

This new volume is organized into four sections: (1) the concept of matter and particle model of matter; (2) properties of matter; (3) classifying matter, chemical properties, and chemical reactions; and (4) nuclear processes and energy. The probes are short and easy to administer. They’ll help you uncover students’ existing beliefs about everything from a particle model of matter to ways of describing energy.

Armed with insights into your students’ thinking, you can use the teacher materials to make informed instructional decisions. Because the content is explained in clear, everyday language, science novices can improve their own understanding of the content they teach. With *Uncovering Student Ideas in Physical Science, Volume 3*, you’ll be ready for the important next step: choosing the instructional path that will work best with your learning goal, your students’ preconceptions, and the diverse learners in your classroom.


---

**A Head Start on Science, Second Edition**

*Encouraging a Sense of Wonder*

**William C. Ritz and William Straits, Editors | NSTA PRESS, GRADES PREK–2**

Imagine what fun it could be for 3- to 7-year-olds to engage in a game of Prism Play or Magnetic Scavenger Hunt or Where Did the Shadows Go? Then imagine how convenient it would be for you if such activities came with the connections, standards, and assessments today’s early childhood educators need most. Your dream resource comes to life in this revised and expanded edition of *A Head Start on Science: Encouraging a Sense of Wonder*. It builds on children’s innate curiosity through 89 developmentally appropriate, teacher-tested activities in life, Earth, and physical science.

Like *A Head Start on Life Science* (p. 44), this book emphasizes child-centered development of science practices and skills. Children can explore the natural world as they take advantage of lively opportunities for science learning. But here’s what sets this book apart: It’s an all-in-one resource for caregivers and teachers from preK to grade 2. Each lesson includes a follow-up activity, connections to centers and children’s literature, assessment guides, and bonus activities written in Spanish and English that let families continue the fun—and the learning—at home. Each activity also supports both the 2015 Head Start Early Learning Outcomes Framework and the *Next Generation Science Standards*.

Whether your young scientists are building bird nests or making bubbles, *A Head Start on Science, Second Edition* will enrich what the editors call “your noble and indispensable work—providing children with opportunities to follow their own curiosity as they joyfully explore the natural world.”


---

**SAVE! Buy with A Head Start on Life Science!**

**Page Keeley and Susan Cooper | NSTA PRESS, GRADES PREK–2**

*Uncovering Student Ideas in Physical Science, Volume 3* offers 32 new formative assessment probes to help you understand how your students (and even you!) think about matter and energy core ideas. The 11th book in the *Uncovering Student Ideas in Science* series (see pp. 18–19), this volume delivers the same teacher-friendly features that have made the series a bestseller among educators at all grade levels. It also provides all 32 probes in both Spanish and English.

This new volume is organized into four sections: (1) the concept of matter and particle model of matter; (2) properties of matter; (3) classifying matter, chemical properties, and chemical reactions; and (4) nuclear processes and energy. The probes are short and easy to administer. They’ll help you uncover students’ existing beliefs about everything from a particle model of matter to ways of describing energy.

Armed with insights into your students’ thinking, you can use the teacher materials to make informed instructional decisions. Because the content is explained in clear, everyday language, science novices can improve their own understanding of the content they teach. With *Uncovering Student Ideas in Physical Science, Volume 3*, you’ll be ready for the important next step: choosing the instructional path that will work best with your learning goal, your students’ preconceptions, and the diverse learners in your classroom.

Understanding Climate Change, Grades 7–12
Laura Tucker and Lois Sherwood | NSTA PRESS, GRADES 7–12

Get help teaching one of the hottest topics in science with Understanding Climate Change, Grades 7–12. This nine-session module is written to be practical and accessible. It provides both extensive background and step-by-step instructions for using three-dimensional methods to explore this complex subject. It fits easily into a middle or high school curriculum while supporting the Next Generation Science Standards. The material can be covered in just three or four weeks or used in part to supplement your existing curriculum. Best of all, your students will find the module truly engaging. Rather than spoon-feeding them information, the lessons spur them to investigate evidence of climate change and global warming for themselves.

Understanding Climate Change is designed with the Learning Cycle and the BSCS 5E Instructional Model in mind. The module starts with an in-depth look at sources of CO₂ (carbon dioxide) and the greenhouse effect. It then addresses misconceptions about climate change; in fact, an entire session is devoted to evaluating information to see if it’s accurate, verifiable, complete, and from a reputable source. Then the lessons prompt students to conduct their own scientific research, discuss ripple effects, and examine solutions. The authors deliberately structured this module to build a conceptual foundation without risking information overload. Your students will come away prepared to analyze what they hear about climate change outside of class. They’ll also be ready to use critical thinking skills to draw their own conclusions about what should be done and to come up with ways they can take action to mitigate the effects of climate change in their homes, schools, and communities.

#: PB445X
E-book #: PKEB445X
Book/E-book Set #: PKE445X
Members: $25.56    Non-members: $31.95
Members: $19.17    Non-members: $23.96
Members: $30.67    Non-members: $38.34

Staging Family Science Nights
Donna Governor and Denise Webb | NSTA PRESS, GRADES K–12

Get rave reviews for science by putting this book’s step-by-step plans to work. Staging Family Science Nights is your playbook for creating an informal learning environment that will generate enthusiasm and enjoyment of science among the entire family. The first section of the book—“Producing the Event”—devotes eight chapters to planning, recruiting volunteers (including students), setting up, last-minute troubleshooting, and injecting pizzazz. The four chapters in the second section—“On the Stage”—offer guidance and templates for activities at the novice, intermediate, and advanced levels. Activities include “Balancing Bugs,” “Bubble Olympics,” and “Creating Color Slime.”

The book is designed to be a crowd-pleaser, whether you’re looking for new ideas for an established science night or planning your first one. It’s useful for teachers at all levels as well as homeschoolers and informal education programs. Best of all, the authors, both veteran educators, are dedicated to making sure your science night showcases quality science content and practices. Based on their years of personal experience, they write, “A successful Family Science Night is a perfect coming together of informal science learning, student leadership, community support, and schoolwide excitement.” Get this book and get ready to take a bow!

#: PB443X
E-book #: PKEB443X
Book/E-book Set #: PKE443X
Members: $25.56    Non-members: $31.95
Members: $18.17    Non-members: $23.96
Members: $30.67    Non-members: $38.34

Order by phone: 800-277-5300 Read sample chapters and order online: www.nsta.org/store
Investigating Environmental Changes, Grade 2

What if you could challenge your second graders to build an outdoor STEM classroom—complete with a butterfly garden, bird bath, and sundial? Investigating Environmental Changes provides young children with a STEM context in which to explore how plant and animal life cycles coincide with the Earth’s movement around the Sun. To develop a proposal and data collection plan for their outdoor classroom, students will draw on life, Earth, and environmental sciences; the engineering design process; mathematics; and English language arts. In addition, they will make connections among local weather patterns, the seasons, and plant life cycles. They will also learn about recycling, including sorting and tracking recycled materials.


Rainwater Analysis, Grade 5

What if you could challenge your fifth graders to design rainwater recycling and delivery systems to provide water for a fictional community garden? With Rainwater Analysis, students can use their own school building and grounds as a design lab. This interdisciplinary module makes the connection between Earth’s spheres, rainfall analysis, irrigation, and mathematical modeling. Students draw on Earth and environmental science and the engineering design process to complete activities such as creating a rain gauge, learning about volume calculations, and analyzing data to determine the best location for a water collection system. Students will also use English language arts to present a proposal for a rainwater system, formulate a message about watershed conservation, and create an ad campaign to share with their community.

© 2019; ISBN: 978-1-68140-449-3; 244 pages

Radioactivity, Grade 11

What if you could challenge your 11th graders to figure out the best response to a partial meltdown at a nuclear reactor in fictional Gammatown, USA? Radioactivity helps high school students understand the debate over the safety and efficiency of using nuclear power to meet the country’s energy demands. Teams of students will apply what they learn about the science and history of nuclear energy to convey the views of particular stakeholder groups. They will explore how radioactive decay, nuclear fission, and nuclear fusion work. They will model nuclear fission, create computer-generated simulations, and perform mathematical computations. Mathematics skills will help them calculate the energy yield of an individual nuclear event (decay, fission, and fusion) and use exponential functions to represent chain reactions. Finally, they’ll make a presentation and adopt the roles of stakeholders grappling with the aftermath of the accident.

Discovery Engineering in Physical Science
Case Studies for Grades 6–12
M. Gail Jones, Elysa Corin, Megan Ennes, Emily Cayton, and Gina Childers
NSTA PRESS, GRADES 6–12

Who knew that gecko feet inspired scientists to develop a stickier adhesive or that cockleburs in dog fur led to the invention of Velcro? Discovery Engineering in Physical Science uses these and other surprising cases of innovations sparked by accidental observations to teach about the amazing role of serendipity in science. The case studies in this new resource are a lively way to integrate engineering into your physical science classes. Middle and high school students will learn to understand fundamental science processes while trying out their own ideas for unexpected applications.

Each of the book’s 22 investigations starts with a real case of accidental inspiration that students explore through primary documents or historical accounts. Then it’s time for the students to become the innovators. They’re tasked to do research, examine data and physical materials, and use their own creativity to design new products or problem-solving applications. The investigations are easy to implement and flexible enough to use in part or as a whole. Students will learn one or more science concepts as they’re exposed to background on the unpredictable nature of science. And they’ll be intrigued by investigations with titles such as “By the Teeth of Your Skin: Shark Skin and Bacteria” and “From Ship to Staircase: The History of the Slinky.” Try this book and see what happens! The result may be more engaged students—and more great ideas about how gecko feet can inspire solutions to everyday problems.


Supporting Emergent Multilingual Learners in Science, Grades 7–12
Molly Weinbugh, Cecilia Silva, and Kathy Horak Smith
NSTA PRESS, GRADES 7–12

Here’s the resource you need to combine middle and high school science content with down-to-earth help for emergent multilingual learners—students learning science as well as English. Based on solid research findings, this book shows you how to put into practice the 5R Instructional Model: Replace, Reveal, Repeat, Reposition, and Reload. The model provides a framework for creating instructional strategies that offer authentic language-learning opportunities within your inquiry-based science classroom.

Supporting Emergent Multilingual Learners in Science starts with useful context about the need for a special approach to integrating science and language. Then it moves from theory to practice by focusing on each of the five Rs and showing how they play out in particular scenarios. Finally, a chapter called “Voices From Teachers” lets you learn from colleagues who’ve used the 5R model as a tool to develop science lessons in actual classrooms. The authors of Supporting Emergent Multilingual Learners in Science have diverse backgrounds in science, mathematics, and bilingual education. Drawing on the overlap they’ve discovered among these areas, they show how you can reduce conflicts and enhance connections between inquiry teaching and language instruction.

Map out a journey that will steer your students toward authentic problem solving as you ground them in integrated STEM disciplines. This K–12 curriculum series is anchored in the Next Generation Science Standards, the Common Core State Standards, and the Framework for 21st Century Learning. It was developed to meet the growing need to infuse real-world learning into classrooms. Each book is an in-depth module that uses project- and problem-based learning. Your students are presented with a challenge. Then, they apply what they learn using science, social studies, English language arts, and mathematics. Engaging and flexible, each volume can be used as a whole unit or in part to meet the needs of districts, schools, and teachers who are charting a course toward an integrated STEM approach.

Patterns and the Plant World, Grade 1
STEM Road Map for Elementary School
Students are challenged to relate changes in seasonal weather patterns to changes in the plant world, with an emphasis on observation, data collection, measurement, and presenting numerical data in graphic form.

Swing Set Makeover, Grade 3
STEM Road Map for Elementary School
Students are challenged to design playground equipment that safely meets their own standards for fun as they learn about motion, forces, and geometric shapes and use mathematical tools to collect and record data.

Transportation in the Future, Grade 3
STEM Road Map for Elementary School
Students are challenged to design a train of the future as they develop conceptual understanding of innovations in train technology, with a focus on maglev (magnetic levitation) trains.
#: PB425X2 E-book #: PKEB425X2 Book/E-book Set #: PKE425X2

Harnessing Solar Energy, Grade 4
STEM Road Map for Elementary School
Students are challenged to design a way for solar energy to provide the world with clean water as they investigate energy, energy sources, and the greenhouse effect.
#: PB425X1 E-book #: PKEB425X1 Book/E-book Set #: PKE425X1
Curriculum Series

Wind Energy, Grade 5
*STEM Road Map for Elementary School*

Students are challenged to develop an economical, eco-friendly wind farm as they investigate the interactions of Earth’s systems, including geography, weather, and wind.

© 2018; ISBN: 978-1-68140-446-2; 220 pages
 #: PB425X3  E-book #: PKEB425X3  Book/E-book Set #: PKE425X3

Amusement Park of the Future, Grade 6
*STEM Road Map for Middle School*

Students are challenged to research the background and designs of amusement parks as they learn about energy transfer, create blueprints, build and test small-scale prototypes, and develop cost–benefit analyses.

 #: PB425X5  E-book #: PKEB425X5  Book/E-book Set #: PKE425X5

Packaging Design, Grade 6
*STEM Road Map for Middle School*

Students are challenged to create packaging that’s engineered to both protect a product and make it a hot seller as they learn about geometric properties of three-dimensional shapes and engineering design.

 #: PB425X10  E-book #: PKEB425X10  Book/E-book Set #: PKE425X10

Improving Bridge Design, Grade 8
*STEM Road Map for Middle School*

Students are challenged to design bridges that last longer as they construct scale models, research and compare minerals and rocks involved in bridge building, and investigate how much bridges cost and what could make them more sustainable.

 #: PB425X7  E-book #: PKEB425X7  Book/E-book Set #: PKE425X7

Construction Materials, Grade 11
*STEM Road Map for High School*

Students explore how high-rises are constructed, their influence on society, and how to communicate complex ideas clearly; the factors involved in the collapse of the World Trade Center’s twin towers in New York, with a focus on how engineers use structural failures to learn more about the designed world; and construction innovations.

 #: PB425X4  E-book #: PKEB425X4  Book/E-book Set #: PKE425X4

Car Crashes, Grade 12
*STEM Road Map for High School*

Students are challenged to research how car accidents happen—and what can be done to prevent them. They will investigate many aspects of accident prevention and response. They’ll also use mathematics to reverse-engineer car crash scenarios and synthesize the information so they can act as expert witnesses in a simulated courtroom.

If you’ve ever asked yourself whether problem-based learning (PBL) can bring new life to both your teaching and your students’ learning, here’s your answer: Yes. The Problem-Based Learning series will help you engage your students in scenarios that represent real-world science in all its messy, thought-provoking glory. The scenarios will prompt K–12 students to work collaboratively on analyzing problems, asking questions, posing hypotheses, and constructing solutions.

These all-in-one guides are both informative and practical. In addition to complete lesson plans that support the Next Generation Science Standards, they offer extensive examples, instructions, and tips. Best of all, the books provide you with what many think is the trickiest part of PBL: rich, authentic problems. The authors not only facilitated the National Science Foundation–funded PBL Project for Teachers but also perfected the lessons in their own teaching. You can be confident that the problems and the teaching methods are teacher tested and approved.

Problem-Based Learning in the Life Science Classroom, K–12
* PB408X2 E-book #: PKEB408X2 Book/E-book Set #: PKE408X2

Problem-Based Learning in the Earth and Space Science Classroom, K–12
* PB408X1 E-book #: PKEB408X1 Book/E-book Set #: PKE408X1

Problem-Based Learning in the Physical Science Classroom, K–12
* PB408X3 E-book #: PKEB408X3 Book/E-book Set #: PKE408X3

SAVE! Buy all three volumes together!
* #: PK408X3 Members: $79.69 Non-members: $99.61

Read sample chapters and order online: www.nsta.org/store  Order by phone: 800-277-5300
Powerful Practices Series

Julie V. McGough and Lisa M. Nyberg | NSTA PRESS, GRADES K–6

“The Powerful Practices series is an ideal bridge between theory and practice. Teachers love the user-friendly resources, which encourage their students to ask questions and suggest ways to make learning applicable to the real world. The authors provide the support teachers need to appropriately use the NGSS with students of all ages. These books are ‘must have’ resources.”

—Nan Barker, regional director, CalStateTEACH, California State University, Fresno

The books in NSTA’s Powerful Practices series are powerful tools in small packages! Through thoughtful text, informative photographs, and links to special videos, they provide fresh, lively strategies you and your students can learn from and enjoy and use to integrate state standards, Next Generation Science Standards, Common Core State Standards, and STEM education practices. The authors of the Powerful Practices series are veteran educators who know how busy and demanding today’s K–6 classrooms are.

The series is based on a three-part instructional model—Powerful Practices—grounded in questioning, investigation, and assessment. The Power of Questioning shows how to nurture the potential for learning that grows out of children’s irrepressible urge to ask questions. The Power of Investigating examines the promise that investigations offer when exploring student and teacher questions. The Power of Assessing covers assessment in the Powerful Practices method. Each volume can work as a stand-alone reference to help you develop assessments across disciplines and guide deeper thinking. The series can also be used as part of a professional development program or preservice class in elementary science or integrated instruction.

**The Power of Questioning**
Guiding Student Investigations
#: PB358X  E-book #: PKEB358X  Book/E-book Set #: PKE358X

**The Power of Investigating**
Guiding Authentic Assessments
#: PB358X2  E-book #: PKEB358X2  Book/E-book Set #: PKE358X2

**The Power of Assessing**
Guiding Powerful Practices
#: PB358X3  E-book #: PKEB358X3  Book/E-book Set #: PKE358X3

**SAVE! Buy all three volumes together!**
#: PK358X3  Members: $56.89  Non-members: $71.11

Order by phone: 800-277-5300  Read sample chapters and order online: www.nsta.org/store
The Argument-Driven Inquiry series helps teachers make labs much more active and engaging for their students. The investigations teach students to use argument to construct, support, and evaluate scientific claims of their own and others. Students will dig into important content as they gain a better understanding of the science and engineering practices, crosscutting concepts, and disciplinary core ideas of the Next Generation Science Standards. These investigations will also enable students to develop the skills outlined in the Common Core State Standards and practice reading, writing, speaking, and using math in the context of science.

The books include reproducible student pages, teacher notes, checkout questions, and standards-alignment matrices, so teachers have everything they need to start incorporating these authentic experiences in their classrooms. Students will have the opportunity to design their own methods, collect and analyze data, generate arguments, and critique claims and evidence. Each book has a companion Student Lab Manual that includes everything students need to complete the investigations.

See new elementary volumes on page 7!
Driven Inquiry

Argument-Driven Inquiry in Life Science
Lab Investigations for Grades 6–8
Patrick J. Enderle, Ruth Bickel, Leeanne Gleim, Ellen Granger, Jonathon Grooms, Melanie Hester, Ashley Murphy, Victor Sampson, and Sherry A. Southerland

NSTA PRESS, GRADES 6–8

#: PB349X3  E-book #: PKEB349X3  Book/E-book Set #: PKE349X3

Student Lab Manual for Argument-Driven Inquiry in Life Science

#: PB349X3S  E-book #: PKEB349X3S  Book/E-book Set #: PKE349X3S

Argument-Driven Inquiry in Physical Science
Lab Investigations for Grades 6–8
Jonathon Grooms, Patrick J. Enderle, Todd Hutner, Ashley Murphy, and Victor Sampson

NSTA PRESS, GRADES 6–8

#: PB349X4  E-book #: PKEB349X4  Book/E-book Set #: PKE349X4

Student Lab Manual for Argument-Driven Inquiry in Physical Science

#: PB349X4S  E-book #: PKEB349X4S  Book/E-book Set #: PKE349X4S

Argument-Driven Inquiry in Physics, Volume 1
Lab Investigations for Grades 9–12
Victor Sampson, Todd L. Hutner, Daniel FitzPatrick, Adam LaMee, and Jonathon Grooms

NSTA PRESS, GRADES 9–12

#: PB349X5V1  E-book #: PKEB349X5V1  Book/E-book Set #: PKE349X5V1

Student Lab Manual for Argument-Driven Inquiry in Physics, Volume 1

#: PB349X5V1S  E-book #: PKEB349X5V1S  Book/E-book Set #: PKE349X5V1S

Order by phone: 800-277-5300

Read sample chapters and order online: www.nsta.org/store
Tens of thousands of teachers have taken advantage of the Uncovering Student Ideas series to reveal students’ preconceptions. Each of the first four volumes provides 25 probes with easy-to-follow steps for uncovering and addressing students’ ideas by promoting learning through conceptual change instruction. Probes cover topics such as physical, life, and Earth and space science; the nature of science; and unifying themes. Each volume on page 19 provides topic-specific probes. These invaluable books include teacher materials that explain content, identify links to standards, and suggest grade-appropriate ways to present materials so students learn the concepts accurately. Teachers, professional development coordinators, and college science and preservice faculty will find these resources essential and exciting.

SAVE! Buy these four volumes together!

# PK193X4 Members: $97.13 Non-members: $121.41

Volume 1, Second Edition
25 Formative Assessment Probes

Volume 2
25 More Formative Assessment Probes
Francis Eberle and Joyce Tugel, Coauthors
# PB193X2 E-book #: PKEB193X2 Book/E-book Set #: PKE193X2

Volume 3
Another 25 Formative Assessment Probes
Francis Eberle and Chad Dorsey, Coauthors
# PB193X3 E-book #: PKEB193X3 Book/E-book Set #: PKE193X3

Volume 4
25 New Formative Assessment Probes
Joyce Tugel, Coauthor
# PB193X4 E-book #: PKEB193X4 Book/E-book Set #: PKE193X4

Uncovering Student Ideas in Physical Science, Volume 3
32 New Matter and Energy Formative Assessment Probes
Susan Cooper, Coauthor

With probes written in both Spanish and English! See full description on page 8.
# PB274X3 Members: $30.36 Non-members: $37.95
E-book #: PKEB274X3 Members: $22.77 Non-members: $28.46
Book/E-book Set #: PKE274X3 Members: $36.43 Non-members: $45.54

Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
Uncovering Student Ideas in Astronomy
45 New Formative Assessment Probes
Cary Sneider, Coauthor

# : PB307X
E-book #: PKEB307X
Book/E-book Set #: PKE307X

Members: $30.36
E-book Members: $22.77
Book/E-book Members: $36.43
Non-members: $37.95
E-book Non-members: $28.46
Book/E-book Non-members: $45.54

Uncovering Student Ideas in Life Science, Volume 1
25 New Formative Assessment Probes
# : PB291X1
E-book #: PKEB291X1
Book/E-book Set #: PKE291X1

Members: $25.56
E-book Members: $19.17
Book/E-book Members: $30.67
Non-members: $31.95
E-book Non-members: $23.96
Book/E-book Non-members: $38.34

Uncovering Student Ideas in Primary Science, Volume 1
25 New Formative Assessment Probes for Grades K–2
# : PB335X1
E-book #: PKEB335X1
Book/E-book Set #: PKE335X1

Members: $25.56
E-book Members: $19.17
Book/E-book Members: $30.67
Non-members: $31.95
E-book Non-members: $23.96
Book/E-book Non-members: $38.34

Uncovering Student Ideas in Physical Science, Volume 1
45 New Force and Motion Assessment Probes
Rand Harrington, Coauthor

© 2010; 978-1-935155-18-8; 214 pages
# : PB274X1
E-book #: PKEB274X1
Book/E-book Set #: PKE274X1

Members: $30.36
E-book Members: $22.77
Book/E-book Members: $36.43
Non-members: $37.95
E-book Non-members: $28.46
Book/E-book Non-members: $45.54

Uncovering Student Ideas in Physical Science, Volume 2
39 New Electricity and Magnetism Formative Assessment Probes
Rand Harrington, Coauthor

# : PB274X2
E-book #: PKEB274X2
Book/E-book Set #: PKE274X2

Members: $30.36
E-book Members: $22.77
Book/E-book Members: $36.43
Non-members: $37.95
E-book Non-members: $28.46
Book/E-book Non-members: $45.54

Uncovering Student Ideas in Earth and Environmental Science
32 New Formative Assessment Probes
Laura Tucker, Coauthor

# : PB335X
E-book #: PKEB335X
Book/E-book Set #: PKE335X

Members: $30.36
E-book Members: $22.77
Book/E-book Members: $36.43
Non-members: $37.95
E-book Non-members: $28.46
Book/E-book Non-members: $45.54

SAVE! Buy all 11 Uncovering books plus What Are They Thinking? (p. 40)!
# : PKUSIX12
Members: $318.74
Non-members: $398.43

Order by phone: 800-277-5300
Read sample chapters and order online: www.nsta.org/store
Never before has it been this easy to interest students in reading and science. The Picture-Perfect Science Program combines the appeal of children’s picture books with standards-based science content. The award-winning book series contains lessons, complete with student pages and assessments, that use picture books to guide science instruction. Teachers will love the convenience of our accompanying collections of children’s books. These collections include the children’s trade books cited in all five of the Picture-Perfect books. We also offer ready-to-use Class Packs, which include all of the materials needed to make performing the classroom-tested lessons even easier.

Let NSTA help you make the most of your school or district Picture-Perfect purchase with teacher professional learning opportunities (see p. 64), led by the authors or expert trainers, to support implementation of the program.

## Integrating Reading, Science, and Inquiry in One Complete Package

### Book
- **Members:** $33.56
- **Non-members:** $41.95

### E-book
- **Members:** $25.17
- **Non-members:** $31.46

### Book/E-book
- **Members:** $40.27
- **Non-members:** $50.34

### SAVE! Buy all three volumes together!
- **#:** PK186X3
- **Members:** $95.96
- **Non-members:** $119.95

---

**Picture-Perfect Science Lessons Expanded 2nd Edition**
Karen Ansberry and Emily Morgan
NSTA PRESS, GRADES 3–6

- #: PB186E2
- E-book #: PKEB186E2
- Book/E-book Set #: PKE186E2

**More Picture-Perfect Science Lessons**
Karen Ansberry and Emily Morgan
NSTA PRESS, GRADES K–4

© 2007; ISBN: 978-1-933531-12-0; 238 pages
- #: PB186X2
- E-book #: PKEB186X2
- Book/E-book Set #: PKE186X2

**Even More Picture-Perfect Science Lessons**
Emily Morgan and Karen Ansberry
NSTA PRESS, GRADES K–5

- #: PB186X3
- E-book #: PKEB186X3
- Book/E-book Set #: PKE186X3

---

Read sample chapters and order online: [www.nsta.org/store](http://www.nsta.org/store)
“Teachers in our district have been fans of Picture-Perfect Science for years, and it’s made a huge impact on how they fit science into their school day. We are so excited to do more of the same with the Picture-Perfect STEM Lessons!”

—Chris Gibler, elementary instructional coach, Blue Springs School District in Missouri

**Picture-Perfect STEM Lessons, K–2**
Emily Morgan and Karen Ansberry
NSTA PRESS, GRADES K–2

#: PB422X1
E-book #: PKEB422X1
Book/E-book Set #: PKE422X1

**Picture-Perfect STEM Lessons, 3–5**
Emily Morgan and Karen Ansberry
NSTA PRESS, GRADES 3–5

#: PB422X2
E-book #: PKEB422X2
Book/E-book Set #: PKE422X2

Order by phone: 800-277-5300
Read sample chapters and order online: www.nsta.org/store
Picture-Perfect Science Book Collections

Collections of children’s trade books, some previously out of print, that support the Picture-Perfect Science Lessons series are now available, with each set packaged in a zippered canvas tote. The Collections include loved volumes—such as Diary of a Worm and Dr. Xargle’s Book of Earth Hounds—that will be welcome additions to your school’s science and reading resources.

**Picture-Perfect Science Collection**

Best Value: Trade book Collection + Picture-Perfect Science book

- #: PAK186E2
- Members: $392.00
- Non-members: $490.00

Trade book Collection only

- #: OK186E2
- Members: $376.00
- Non-members: $470.00

Includes more than three dozen books!

---

**More Picture-Perfect Science Collection**


- #: PAK186X2
- Members: $347.96
- Non-members: $434.95

Trade book Collection only

- #: OK186X2
- Members: $331.96
- Non-members: $414.95

Includes more than two dozen books!

---

**Even More Picture-Perfect Science Collection**


- #: PAK186X3
- Members: $359.96
- Non-members: $449.95

Trade book Collection only

- #: OK186X3
- Members: $343.96
- Non-members: $429.95

Includes more than two dozen books!

For a full list of the books available in each Collection, please visit www.nsta.org/pictureperfect.

Read sample chapters and order online: www.nsta.org/store

Order by phone: 800-277-5300
“As with the original Picture-Perfect Science Lessons series, the story books give meaningful context to students as they explore the world around them. I would highly recommend these new STEM books for any K–5 educator interested in expanding his or her science classroom.”

—Participant in a one-day Picture-Perfect STEM Lessons workshop

---

**Picture-Perfect STEM Lessons, K–2 Collection**


<table>
<thead>
<tr>
<th>#</th>
<th>PAK422X1</th>
<th>Members: $399.96</th>
<th>Non-Members: $499.95</th>
</tr>
</thead>
</table>

Trade book Collection only

| #   | OK422X1 | Members: $383.96 | Non-members: $479.95 |

Includes more than two dozen books!

---

**Picture-Perfect STEM Lessons, 3–5 Collection**


<table>
<thead>
<tr>
<th>#</th>
<th>PAK422X2</th>
<th>Members: $399.96</th>
<th>Non-Members: $499.95</th>
</tr>
</thead>
</table>

Trade book Collection only

| #   | OK422X2 | Members: $383.96 | Non-members: $479.95 |

Includes more than two dozen books!
The Gadgets & Gizmos books feature water rockets, Drinking Birds, Dropper Poppers, Boomwhackers, and more. The experiments let students explore phenomena involving pressure and force, thermodynamics, light and color, resonance, buoyancy, and more.

The phenomenon-based learning (PBL) approach is as educational as the demonstrations are attention-grabbing. PBL encourages students to first experience how gadgets work and then grow curious enough to find out why. The result: Your students learn physics by doing what scientists do. (For information about materials for these books, visit Arbor Scientific at www.arborsci.com/products/nsta-kit-1, www.arborsci.com/products/nsta-kit-2, www.arborsci.com/products/nsta-kit-middle-school, and www.arborsci.com/products/nsta-elementary-school-kit.)

The volume for grades 3–5 was an AM&P SILVER EXCEL AWARD WINNER!

NSTA Press’s bestselling *Stop Faking It!* series comes to your rescue! Author Bill Robertson has been helping teachers develop a deeper understanding of scientific principles for years. He uses fun examples, easy-to-understand language, and accurate explanations to teach in a stress-free way. His trademark wit and irreverence help dispel long-held fears so you can grasp scientific concepts with confidence. Perfect for K–8 teachers, homeschoolers, or parents who just want to boost their science know-how.

Bill Robertson draws on his many years of experience as a college physics instructor, cognitive science researcher, curriculum developer, science reviewer, and teacher workshop leader as inspiration for his informative but humorous approach to science.

**Explore all books in the series!**
Print and electronic versions and mixed media sets are available.

**SAVE! Buy all 8 books!**
Member: $128.90  Non-member: $161.12

ISBNs:

- **Air, Water, & Weather**
  - ISBN: 978-0-87355-238-7; #: PB169X6

- **Chemistry Basics**
  - ISBN: 978-0-87355-239-4; #: PB169X8

- **More Chemistry Basics**
  - ISBN: 978-1-933531-47-2; #: PB169X9

- **Energy**
  - ISBN: 978-0-87355-214-1; #: PB169X2

- **Force & Motion**
  - ISBN: 978-0-87355-209-7; #: PB169X1

- **Companion Classroom Activities for Stop Faking It! Force & Motion**
  - ISBN: 978-1-936137-28-2; #: PB295X

- **Light**

- **Sound**
  - ISBN: 978-0-87355-216-5 #: PB169X4

Everybody loves a mystery—and thousands of teachers love how the Everyday Science Mysteries series gets students engaged in real phenomena about science content. Author Richard Konicek-Moran uses each mystery to present opportunities for students to ask questions, form hypotheses, test ideas, and come up with explanations. Konicek-Moran engages students by grounding the stories in familiar experiences that provide a foundation for discussion. When asked how he comes up with his science mysteries, Konicek-Moran says: “They are most often derived from my everyday experiences. Science is all around us, and as we go through our daily routines, it often eludes us because—as the old saying goes—‘The hidden we seek, the obvious we ignore.’”

This popular series is available in two different sets to fit teachers’ needs: The original four-volume series covers an array of topics in each book, and a three-volume set comprises topic-specific books for physical, life, and Earth and space science. Chapters include science concepts to explore, grade-appropriate strategies for using the stories, and explanations of how the lessons support standards.
The NSTA Quick-Reference Guides to the NGSS
K–12, Elementary School, Middle School, and High School
Ted Willard, Editor | NSTA PRESS, GRADES K–12

The guides are available in grade-specific versions for elementary, middle, and high school, plus a version for K–12. Each book provides the appropriate performance expectations; disciplinary core ideas; practices; crosscutting concepts; connections to engineering, technology, and applications of science; and connections to the nature of science.

#: PB354X
E-book #: PKEB354X
Book/E-book Set #: PKE354X
Members: $15.96
E-book: $11.97
Non-members: $19.95
Non-members: $14.96
Non-members: $23.94

#: PB354X1
E-book #: PKEB354X1
Book/E-book Set #: PKE354X1
Members: $13.56
Non-members: $16.95
E-book: $10.17
Non-members: $12.71
Book/E-book Set: $16.27
Non-members: $20.34

© 2015; ISBN: 978-1-941316-12-2; 105 pages (Middle School)
#: PB354X2
E-book #: PKEB354X2
Book/E-book Set #: PKE354X2
Members: $13.56
Non-members: $16.95
E-book: $10.17
Non-members: $12.71
Book/E-book Set: $16.27
Non-members: $20.34

#: PB354X3
E-book #: PKEB354X3
Book/E-book Set #: PKE354X3
Members: $13.56
Non-members: $16.95
E-book: $10.17
Non-members: $12.71
Book/E-book Set: $16.27
Non-members: $20.34

Preparing Teachers for Three-Dimensional Instruction
Jack Rhoton, Editor | NSTA PRESS, COLLEGE

This book was written to help preservice teachers make the vision of the NGSS come alive in their future classrooms, but practicing K–12 teachers can also benefit from it. The book showcases the many shifts that higher education science faculty, teacher education faculty, and others are already making to bring the standards to life. The authors of the 18 chapters are outstanding classroom practitioners and science educators at all levels. Use this book to help your students become true practitioners of science.

© 2018; ISBN: 978-1-68140-393-9; 166 pages
#: PB430X
E-book #: PKEB430X
Book/E-book Set #: PKE430X
Members: $33.56
E-book: $25.17
Non-members: $41.95
Non-members: $31.46
Non-members: $50.34

NGSS for All Students
Okhee Lee, Emily Miller, and Rita Januszyk, Editors | NSTA PRESS, GRADES K–12

NGSS for All Students shows you how to teach diverse students and connect your lessons to the Next Generation Science Standards (NGSS). The emphasis is on show. At the core of the book are case studies that vividly illustrate research- and standards-based classroom strategies to engage seven diverse demographic groups: economically disadvantaged students, students from major racial and ethnic groups, students with disabilities, English language learners, girls, students in alternative education, and gifted and talented students. The case studies span all grade levels and science disciplines.

#: PB400X
E-book #: PKEB400X
Book/E-book Set #: PKE400X
Members: $28.76
E-book: $21.57
Non-members: $35.95
Non-members: $26.96
Non-members: $43.14
Disciplinary Core Ideas
Reshaping Teaching and Learning

Ravit Golan Duncan, Joseph Krajcik, and Ann E. Rivet, Editors | NSTA PRESS, GRADES K–12

Building on the foundation provided by the Framework, which informed the development of the NGSS, this book helps your students make sense of seemingly unrelated phenomena. Disciplinary Core Ideas covers four broad areas: physical science; life science; Earth and space science; and engineering, technology, and applications of science. It aims to make science lessons at all grade levels more coherent and memorable. Think of it as your conceptual tool kit.


Helping Students Make Sense of the World Using Next Generation Science and Engineering Practices

Christina V. Schwarz, Cynthia Passmore, and Brian J. Reiser | NSTA PRESS, GRADES K–12

Written in clear, nontechnical language, this book provides a nuts-and-bolts understanding of the practices strand of the Framework and the NGSS. It addresses three important questions: How will engaging students in science and engineering practices help improve class? What do the eight practices look like in the classroom? And exactly how can educators teach and support the NGSS using the practices? The book is a helpful resource for K–12 science teachers, curriculum developers, teacher educators, and administrators.


Dive In!
Immersion in Science Practices for High School Students

Karen J. Graham, Lara M. Gengarelly, Barbara A. Hopkins, and Melissa A. Lombard | NSTA PRESS, GRADES 9–12

Dive In! provides detailed examples of how veteran teachers and their students can make the leap to implementing the recommendations of the Framework and the NGSS. Its vignettes offer authentic perspectives about conducting student investigations and integrating science practices. Its field-tested activities illustrate a range of investigations you can adopt or adapt. This book is the resource you need to help students shift from only knowing about science to actually investigating and making sense of it.


Introducing Teachers and Administrators to the NGSS
A Professional Development Facilitator’s Guide

Eric Brunsell, Deb M. Kneser, and Kevin J. Niemi | NSTA PRESS, GRADES K–12

This book is a natural companion to Translating the NGSS for Classroom Instruction (p. 30) and ideal for science specialists, curriculum coordinators, instructional coaches, and others who provide professional development. The book’s 24 activities introduce educators to the NGSS terms, structure, and conceptual shifts; explore the practices and crosscutting concepts; help teachers work within the standards to support students challenged by traditional teaching; develop science road maps, essential questions, and assessments; and more.

Not since the release of *A Framework for K–12 Science Education* has a document held such promise and significance for science education as do the Next Generation Science Standards (NGSS). Science—and therefore science education—is central to the lives of all Americans. When tracking current events, choosing and using technology, or making informed decisions about health care, science understanding is key. Science is also at the heart of the country’s ability to innovate, lead, and create the jobs of the future. All students—whether they become chefs, doctors, or researchers—must have a solid science education. The NGSS have been packaged as a two-volume set. The first volume includes the standards themselves—with spiral binding—and the second contains the appendixes.


# OP907X
Members: $44.96 Non-members: $49.95

The NGSS aim to better prepare U.S. students for the rigors of career and college-level scientific study by stressing the importance and integration of three dimensions: science and engineering practices, crosscutting concepts, and disciplinary core ideas. They will provide for a more integrated and cohesive approach to science instruction, leading to a more scientifically literate citizenry. The NGSS also mark a change in how we think about science instruction. The adoption of these new standards and their incorporation into instruction will require a significant amount of support. This easy-to-use Reader’s Guide offers teachers, principals, and district and state administrators—anyone with a vested interest in improving the quality of science education—the tools they need to fully absorb the new standards and begin to implement them effectively.


# PB340X
Members: $12.76 Non-members: $15.95
E-book #: PKEB340X Members: $9.57 Non-members: $11.96
Book/E-book Set #: PKE340X Members: $15.31 Non-members: $19.14

**SAVE! Buy the NGSS and The NSTA Reader’s Guide!**

# PK340X2 Members: $54.83 Non-members: $62.61

*A Framework for K–12 Science Education* outlines an approach that will capture the interest of teachers and students and better prepare future generations. Written for science teachers, standards developers, curriculum designers, assessment developers, teacher educators, state and district science administrators, and informal educators, the Framework is the first step toward a research-grounded basis for improving science teaching and learning. Intended to be used with the Next Generation Science Standards, the Framework enables a deeper and more thorough understanding of the new standards and describes a broad set of expectations for students in science and engineering. These expectations have informed fundamental revisions to curriculum, instruction, assessment, and professional development for educators.


# OP901X Members: $35.96 Non-members: $39.95

Order by phone: 800-277-5300
Read sample chapters and order online: www.nsta.org/store
Developing Assessments for the Next Generation Science Standards
National Research Council | NATIONAL ACADEMIES PRESS, GRADES K–12

Developing Assessments for the Next Generation Science Standards develops an approach to assessment to meet the vision of science education for the future as it has been elaborated in A Framework for K–12 Science Education and the Next Generation Science Standards (NGSS). These documents are fairly new, and the changes they call for are currently under way, but the new assessments will be needed as soon as states and districts begin the process of implementing the NGSS and changing their approach to science.

#: OP915X
Members: $44.96
Non-members: $49.95

Guide to Implementing the Next Generation Science Standards
National Research Council | NATIONAL RESEARCH COUNCIL, GRADES K–12

The Framework and the NGSS describe a new vision that is catalyzing improvements in science classrooms. Guide to Implementing the Next Generation Science Standards helps district and school leaders and teachers charged with developing a plan and implementing the NGSS as they change curriculum, instruction, professional learning, policies, and assessment to address the standards. This report lays out recommendations for action, cautions about potential pitfalls, and identifies overarching principles that should guide the planning and implementation process.

#: OP936X
Members: $34.16
Non-members: $37.95
In response to “these unconventional and uncertain years,” veteran educator Rodger W. Bybee has written a book that’s as thought-provoking as it is constructive. Now more than ever, he writes, “America needs reminders of both the themes that made it great in the first place and STEM’s contributions to its citizens.” Science educators must address STEM issues at local, national, and global levels. And teachers should help students tackle today’s problems with new approaches to STEM learning that complement traditional single-discipline programs.

*STEM Education Now More Than Ever* addresses these themes through four wide-ranging sections. Parts of the book are what you might expect from a longtime thought leader in science education. In light of the 2016 election and recent assaults on science’s validity, Bybee strongly asserts the need for making a new case for STEM education. Other parts may not seem typical for a book on STEM. He writes about the Enlightenment, the U.S. Constitution, democracy, and citizenship as reminders of the effects of STEM disciplines on America’s foundational ideas and values.

In the end, Bybee ties it all together with positive, practical recommendations. A major one involves newer, faster ways to help teachers develop STEM units that address contemporary challenges in their classes. Another involves the importance of strong leadership from teachers and the STEM education community—leadership Bybee believes we need now more than ever.


### Designing Meaningful STEM Lessons

**Milton Huling and Jackie Speake Dwyer** | **NSTA PRESS, GRADES 3–8**

Sure, there are lots of cool STEM activities you can use in class. But do they really help your students learn science? This book shows you how to take lessons you’re already familiar with and, through small changes, do what the title says: Design STEM lessons that are actually meaningful for teaching and learning science. You can also make sure your STEM lessons contain the content students need to learn.

The book’s foundation is a conceptual framework that keeps science front and center, showing you how to embed engineering, technology, and science applications in your lessons—similar to how you would embed literacy skills in your classwork. To make it easy to use this conceptual framework, *Designing Meaningful STEM Lessons* provides 13 ready-to-use lessons in physical science, life science, and Earth and space science. True to the authors’ promise to be both relevant and exciting, the lessons have titles such as “Cell-fie” and “Aircraft Catapult.” All correlate with *A Framework for K–12 Science Education*, take a constructivist approach, and operate within the 5E instructional model. By presenting STEM as a “process and not a thing,” *Designing Meaningful STEM Lessons* helps you bring STEM learning to life in your classroom, easily and effectively.

Creating a STEM Culture for Teaching and Learning

Jeff Weld  NSTA PRESS, GRADES K–12

Author Jeff Weld channels the wisdom of professionals in education, business, and government to bring you the theory and policy behind nationally recognized education models for STEM. Sprinkled with lighthearted case studies, the book covers everything from why STEM matters to what STEM means.

© 2017; ISBN: 978-1-68140-396-0; 180 pages

#: PB429X  Members: $30.36  Non-members: $37.95
E-book #: PKEB429X  Members: $22.77  Non-members: $28.46
Book/E-book Set #: PKE429X  Members: $36.43  Non-members: $45.54

Everyday Engineering Series

Putting the E in STEM Teaching and Learning

Richard H. Moyer and Susan A. Everett  NSTA PRESS JOURNALS COLLECTIONS, GRADES 6–8

Spark curiosity with appealing, hands-on activities that will help middle schoolers understand that engineering truly is a part of their everyday lives. Each investigation is a complete lesson that includes in-depth teacher background information, expected sample data, a materials list, and a student activity sheet for recording results.


Put the Engineering into Your Day!


More Everyday Engineering


The Case for STEM Education

Challenges and Opportunities

Rodger W. Bybee  NSTA PRESS, GRADES K–12

This book outlines the challenges facing STEM education. It is a must-read for national and state policy makers, state-level educators, college and university faculty who educate STEM teachers, administrators who make decisions about district and school programs, and teachers who represent STEM disciplines.


#: PB337X  Members: $23.96  Non-members: $29.95
E-book #: PKEB337X  Members: $17.97  Non-members: $22.46
Book/E-book Set #: PKE337X  Members: $28.75  Non-members: $35.94
Doing Good Science in Middle School, Expanded 2nd Edition

A Practical STEM Guide

Olaf Jorgenson, Rick Vanosdall, Vicki Massey, and Jackie Cleveland | NSTA PRESS, GRADES 6–8

Doing Good Science is a comprehensive resource that covers big-picture concepts such as understanding the middle school learner and exploring the nature of science. It provides 10 sample activities to develop engaging lessons integrating STEM and 5E instruction with the standards. The authors give specific guidance on classroom management, safety, and how to use collaborative table groups and science lab notebooks. The new edition shares the same goal as the popular first edition: to prove that good science is compatible with noisy, bustling, insatiably curious middle schoolers.


#: PB183E2
Members: $29.56
Non-members: $36.95

E-book #: PKEB183E2
Members: $22.17
Non-members: $27.71

Book/E-book Set #: PKE183E2
Members: $34.51
Non-members: $43.14

“‘The editor, a veteran classroom teacher and educator, was aware of the need to include not only well-designed lessons, but also the strategies that elementary teachers need to implement the lessons and additional resources such as websites and references. Bringing STEM to the Elementary Classroom is an excellent resource for elementary classrooms as well as educators who work with elementary-aged children.”

—NSTA Recommends

Order by phone: 800-277-5300
Read sample chapters and order online: www.nsta.org/store
Mathematics Formative Assessment, Volumes 1 and 2

Practical Strategies for Linking Assessment, Instruction, and Learning

Page Keeley and Cheryl Rose Tobey | CORWIN AND NCTM PRESS, GRADES K–12

Award-winning author Page Keeley and mathematics expert Cheryl Rose Tobey apply the format of Keeley’s bestselling *Science Formative Assessment* (p. 40) to mathematics. They show teachers how to use formative assessment strategies to inform instructional planning and better meet the needs of all students and provide guidance with each technique. Research shows that formative assessment has the power to significantly improve learning, and its many benefits include stimulation of metacognitive thinking, increased student engagement, insights into student thinking, and development of a discourse community. Volume 1 includes 75 strategies, and volume 2 provides 50 more strategies.


Members: $33.26  Non-members: $36.95

---

STEM Lesson Essentials

Integrating Science, Technology, Engineering, and Mathematics

Jo Anne Vasquez, Cary Sneider, and Michael Comer | HEINEMANN, GRADES 3–8

This book provides all the strategies you’ll need to design integrated, interdisciplinary STEM lessons and units that are relevant and exciting to your students. The book shows teachers how to begin the STEM integration journey with five guiding principles for effective STEM instruction, classroom examples of what these principles look like in action, sample activities that put all four STEM fields into practice, and lesson planning templates for STEM units. Explicit connections are made among the STEM practices, including the *Common Core State Standards* for mathematics and the Framework.


Members: $26.96  Non-members: $29.95

---

STEM Lesson Guideposts

Creating STEM Lessons for Your Curriculum

Jo Anne Vasquez, Michael Comer, and Joel Villegas | HEINEMANN, GRADES 3–8

This companion to the bestselling *STEM Lesson Essentials* (above) will help you move from thinking about *what STEM is* to the *how* of constructing impactful STEM lessons and units. The authors developed the W.H.E.R.E. planning model—five interrelated guideposts that provide structure and guidance for conceiving, creating, and organizing STEM experiences. You’ll learn to create hands-on, inquiry-focused experiences using your own curriculum and standards and develop STEM lessons that are not only rigorous but also relevant to your students.


Members: $22.66  Non-members: $24.95

---

Read sample chapters and order online: www.nsta.org/store  Order by phone: 800-277-5300
Instructional Sequence Matters, Grades 6–8
Structuring Lessons With the NGSS in Mind
Patrick Brown | NSTA PRESS, GRADeS 6–8

This book shows how to make simple shifts in the way you arrange and combine activities to improve student learning. It provides a complete self-guided tour to becoming an “explore-before-explain” teacher and helping students construct accurate knowledge firsthand. The book focuses on two popular instructional models, POE (Predict, Observe, and Explain) and 5E (Engage, Explore, Explain, Elaborate, and Evaluate), and comes with ready-to-use lessons to teach about heat and temperature, magnetism, electric circuits, and force and motion. See the volume for grades 3–5 on page 3.

#: PB438X
E-book #: PKEB438X
Book/E-book Set #: PKE438X
Members: $20.76
Non-members: $25.95
Members: $15.57
Non-members: $19.46
Members: $24.91
Non-members: $31.14

SAVE! Buy both volumes together!
#: PK438X2
Members: $39.45
Non-members: $49.31

The BSCS 5E Instructional Model
Creating Teachable Moments
Rodger W. Bybee | NSTA PRESS, GRADES K–12

The popular BSCS 5E Instructional Model includes five phases: Engage, Explore, Explain, Elaborate, and Evaluate. The book elaborates on how the model connects to the NGSS, STEM education, and 21st-century skills.

© 2015; ISBN: 978-1-941316-00-9; 126 pages
#: PB356X
E-book #: PKEB356X
Book/E-book Set #: PKE356X
Members: $27.96
Non-members: $34.95
Members: $20.97
Non-members: $26.21
Members: $33.55
Non-members: $41.94

The Feedback Loop
Using Formative Assessment Data for Science Teaching and Learning
Erin Marie Furtak, Howard M. Glasser, and Zora M. Wolfe | NSTA PRESS, GRADES 6–12

This book introduces the Feedback Loop framework; highlights the four elements of goals, tools, data, and inferences; explores how to connect inferences and goals through feedback; and shows how to use the loop to inform instruction. The book supports the NGSS.

#: PB405X
E-book #: PKEB405X
Book/E-book Set #: PKE405X
Members: $28.76
Non-members: $35.95
Members: $21.57
Non-members: $26.96
Members: $34.51
Non-members: $43.14

Rise and Shine
A Practical Guide for the Beginning Science Teacher
Linda Froschauer and Mary L. Bigelow | NSTA PRESS, GRADES K–12

The easy-to-read book offers candid advice from seasoned science teachers and plenty of widely applicable techniques for managing the classroom, maintaining discipline, and working with parents. It also covers important science-specific topics such as laboratory setup, classroom safety, and initiating inquiry.

#: PB308X
E-book #: PKEB308X
Book/E-book Set #: PKE308X
Members: $26.36
Non-members: $32.95
Members: $19.77
Non-members: $24.71
Members: $31.63
Non-members: $39.54

Order by phone: 800-277-5300
Read sample chapters and order online: www.nsta.org/store
Becoming a Responsive Science Teacher

**Focusing on Student Thinking in Secondary Science**

Daniel Levin, David Hammer, Andrew Elby, and Janet Coffey | NSTA PRESS, GRADES 9–12

Through five case studies, learn how you can shift from the traditional method—presenting material that you hope students will retain—to “responsive listening”—attuning your teaching to the substance of students’ reactions to your lessons and helping them learn how to learn science.


| #: PB323X | Members: $23.96 | Non-members: $29.95 |
| E-book #: PKEB323X | Members: $17.97 | Non-members: $22.46 |
| Book/E-book Set #: PKE323X | Members: $28.75 | Non-members: $35.94 |

Teaching for Conceptual Understanding in Science

Richard Konicek-Moran and Page Keeley | NSTA PRESS, GRADES K–12

This book will make you think about what the authors call “the major goal of science education in the 21st century”: to help students understand science at the conceptual level so they can see its connections to other fields, other concepts, and their lives.


| #: PB359X | Members: $28.76 | Non-members: $35.95 |
| Book/E-book Set #: PKE359X | Members: $34.51 | Non-members: $43.14 |

It’s Debatable!

**Using Socioscientific Issues to Develop Scientific Literacy, K–12**

Dana L. Zeidler and Sami Kahn | NSTA PRESS, GRADES K–12

Students will explore real-world questions using the Socioscientific Issues Framework. This book encourages scientific literacy and supports the NGSS by giving students practice in research, analysis, and argumentation and by confronting just how messy the questions raised by science (and pseudoscience) can be. See the new volume, It’s Still Debatable!, on page 4.

© 2014; ISBN: 978-1-938946-00-4; 304 pages

| #: PB347X | Members: $30.36 | Non-members: $37.95 |
| E-book #: PKEB347X | Members: $22.77 | Non-members: $28.46 |
| Book/E-book Set #: PKE347X | Members: $36.43 | Non-members: $45.54 |

Designing Effective Science Instruction

**What Works in Science Classrooms**

Anne Tweed | NSTA PRESS AND MCREL, GRADES K–12

Science teachers in every grade band will benefit from this research-based text with practical steps to improve science instruction. Author Anne Tweed recommends a C-U-E framework—Content, Understanding, and Environment—demonstrating to educators that all three elements must be part of lesson design and implementation to successfully achieve high-quality science instruction. Providing a review of the research related to each element, strategies to be incorporated into the lesson, and tools that assess teachers’ practices, this is a must-have resource.


| #: PB243X | Members: $27.96 | Non-members: $34.95 |
| E-book #: PKEB243X | Members: $20.97 | Non-members: $26.21 |
| Book/E-book Set #: PKE243X | Members: $33.65 | Non-members: $41.94 |
Hard-to-Teach Science Concepts
A Framework to Support Learners, Grades 3–5
Susan Koba and Carol T. Mitchell | NSTA PRESS, GRADES 3–5

Four actions make up the methodology in this book: Engage students about their preconceptions and address and dispel misconceptions, target lessons to be learned, determine appropriate strategies, and use standards-based teaching that builds on student understandings. With the framework comes examples of application, specifically on the flow of energy and matter in ecosystems, force and motion, matter and its transformation, and Earth’s shape.


#: PB238X2
   Members: $27.16  Non-members: $33.95
E-book #: PKEB238X2
   Members: $20.37  Non-members: $25.46
Book/E-book Set #: PKE238X2
   Members: $32.59  Non-members: $40.74

The New Science Teacher’s Handbook
What You Didn’t Learn From Student Teaching
Sarah Reeves Young and Mike Roberts | NSTA PRESS, GRADES K–12

This book aims to help you become the teacher you’ve always aspired to be. It covers the day-to-day stumbling blocks your methods classes didn’t, including organizing the jungle of science materials your predecessor left, making grading manageable, and coping with cranky parents. Each of the 12 chapters is set up to make the book fun to read. You get a story of a struggle from the authors’ own classroom experience; the moral of the story; steps for success to overcome the struggle; what success looks like for you and your classes when you follow the steps; and resources for further reading.


#: PB342X
   Members: $25.56  Non-members: $31.95
E-book #: PKEB342X
   Members: $19.77  Non-members: $24.71
Book/E-book Set #: PKE342X
   Members: $31.63  Non-members: $39.54

Science Notebooks, Second Edition
Writing About Inquiry
Lori Fulton and Brian Campbell | HEINEMANN, GRADES K–5

This book inspires teachers to use science notebooks to support implementation of the standards and help students reveal and develop their thinking about scientific concepts, engage in the work of scientists and engineers, and exercise language skills. Chapter materials include strategies to scaffold science notebook instruction, approaches for collecting and analyzing notebooks for formative assessment, student samples and classroom vignettes, and new interviews with scientists and engineers that spotlight the use of notebooks in their work.


#: OP914X
   Members: $21.36  Non-members: $23.75

Reading Science
Practical Strategies for Integrating Instruction
Jennifer L. Altieri | HEINEMANN, GRADES 4–8

Filled with practical strategies customized for science classrooms, this book supports teaching students to be critical consumers of scientific information; developing students’ interest in scientific vocabulary; and encouraging collaboration as students seek answers to scientific questions and communicate their findings. With Reading Science, teachers can use literacy as a tool to help students access science content, communicate their ideas precisely, and apply their discoveries in new contexts.


#: OP940X
   Members: $21.56  Non-members: $23.95

Order by phone: 800-277-5300 Read sample chapters and order online: www.nsta.org/store
Reimagining the Science Department

Wayne Melville, Doug Jones, and Todd Campbell | NSTA PRESS, GRADES 6–12

Reimagining the Science Department invites you to reassess past and current practices in science departments. The text offers rich historical perspective, and you'll come away with sensible strategies—bolstered by practitioner vignettes and related research—that your entire department can put to work right away. See also the authors’ latest NSTA Press book, Building the Science Department (above).


#: PB357X  Members: $23.96  Non-members: $29.95
E-book #: PKEB357X  Members: $17.97  Non-members: $22.46
Book/E-book Set #: PKE357X  Members: $28.75  Non-members: $35.94

“Reimagining the Science Department is very useful for any head of science trying to bring about change in the way science is taught in their school.”

—Education in Chemistry

Be a Winner!

A Science Teacher’s Guide to Writing Successful Grant Proposals

Patty McGinnis and Kitchka Petrova | NSTA PRESS, GRADES K–12

Formatted as a handy workbook, Be a Winner! takes you step by step through the writing process. You’ll learn the top 10 reasons to write a grant proposal, how to identify and refine proposal ideas, the basic components of every proposal, the ins and outs of submitting a proposal, and how to manage a funded project. Appendixes provide you with writing templates, a grant proposal rubric, science-related grant listings and teaching awards, and more.


#: PB412X  Members: $28.76  Non-members: $35.95
Book/E-book Set #: PKE412X  Members: $34.51  Non-members: $43.14

“This guide is very user-friendly and a must for every science teacher’s library. Our program uses this excellent resource for the professional development we hold for our graduates. Even seasoned grant proposal writers will learn valuable tips when following this guide.”

—Amazon customer (verified purchaser)

Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
Including Students With Disabilities in Advanced Science Classes
Lori A. Howard and Elizabeth A. Potts | NSTA PRESS, GRADES 9–12

This book offers realistic guidance for helping students with disabilities succeed in advanced science classes. Eight straightforward chapters provide a strong foundation in special education terms and laws; working with the IEP team; classroom considerations regarding behavior, instruction, labs, and assistive technology; and end-of-year testing.


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Members:</td>
<td>$28.76</td>
<td>$24.91</td>
</tr>
<tr>
<td>Non-members:</td>
<td>$25.95</td>
<td>$21.46</td>
</tr>
</tbody>
</table>

The 6 Principles for Exemplary Teaching of English Learners
TESOL International Association Writing Team | TESOL PRESS, GRADES K–12

The 6 Principles are universal guidelines drawn from decades of research in language pedagogy and language acquisition theory. They provide an evidence-based foundation for schools to examine their own instructional practice and work collaboratively to enable English learners to acquire strong social and academic language proficiency. The principles are applicable across different educational settings. The book includes essential information on language development and second language acquisition, practical applications of the 6 Principles for K–12 classrooms, access to informational videos and additional online resources for educators and educational personnel, and more.


<table>
<thead>
<tr>
<th>#: OP946X</th>
<th>Members:</th>
<th>$26.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-members:</td>
<td>$28.95</td>
<td></td>
</tr>
</tbody>
</table>
This compendium of 30 “Formative Assessment Probes” columns from NSTA’s *Science and Children* provides sample probes—sets of interesting questions that root out commonly held (and often mistaken) ideas. Students’ answers will help you figure out how to guide them from where they are conceptually to where they need to be. Teacher notes tell you how to encourage evidence-based discussion and monitor students’ progress. For each column, Page Keeley, the award-winning author of NSTA’s bestselling *Uncovering Student Ideas in Science* series (pp. 18–19), has added a set of study group questions.


<table>
<thead>
<tr>
<th>#</th>
<th>Members</th>
<th>Non-members</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB348X</td>
<td>$30.36</td>
<td>$37.95</td>
</tr>
<tr>
<td>E-book #: PKEB348X</td>
<td>$24.67</td>
<td>$28.46</td>
</tr>
<tr>
<td>Book/E-book Set #: PKE348X</td>
<td>$39.47</td>
<td>$49.34</td>
</tr>
</tbody>
</table>

“I just love using probes and uncovering misconceptions students have [about] science concepts. Science topics are not always easy for non-science oriented educators to wrap their heads around, and we need all the resources we can get!”

—NSTA Press reader Susan P.
Eureka! Series
Introduce skill-building inquiry investigations with the Eureka! series. At the books’ core are more than two dozen lessons that connect science content to children’s trade book biographies of scientists and engineers. Some of these individuals are famous (such as George Washington Carver, Albert Einstein, and Jane Goodall), whereas others are not as well known (such as paleontologist Mary Anning, astronomer Annie Jump Canon, and engineer William Kamkwamba). The lessons are designed to support the NGSS and be appealing and easy to use. Chapters delve into the practices of science and engineering, such as how to ask questions and define problems, plan and conduct investigations, and analyze and interpret data. With engaging lessons, even the youngest students can make an important discovery: Scientists aren’t stereotypes wearing goggles and lab coats. They are both women and men whose work and success stem from their life experiences and character traits.

Eureka, Again! K–2 Science Activities and Stories
Donna Farland-Smith and Julie Thomas | GRADES K–2
#: PB423X2 E-book #: PKEB423X2 Book/E-book Set #: PKE423X2

Eureka! Grade 3–5 Science Activities and Stories
Donna Farland-Smith and Julie Thomas | GRADES 3–5
#: PB423X1 E-book #: PKEB423X1 Book/E-book Set #: PKE423X1

Eureka! Book Collections
For each Eureka! volume, NSTA offers a collection of the related children’s trade books. The books fit inside a zippered canvas tote bag with a screened image of the book cover on it. This bundled set is a great value, especially compared with the retail cost (and effort) of buying the books separately. The Collection includes much-admired volumes that will become frequently enjoyed additions to your school’s science and reading resources.

For a full list of the books available in each Collection, visit www.nsta.org/publications/press/eureka.aspx.

Teaching Science Through Trade Books
Christine Anne Royce, Emily Morgan, and Karen Ansberry
AN NSTA PRESS JOURNALS COLLECTION, GRADES K–6

This collection of popular “Teaching Through Trade Books” columns from NSTA’s award-winning journal Science and Children will help you engage reluctant scientists (through books) while also enticing struggling readers (through science). Each lesson includes a targeted K–3 activity and a grade 4–6 activity. If you are a fan of Picture-Perfect Science Lessons (see pp. 20–23), you’ll love the convenience of having these ready-to-teach lessons in one handy volume.

#: PB315X Members: $27.96 Non-members: $34.95
E-book #: PKEB315X Members: $20.97 Non-members: $26.21
Book/E-book Set #: PKE315X Members: $33.55 Non-members: $41.94

Order by phone: 800-277-5300
Read sample chapters and order online: www.nsta.org/store
Inquiring Scientists, Inquiring Readers
Using Nonfiction to Promote Science Literacy
Jessica Fries-Gaither and Terry Shiverdecker | NSTA PRESS, GRADES 3–8

These resources will help you integrate inquiry-based science with literacy. A learning-cycle framework helps students deepen their understanding with data collection and analysis before reading about a concept. Investigations support standards and encompass life, physical, and Earth and space sciences.

Inquiring Scientists, Inquiring Readers (Grades 3–5)
 Book #: PB325X  E-book #: PKEB325X  Book/E-book Set #: PKE325X

Inquiring Scientists, Inquiring Readers in Middle School (Grades 6–8)
© REVERE AWARD WINNER!
 Book #: PB325X2  E-book #: PKEB325X2  Book/E-book Set #: PKE325X2

Creative Writing in Science
Activities That Inspire
Katie Coppens | NSTA PRESS, GRADES 3–12

Inspire students to be better writers while you enjoy new strategies to assess their understanding. This book features activities that integrate writing with content in life science, Earth and space science, physical science, and engineering.

 Book #: PB411X  Members: $19.96  Non-members: $24.95
 E-book #: PKEB411X  Members: $14.97  Non-members: $18.71
 Book/E-book Set #: PKE411X  Members: $33.95  Non-members: $39.94

Science Learning in the Early Years
Activities for PreK–2
Peggy Ashbrook | NSTA PRESS, GRADES PREK–2

These 40-plus classroom activities for grades PreK–2 will show you how to go beyond demonstrations to experiences that actually get children engaged. The activities focus on important science concepts, connect to the NGSS, and highlight safety concerns. ● REVERE AWARD WINNER!

 Book #: PB407X  Members: $26.36  Non-members: $32.95
 E-book #: PKEB407X  Members: $19.77  Non-members: $24.71
 Book/E-book Set #: PKE407X  Members: $33.55  Non-members: $41.94

Predict, Observe, Explain
Activities Enhancing Scientific Understanding
John Haysom and Michael Bowen | NSTA PRESS, GRADES 7–12

This research-based book provides more than 100 student activities to learn about scientific concepts through the use of Predict, Observe, Explain sequences. Accompanying the activities are worksheets, scientific explanations, sample student responses obtained during the field tests, a synopsis of the relevant research findings, and a list of required materials.

 Book #: PB281X  Members: $27.96  Non-members: $34.95
 E-book #: PKEB281X  Members: $20.97  Non-members: $26.21
 Book/E-book Set #: PKE281X  Members: $33.55  Non-members: $41.94

Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
Enjoy dread-free science fairs with help from the curriculum materials in this series. Three grade-appropriate student editions offer original investigations on topics ranging from paper helicopters to Archimedes pumps to acid rain. Underpinning the investigations are problem-solving exercises to help students develop the inquiry skills to carry the projects through. The separate Teachers Guide provides detailed lesson plans and advice for adapting all the student material to your classes’ needs.

Thoroughly field-tested, the books save you time while helping you meet your teaching goals. The student editions are organized to grow more challenging with each book and encourage independent study as students gain experience. The series is based on the constructivist view that makes students responsible for their own learning and aligns with science standards and A Framework for K–12 Science Education. Science Fair Warm-Up will prepare your students and you for science fair success. But even if you don’t have a science fair in your future, the material can help your students become more proficient with scientific research.

―NSTA Press reader Doreen B.
Engineering in the Life Sciences, 9–12
Rodney L. Custer, Jenny L. Daugherty, Julia M. Ross, Katheryn B. Kennedy, and Cory Culbertson
NSTA PRESS, GRADES 9–12

The six standards-based lessons in this book show how to infuse engineering concepts into existing courses. It also provides wide-ranging material from each of the major content areas in biological sciences, including structures and processes, ecosystems, heredity, and biological evolution. Spark your high school students’ interest with lesson titles such as “Designer DNA,” “Ecosystem Board Game,” and “B-pocalypse.” Inspired by extensive field testing, the authors made the book easy to use in diverse settings by supplementing the lessons with detailed support materials, teaching tips, connections to standards, and case studies about how engineering concepts and science intersect to address human needs.

#: PB433X
Members: $31.96  Non-members: $39.95
E-book #: PKEB433X
Members: $23.97  Non-members: $29.96
Book/E-book Set #: PKE433X
Members: $38.35  Non-members: $47.94

Reading Nature
Engaging Biology Students With Evidence From the Living World
Matthew Kloser and Sophia Grathwol  NSTA PRESS, GRADES 6–12

This unique supplemental resource reflects the true “endeavor of science,” with its ingenious experiments, frustrating dead ends, and incredible finds that eventually contribute to our understanding of living things. It draws on and adapts peer-reviewed articles from scientific journals that tie into one of five disciplinary core ideas—from molecules to organisms, ecosystems, heredity, biological evolution, and human impacts on Earth systems. With its supplementary teacher questions and prompts, this resource is both practical and flexible.

#: PB427X
Members: $19.96  Non-members: $24.95
E-book #: PKEB427X
Members: $14.97  Non-members: $18.71
Book/E-book Set #: PKE427X
Members: $23.95  Non-members: $29.94

A Head Start on Life Science
Encouraging a Sense of Wonder
William Straits  NSTA PRESS, GRADES PREK–2

The 24 inquiry-based lessons in this lively collection show you how to nurture curiosity in the youngest scientists, with a focus on animals, plants, and nature walks, and include at-home activities written in English and Spanish. See page 8 for the Head Start volume that includes activities for all science disciplines.

#: PB428X
Members: $30.36  Non-members: $37.95
E-book #: PKEB428X
Members: $22.77  Non-members: $28.46
Book/E-book Set #: PKE428X
Members: $36.43  Non-members: $45.54

Adventures With Arthropods
Eco-Friendly Lessons for Middle School
Ron Wagler  NSTA PRESS, GRADES 6–8

This book will help you and your students get up close and personal with amazing arthropods such as tarantulas, roly polys, and Madagascar hissing cockroaches. It provides 26 middle school lessons that teach students everything from anatomy, growth, and behavior to eating preferences and environmental needs of three arthropod groups. You’ll also learn which arthropods are classroom-safe and what’s involved in caring for them humanely.

#: PB435X
Members: $22.36  Non-members: $27.95
E-book #: PKEB435X
Members: $16.77  Non-members: $20.96
Book/E-book Set #: PKE435X
Members: $23.97  Non-members: $33.54
Argument-Driven Inquiry in Biology
Lab Investigations for Grades 9–12
Victor Sampson, Patrick Enderle, Leeanne Gleim, Jonathon Grooms, Melanie Hester, Sherry Southerland, and Kristin Wilson
NSTA PRESS, GRADES 9–12

The 27 field-tested labs cover molecules and organisms, ecosystems, heredity, and biological evolution. Supporting the NGSS and Common Core, the investigations are more authentic than traditional labs and enable students to practice how to read, write, speak, and use math in the context of science.

E-book #: PB349X1 Members: $38.36 Non-members: $47.95
E-book #: PKEB349X1 Members: $28.77 Non-members: $35.96
Book/E-book Set #: PKE349X1 Members: $46.03 Non-members: $57.54

Student Lab Manual for Argument-Driven Inquiry in Biology
© 2016; ISBN: 978-1-68140-014-3; 256 pages
E-book #: PB349X1S Members: $15.96 Non-members: $19.95
E-book #: PKEB349X1S Members: $11.97 Non-members: $14.96
Book/E-book Set #: PKE349X1S Members: $19.15 Non-members: $23.94

Argument-Driven Inquiry in Life Science
Lab Investigations for Grades 6–8
Patrick J. Enderle, Ruth Bickel, Leeanne Gleim, Ellen Granger, Jonathon Grooms, Melanie Hester, Ashley Murphy, Victor Sampson, and Sherry A. Southerland
NSTA PRESS, GRADES 6–8

These 20 field-tested labs help students learn how to read, write, speak, and use math in the context of science. Students design methods, develop models, collect and analyze data, and critique information. The labs cover topics related to molecules and organisms, ecosystems, biological evolution, and heredity. Labs include student pages, teacher notes, and checkout questions.

E-book #: PB349X3 Members: $38.36 Non-members: $47.95
E-book #: PKEB349X3 Members: $28.77 Non-members: $35.96
Book/E-book Set #: PKE349X3 Members: $46.03 Non-members: $57.54

Student Lab Manual for Argument-Driven Inquiry in Life Science
E-book #: PB349X3S Members: $15.96 Non-members: $19.95
E-book #: PKEB349X3S Members: $11.97 Non-members: $14.96
Book/E-book Set #: PKE349X3S Members: $19.15 Non-members: $23.94

Uncovering Student Ideas in Life Science, Volume 1
25 New Formative Assessment Probes
Page Keeley
NSTA PRESS, GRADES K–12

Author Page Keeley provides teachers with her popular formula for uncovering and addressing preconceptions in this book. It covers life and diversity; structure and function; life processes and needs of living things; and more. Each probe is supported by Teacher Notes, providing background information, related concepts, explanations, related ideas in national science standards, research on misconceptions, and suggestions for instruction and assessment. ● REVERE AWARD WINNER!

E-book #: PB291X1 Members: $25.56 Non-members: $31.95
E-book #: PKEB291X1 Members: $19.17 Non-members: $23.96
Book/E-book Set #: PKE291X1 Members: $30.67 Non-members: $38.34
This 19-lesson unit connects core ideas about chemical reactions to the biological phenomena of growth and repair in plants and animals. Legos, ball-and-stick models, videos, and a variety of print manipulatives help students overcome many common conceptual difficulties and provide the foundation in biochemistry they will need for high school biology and beyond.

**Toward High School Biology, Teacher Edition**

| #: PB434XT | Members: $35.96 | Non-members: $44.95 |
| E-book #: PKEB434XT | Members: $26.97 | Non-members: $33.71 |
| Book/E-book Set #: PKE434XT | Members: $43.15 | Non-members: $53.94 |

**Toward High School Biology, Student Edition**

| #: PB434XS | Members: $15.96 | Non-members: $19.95 |
| E-book #: PKEB434XS | Members: $11.97 | Non-members: $14.95 |
| Book/E-book Set #: PKE434XS | Members: $19.15 | Non-members: $23.94 |

**Problem-Based Learning in the Life Science Classroom, K–12**
Tom J. McConnell, Joyce M. Parker, and Janet Eberhardt | NSTA PRESS, GRADES K–12

Problem-Based Learning in the Life Science Classroom, K–12 will help you prompt learners to immerse themselves in analyzing problems, asking questions, posing hypotheses, finding information, and constructing a proposed solution. The book’s 13 lessons cover life cycles, ecology, genetics, and cellular metabolism. See page 14 for an overview of the Problem-Based Learning series.


| #: PB408X2 | Members: $27.96 | Non-members: $34.95 |
| E-book #: PKEB408X2 | Members: $20.97 | Non-members: $26.21 |
| Book/E-book Set #: PKE408X2 | Members: $33.55 | Non-members: $41.94 |

**Scientific Argumentation in Biology**
30 Classroom Activities
Victor Sampson and Sharon Schleigh | NSTA PRESS, GRADES 6–12

Scientific Argumentation in Biology combines theory, practice, and biological content. This book starts by giving you solid background in why students need to be able to go beyond expressing mere opinions when making research-related biology claims. Then, it provides 30 field-tested activities. Detailed teacher notes suggest specific ways to use the activities to enrich and supplement (not replace) what you’re doing in class already.


| #: PB304X | Members: $31.96 | Non-members: $39.95 |
| E-book #: PKEB304X | Members: $23.97 | Non-members: $29.96 |
| Book/E-book Set #: PKE304X | Members: $38.35 | Non-members: $47.94 |

**Once Upon a Life Science Book**
12 Interdisciplinary Activities to Create Confident Readers
Jodi Wheeler-Toppen | NSTA PRESS, GRADES 6–8

This book starts with advice on teaching reading-comprehension strategies. Then, the 12 content chapters give you hands-on science activities; readings that cover important science concepts and support the NGSS; writing activities that prompt students to connect what they did with what they read; and assessment exercises to give you feedback on what your students are learning. Topics include cell cycle, food chains, genetics, plant structure and function, and more!

© 2010; 978-1-935155-09-6; 161 pages

| #: PB275X | Members: $18.36 | Non-members: $22.95 |
| E-book #: PKEB275X | Members: $13.77 | Non-members: $17.21 |
| Book/E-book Set #: PKE275X | Members: $22.03 | Non-members: $27.54 |
Earth/Environmental/Outdoor Science

Problem-Based Learning in the Earth and Space Science Classroom, K–12
Tom J. McConnell, Joyce Parker, and Janet Eberhardt | NSTA PRESS, GRADES K–12

The scenarios cover Earth’s landforms and water, the rock cycle and plate tectonics, weather, and astronomy. They’ll prompt students to work collaboratively on analyzing problems, asking questions, posing hypotheses, and constructing solutions. In addition to complete lesson plans that support the NGSS, they offer extensive examples, instructions, and tips. (See more about the series on p. 14.)

#: PB408X1 Members: $27.96 Non-members: $34.95
E-book #: PKEB408X1 Members: $20.97 Non-members: $26.21
Book/E-book Set #: PKE408X1 Members: $33.55 Non-members: $41.94

“I truly believe that teachers will both like and use [this book]. Implementing PBL is difficult ... few curriculum guides are available to support their efforts.”

—Peggy Ertmer, Purdue University

Order by phone: 800-277-5300 Read sample chapters and order online: www.nsta.org/store
Learning to Read the Earth and Sky
Explorations Supporting the NGSS, Grades 6–12

Russ Colson and Mary Colson | NSTA PRESS, GRADES 6–12

This book offers inspiration for reaching beyond prepared curricula, engaging in discovery along with your students, and using your lessons to support the NGSS. The book provides examples of labs and activities you and your students can do together and guidance on how to translate the core ideas of the NGSS into specific examples.


Big Data, Small Devices
Investigating the Natural World Using Real-Time Data

Donna Governor, Michael Bowen, and Eric Brunsell | NSTA PRESS, GRADES 3–12

This book is designed for Earth and environmental science teachers who want to help students tap into, organize, and deploy large data sets via their devices to investigate the world around them. Using the many available websites and free apps, students can learn to detect patterns among phenomena related to the atmosphere, biosphere, geosphere, hydrosphere, and seasons.


Uncovering Student Ideas in Earth and Environmental Science
32 New Formative Assessment Probes

Page Keeley and Laura Tucker | NSTA PRESS, GRADES 3–12

Authors Page Keeley and Laura Tucker give you 32 engaging questions, or probes, that can reveal what your students already know—or think they know—about core Earth and environmental science concepts. These probes are organized into four sections: land and water; water cycle, weather, and climate; Earth history, weathering and erosion, and plate tectonics; and natural resources, pollution, and human impact. This 10th installment in the bestselling Uncovering Student Ideas in Science series (see pp. 18–19) offers field-tested teacher materials that provide science background and link to national standards.


Uncovering Student Ideas in Astronomy
45 New Formative Assessment Probes

Page Keeley and Cary Sneider | NSTA PRESS, GRADES K–12

The 45 astronomy probes provide situations that will pique your students’ interest while helping you understand how your students think about key ideas related to the nature of planet Earth, the Sun-Earth system, the Moon, the solar system, and the universe.


Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
The more than 30 hands-on activities cover the Sun’s motions, space weather caused by the Sun, and much more. The book contains ideas for writing projects; grade-appropriate math examples; and connections to music, art, fiction, and history. It also supports the NGSS and connects to the Common Core State Standards. AM&G GOLD EXCEL AWARD WINNER!


Once Upon an Earth Science Book
12 Interdisciplinary Activities to Create Confident Readers

Jodi Wheeler-Toppen NSTA PRESS, GRADES 6–8

This book starts with advice on teaching reading comprehension strategies. Then, the 12 content chapters give you hands-on science activities, readings that cover important Earth science concepts and support the NGSS, writing activities, and assessment exercises. (See p. 46 for the life science volume.)


Earth Science Puzzles
Making Meaning From Data

Kim Kastens and Margie Turrin NSTA PRESS, GRADES 8–12

This activity book centers on six “data puzzles” that foster critical-thinking skills in students and support science and math learning. Each puzzle is supported by an extensive Pedagogical Content Knowledge document with background information, required skills, common misconceptions, answers to student questions, and a bank of resources to further examine topics. REVERE AWARD WINNER!

Problem-Based Learning in the Physical Science Classroom, K–12
Tom J. McConnell, Joyce Parker, and Janet Eberhardt | NSTA PRESS, GRADES K–12

This book will help your students truly understand concepts such as motion, energy, and magnetism in true-to-life contexts. It offers a comprehensive description of why, how, and when to implement problem-based learning (PBL) in your curriculum. Its 14 developmentally appropriate lessons cover forces and motion, energy transformation, and electricity and magnetism. The lessons’ inviting titles include “Cartoon Cliff Escape” and “Rube Goldberg Machine.” This volume is the third in NSTA’s PBL series, which also covers Earth and space science and life science (p. 14). In addition to complete lesson plans that support the Next Generation Science Standards, the book offers extensive examples, instructions, and tips for implementing open-ended inquiry. It also provides rich, authentic problems you can use as is or adapt.

# P8408X3 Members: $27.96 Non-members: $34.95
E-book #: PKEB8408X3 Members: $20.97 Non-members: $26.21
Book/E-book Set #: PKE408X3 Members: $33.55 Non-members: $41.94

Argument-Driven Inquiry in Physics, Volume 1
Mechanics Lab Investigations for Grades 9–12
Victor Sampson, Todd L. Hutner, Daniel FitzPatrick, Adam LaMee, and Jonathon Grooms | NSTA PRESS, GRADES 9–12

Like the NSTA Press bestsellers for high school biology and chemistry (see p. 16), this book helps you build your students’ science proficiency. Argument-Driven Inquiry in Physics, Volume 1 focuses on mechanics and has two parts. The first part describes the ADI instructional model and the components of ADI lab investigations. The second part provides 23 field-tested labs covering a wide variety of topics related to forces and interactions, energy, work, and power. Some investigations are introductory labs that expose students to new content; others are application labs to help students try out a theory, law, or unifying concept. All are easy to use, thanks to teacher notes, student handouts, and checkout questions, and all align with the NGSS and the Common Core State Standards.

# P8349X5V1 Members: $38.36 Non-members: $47.95
E-book #: PKEB349X5V1 Members: $28.77 Non-members: $35.96
Book/E-book Set #: PKE349X5V1 Members: $46.03 Non-members: $57.54

Student Lab Manual for Argument-Driven Inquiry in Physics, Volume 1
# P8349X5V1S Members: $15.96 Non-members: $19.95
E-book #: PKEB349X5V1S Members: $11.97 Non-members: $14.96
Book/E-book Set #: PKE349X5V1S Members: $19.15 Non-members: $23.94

Beyond the Egg Drop
Infusing Engineering Into High School Physics
Arthur Eisenkraft and Shu-Yee Chen Freake, Editors | NSTA PRESS, GRADES 9–12

Problem: You’re eager to expand your physics curriculum and engage your students with engineering content, but you don’t know how. Solution: Use the approach and lessons in Beyond the Egg Drop to infuse engineering into what you’re already teaching, without sacrificing time for teaching physics concepts. In addition to a thorough discussion on the rationale, justification, meaning, and implementation of integrating engineering into your science curriculum, this book provides 24 flexible, engineering-infused physics lessons that cover mechanics, optics, electricity, and thermodynamics. Lessons also include examples of student work; incorporate strategies for assessment, teaching, and student learning; and connect to the Framework and the NGSS. The lessons in Beyond the Egg Drop will make it easier to include engineering concepts and skills without having to restructure your existing physics curriculum.

# PB432X Members: $35.96 Non-members: $44.95
E-book #: PKEB432X Members: $26.97 Non-members: $33.71
Book/E-book Set #: PKE432X Members: $43.15 Non-members: $53.96
Argument-Driven Inquiry in Physical Science
Lab Investigations for Grades 6–8
Jonathon Grooms, Patrick J. Enderle, Todd Hutner, Ashley Murphy, and Victor Sampson
NSTA PRESS, GRADES 6–8

Argument-Driven Inquiry in Physical Science will make middle school labs much more active and engaging. Its 22 investigations teach students to use argument to construct, support, and evaluate scientific claims. The labs cover core ideas in physical science: matter, motion and forces, energy, and waves. Students dig into important content and discover scientific practices as they figure out everything from how thermal energy works to what could make an action figure jump higher.

Easy-to-use features include reproducible student pages, teacher notes, checkout questions, and standards-alignment matrices. Its labs are versatile enough to introduce a topic or to act as a unit capstone. No matter how you use these authentic experiences, they’ll change the focus of your lab instruction. (See more about the series on pp. 16–17.)

#: PB349X4
Members: $38.36
Non-members: $47.95
E-book #: PKEB349X4
Members: $28.77
Non-members: $35.96
Book/E-book Set #: PKE349X4
Members: $46.03
Non-members: $57.54

Student Lab Manual for Argument-Driven Inquiry in Physical Science
#: PB349X4S
Members: $15.96
Non-members: $19.95
E-book #: PKEB349X4S
Members: $11.97
Non-members: $14.96
Book/E-book Set #: PKE349X4S
Members: $19.15
Non-members: $23.94

Argument-Driven Inquiry in Chemistry
Lab Investigations for Grades 9–12
Victor Sampson, Peter Carafano, Patrick Enderle, Steve Fannin, Jonathon Grooms, Sherry A. Southerland, Carol Stallworth, and Kiesha Williams
NSTA PRESS, GRADES 9–12

Transform your chemistry labs with this guide to argument-driven inquiry. Students will learn to identify questions, develop models, collect and analyze data, generate arguments, and critique and revise reports. The 30 field-tested labs cover a broad range of topics related to chemical reactions and matter’s structure and properties. The book contains introduction labs to acquaint students with new content and application labs to try out a theory, law, or unifying concept. All labs include reproducible student pages, teacher notes, and checkout questions.

#: PB349X2
Members: $38.36
Non-members: $47.95
E-book #: PKEB349X2
Members: $28.77
Non-members: $35.96
Book/E-book Set #: PKE349X2
Members: $46.03
Non-members: $57.54

Student Lab Manual for Argument-Driven Inquiry in Chemistry
#: PB349X2S
Members: $15.96
Non-members: $19.95
E-book #: PKEB349X2S
Members: $11.97
Non-members: $14.96
Book/E-book Set #: PKE349X2S
Members: $19.15
Non-members: $23.94

“I’ve used Argument-Driven Inquiry in Chemistry in my class to create three projects that have proven to be top notch! My students enjoyed the project, and most importantly, mastered more of the content than ever before. I’ve always been amazed at the level of quality of all the NSTA material. I want to get my hands on even more things to increase the learning and engagement in my class.”

—NSTA Press reader Ed G.
Teaching Energy Across the Sciences, K–12
Jeffrey Nordine, Editor | NSTA PRESS, GRADES K–12

This book gives you the strategies and tools you need to help your students understand energy as a concept that cuts across all sciences. The result will be a clear lens for interpreting how energy works in many contexts, both inside and outside the classroom. Teaching Energy Across the Sciences, K–12 is accessible to teachers with varying science backgrounds.

#: PB401X
E-book #: PKEB401X
Book/E-book Set #: PKE401X

Members: $27.96
Non-members: $34.95

Members: $20.97
Non-members: $26.21

Members: $33.55
Non-members: $41.94

Uncovering Student Ideas in Physical Science, Volumes 1, 2, and 3
Page Keeley | NSTA PRESS, GRADES K–12

Volume 1 provides 45 formative assessment probes on topics related to force and motion. Volume 2 offers 39 additional probes covering electricity and magnetism. The 32 new probes in volume 3 cover matter and energy. By helping you detect students’ misconceptions and then make sound instructional decisions to address them, these books have the potential to transform your teaching. Volumes 1 and 2 are coauthored by Rand Harrington. Volume 3 is coauthored by Susan Cooper. Volume 1 was a REVERE AWARD WINNER!

Volume 1, 45 New Force and Motion Assessment Probes
#: PB274X1
E-book #: PKEB274X1
Book/E-book Set #: PKE274X1

Members: $30.36
Non-members: $37.95

Members: $22.77
Non-members: $28.46

Members: $36.43
Non-members: $45.54

Volume 2, 39 New Electricity and Magnetism Formative Assessment Probes
#: PB274X2
E-book #: PKEB274X2
Book/E-book Set #: PKE274X2

Members: $30.36
Non-members: $37.95

Members: $22.77
Non-members: $28.46

Members: $36.43
Non-members: $45.54

Volume 3, 32 New Matter and Energy Formative Assessment Probes
#: PB274X3
E-book #: PKEB274X3
Book/E-book Set #: PKE274X3

Members: $30.36
Non-members: $37.95

Members: $22.77
Non-members: $28.46

Members: $36.43
Non-members: $45.54

SAVE! Buy all three volumes of Uncovering Student Ideas in Physical Science!
# #: PK274X3
Members: $86.53
Non-members: $108.16

Read sample chapters and order online: www.nsta.org/store
Order by phone: 800-277-5300
Never Stop Wondering
Emily Morgan  NSTA KIDS, GRADES K–4

Keep curiosity alive! That’s the message of Never Stop Wondering, which inspires children to develop an enduring interest in the mysteries of the universe. Illustrated with whimsical drawings and written in lively verse by Emily Morgan (author of the Next Time You See series, pp. 56–57), the book is a vibrant ode to the power of asking questions and the endeavor of science. It prompts kids to be inquisitive and persistent like the great scientists of history and provides activities to get their questions flowing; it motivates them to appreciate scientific inquiry; and most important, it encourages them to never stop in their quest to explore the “whys” of the world.

Never stop wondering, never stop questioning.
Never stop trying to figure things out.
Always keep searching, always keep asking.
That’s what science is all about.

#: PB440X Members: $10.36 Non-members: $12.95
E-book #: PKEB440X Members: $8.42 Non-members: $9.71
Book/E-book Set #: PKE440X Members: $13.47 Non-members: $16.84

Library Edition
#: P8440XL Members: $15.16 Non-members: $18.95

Order by phone: 800-277-5300  Read sample chapters and order online: www.nsta.org/store
Exemplary Evidence
Scientists and Their Data
Jessica Fries-Gaither | NSTA KIDS, GRADES 3–5

With this follow-up to the award-winning Notable Notebooks (see below), you can help kids discover what data—and scientists—can do! Exemplary Evidence highlights how a diverse range of scientists, including Marie Tharp and Russell Stands-Over-Bull, have used measurements, mapping, and even sketches to make all kinds of breakthroughs.


Library Edition

Notable Notebooks
Scientists and Their Writings
Jessica Fries-Gaither | NSTA KIDS, GRADES 3–5

This book brings to life the many ways in which trailblazers from Galileo to Jane Goodall have used a science notebook. You will also get four steps to starting your own notebook, plus mini-biographies of the diverse featured scientists. Written in captivating rhyme, the text is sprinkled with lively illustrations.


Library Edition

The Beaks of Birds

Why do some birds have beaks like straws, or pouches, or even daggers? Invite students to find out by reading this story of a child and two grown-up friends on a jaunt that sparks all kinds of questions. In addition to kindling kids’ curiosity, the colorful book shows how the structure of birds’ beaks plays a significant role in how birds function to find and capture their food. Bonus background material and eight age-appropriate activities round out the contents. The authors are husband-and-wife naturalists who also wrote and illustrated From Flower to Fruit (see below).


From Flower to Fruit
Richard Konicek-Moran and Kathleen Konicek-Moran | NSTA KIDS, GRADES K–4

Spark curiosity about the parts of a flower and the vital roles of bees and seeds in plant reproduction as you explore several mysteries: How does a seed change as it sprouts into a plant? Why do scientists call a tomato a fruit? Can some fruits really fly, float, and stick to your socks? This book will transform curious readers—children and adults—into budding botanists.

Animal Adaptations
National Science Teaching Association | NSTA KIDS, GRADES K–5

From feet to color to teeth, animals have many special structures that help them survive. This book allows children to use their powers of observation to compare the physical characteristics of animals to figure out how the characteristics help the animals survive in their environments.

#: PB439X Members: $11.96 Non-members: $14.95
E-book #: PKEB439X Members: $8.97 Non-members: $11.96
Book/E-book Set #: PKE439X Members: $14.35 Non-members: $17.94

Mrs. Carter’s Butterfly Garden
Steve Rich | NSTA KIDS, GRADES K–3

This is the story of how former First Lady Rosalynn Carter started a front yard project that grew into a butterfly-friendly trail through her hometown of Plains, Georgia. Learn why it’s good for people when butterflies have welcoming spaces and how kids can create their own.

OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!
#: PB352X1 E-book #: PBKE352X1 Book/E-book Set #: PKE352X1

My School Yard Garden
Steve Rich | NSTA KIDS, GRADES K–3

This colorful book takes students on a ramble through a school yard garden—past the seeding beds, along the compost bin, and over to the birdhouse and birdbath. Along the way, children learn what insects, animals, and plants need to thrive and discover the fun of observing and recording it all.

#: PB352X2 E-book #: PBKE352X2 Book/E-book Set #: PKE352X2
Emily Morgan, NSTA Kids, Grades K–5

A sense of wonder in a child with the Next Time You See series. Rather than providing facts to memorize, the books’ engaging text and eye-catching photography inspire children to experience the enchantment of everyday phenomena in the natural world. Free supplementary activities are available on NSTA’s website for teachers who want to go one step further. Specialized designed to be experienced with an adult—whether a parent, teacher, or friend—Next Time You See books serve as a reminder that you don’t have to look far to find something remarkable in nature. (Next Time You See books in Spanish are translated by Alicia B. Fuentes.)

SAVE! Buy all 9 Next Time You See books!

<table>
<thead>
<tr>
<th># (paperback)</th>
<th>PK329X9</th>
<th>Members: $88.58</th>
<th>Non-members: $110.72</th>
</tr>
</thead>
<tbody>
<tr>
<td># (library)</td>
<td>PK329X9L</td>
<td>Members: $129.62</td>
<td>Non-members: $162.02</td>
</tr>
</tbody>
</table>

Next Time You See a Bee
This book will get young readers buzzing about bees! Next Time You See a Bee reveals the big impact these little insects have on the world. It shows how the physical features of bees make them pros at collecting and spreading pollen. It explains how bees pollinate flowers, allowing the plants to produce delicious foods such as apples, almonds, and peaches. It also introduces readers to the wide variety of North America’s native bee species, discusses why bees are threatened, and shares what readers can do to help. After reading Next Time You See a Bee, curious kids can partner with adults to observe these remarkable creatures without fear—and take bee-friendly measures to protect the insects for the benefit of us all.

#: PB329X9  E-book #: PKEB329X9  Book/E-book Set #: PKE329X9

Next Time You See a Cloud

Next Time You See a Cloud

#: PB329X8  E-book #: PKEB329X8  Book/E-book Set #: PKE329X8

Library editions are also available!

Members: $15.16  Non-members: $18.95

Next Time You See a Bee
ISBN: 978-1-68140-652-7; #: PB329X9L

Next Time You See a Cloud
ISBN: 978-1-941316-32-0; #: PB329X8L

Next Time You See a Firefly
ISBN: 978-1-938946-16-5; #: PB329X3L

Next Time You See a Maple Seed
ISBN: 978-1-941316-49-3; #: PB329X5L

Next Time You See the Moon
ISBN: 978-1-938946-49-3; #: PB329X4L

Next Time You See a Pill Bug
ISBN: 978-1-938946-17-2; #: PB329X4L

Next Time You See a Seashell
ISBN: 978-1-938946-27-1; #: PB329X7L

Next Time You See a Spiderweb
ISBN: 978-1-941316-31-3; #: PB329X2L

Next Time You See a Sunset
ISBN: 978-1-938946-26-4; #: PB329X2L

Order by phone: 800-277-5300

Read sample chapters and order online: www.nsta.org/store
Next Time You See a Firefly
- OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!

Next Time You See a Maple Seed
- OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!

Next Time You See the Moon
- ILA/CBC CHILDREN’S CHOICES WINNER!
#: PB329X5 E-book #: PKEB329X5 Book/E-book Set #: PKE329X5

Spanish edition available
La próxima vez que veas la luna
#: PB329X5SP E-book #: PKEB329X5SP Book/E-book Set #: PKE329X5SP

Next Time You See a Pill Bug
- OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!
- REVERE AWARD WINNER!
#: PB329X4 E-book #: PKEB329X4 Book/E-book Set #: PKE329X4

Spanish edition available
La próxima vez que veas una cochinilla
#: PB329X4SP E-book #: PKEB329X4SP Book/E-book Set #: PKE329X4SP

Next Time You See a Seashell
- REVERE AWARD WINNER!
#: PB329X1 E-book #: PKEB329X1 Book/E-book Set #: PKE329X1

Next Time You See a Spiderweb
- OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!
#: PB329X7 E-book #: PKEB329X7 Book/E-book Set #: PKE329X7

Next Time You See a Sunset
- OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!

Spanish edition available
La próxima vez que veas una puesta del sol
#: PB329X2SP E-book #: PKEB329X2SP Book/E-book Set #: PKE329X2SP
The I Wonder Why series was written to ignite the curiosity of young children while encouraging them to become avid readers. Included in each volume is a Parent/Teacher Handbook with coordinating activities. The I Wonder Why series was written by award-winning science educator Lawrence Lowery.

**Animals Two by Two**
NSTA KIDS, GRADES K–3

Reading this book is like taking a walk through the zoo with an eagle-eyed friend testing you about the differences between a frog and a toad or a mole and a vole!


**Dark as a Shadow**
NSTA KIDS, GRADES K–6

Written in lively rhymes, this book makes it even more fun to learn the science behind why shadows change length throughout the day and disappear in the dark.


**Fragrant as a Flower**
NSTA KIDS, GRADES K–3

This book invites kids to discover what their sense of smell can teach them about the world around them.


**How Tall Was Milton?**
NSTA KIDS, GRADES K–6

In this book, the townspeople’s earnest yet humorous attempts to gauge just how big Milton is convey the importance of having standard units of measurement.


**Look and See**
NSTA KIDS, GRADES K–3

Charming text and bright pictures help children learn about the richness of sight and start making comparisons and identifying patterns in what they see.

Quiet as a Butterfly
NSTA KIDS, GRADES K–3

The book not only explains how hearing works but also aims to sharpen young readers’ awareness of all they can listen to and all they can learn as they do.


Sounds Are High, Sounds Are Low
NSTA KIDS, GRADES K–6

A whimsical introduction to pitch and volume, this book practically begs young scientists to read it aloud.


Spenser and the Rocks
NSTA KIDS, GRADES K–6

This book is an engaging introduction to such scientific procedures as classification and research.


The Tree by Diane’s House
NSTA KIDS, GRADES K–3

The book explores life cycles and the food chain as it shows young readers how an end can also be a new beginning in the natural world.

#: PB330X17 E-book #: PKEB330X17 Book/E-book Set #: PKE330X17

Up, Up in a Balloon
NSTA KIDS, GRADES K–6

In addition to introducing scientific processes and principles of flight, this book may prompt budding inventors to try, try again.

**OUTSTANDING SCIENCE TRADE BOOK FOR STUDENTS K–12!**


Save! Buy all 21 I Wonder Why books!
#: PK330X21 Members: $190.72 Non-members: $238.40

Order by phone: 800-277-5300 Read sample chapters and order online: www.nsta.org/store
STEM for kids! Phenomenon-based, three-dimensional learning content that’s designed using the 5E model and incorporates the science and engineering practices (SEPs), crosscutting concepts (CCCs), and disciplinary core ideas (DCIs) of three-dimensional learning.

To see complete list of eBooks+Kids, go to www.nsta.org/ebooks/kids

Features

eBooks+ include simulations, videos, animations, slide shows, drag and drop, glossary, high-resolution graphics, embedded review questions, and word-by-word highlighting with narration.
Teacher’s Guide

Comprehensive teacher’s guides are available. Each teacher’s guide provides connections to the grade-level content (including science, ELA, and mathematics), explanations for how students are using the three dimensions (SEPs, CCCs, DCIs), and tips and practical information to enhance the e-book experience.

Use activities in the teacher’s guides to implement three-dimensional learning in your classrooms.

Explore Phenomena

Three-Dimensional Activities

A Note About Safety

English Language Arts Connections

Mathematics Connections

English Language Arts: Speaking and Listening

Hands-On Activities

Thinking Beyond

Differentiated Learning

Engineering Connections

Performance Expectations

Disciplinary Core Ideas

Misconceptions

Driving Questions

Discourse

Order by phone: 800-277-5300

View all Enhanced E-books: www.nsta.org/ebooks
eBooks+ Student Editions (Grades 6–12) and Professional Learning Editions

eBooks+ include simulations, videos, animations, slide shows, drag and drop, glossary, high-resolution graphics, and embedded review questions.

Features

- Interactive Simulations
- Videos/Animations
- Glossary
- Slide Shows
- Interactive Images
- Formative Assessment
- Graphs and Diagrams
- Hands-On Activities
- Summative Assessment

View all Enhanced E-books: www.nsta.org/ebooks

Order by phone: 800-277-5300
## eBooks+ Student Editions and Professional Learning

<table>
<thead>
<tr>
<th><strong>Student</strong></th>
<th><strong>Professional Learning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore science content</td>
<td>Brush up on content knowledge and pedagogy</td>
</tr>
<tr>
<td>Highlight and take notes directly in the e-book</td>
<td>Highlight and take notes directly in the e-book</td>
</tr>
<tr>
<td>Answer embedded review questions that can be viewed by teacher</td>
<td>Answer embedded review questions for self-assessment</td>
</tr>
<tr>
<td>Upload completed assignments to teacher (formats: PDF, Word, Excel, video, audio, image, URL)</td>
<td>View chapters on Learning Outcomes and Pedagogical Implications</td>
</tr>
</tbody>
</table>

* See URLs below for a complete list of the tools.

## Information and Ordering of eBooks+ and eBooks+ Kids

**INFORMATION**
For pricing, latest releases, and other information, go to the following URLs:
- Grades K–5: [www.nsta.org/ebooks/kids](http://www.nsta.org/ebooks/kids)
- Grades 6–12: [www.nsta.org/ebooks/school](http://www.nsta.org/ebooks/school)
- Educators: [www.nsta.org/ebooks/professional_learning](http://www.nsta.org/ebooks/professional_learning)

**ORDERING**
Order by phone: 800-277-5300
Order by e-mail: orders@nsta.org
Order by fax: 888-433-0526

For questions or to request a free preview, contact ebooks@nsta.org.

For PCs, Macs, iPads, Android tablets, and Chromebooks.
Three-Dimensional Teaching and Learning Powered by STEM

Empower educators to better integrate STEM and three-dimensional (3-D) standards for teaching and learning, and learn how STEM initiatives and 3-D instruction support each other. Participants explore the vision of a scientifically literate society described in *A Framework for K–12 Science Education*. They examine how this vision supports and is supported by STEM education, focusing on aspects of the designed world through the application of science and engineering practices.

Achieving Equity With Three-Dimensional Teaching and Learning

Explore how 3-D science instruction, driven by phenomena and problem solving, can create opportunities for ALL students to develop scientific literacy. Participants develop an understanding of 3-D teaching and learning and gain a powerful toolkit to support learning for all students in the classroom.

Assessing Three-Dimensional Learning

3-D teaching and learning poses new challenges—and new opportunities—in assessment. Participants learn how to examine student models for evidence of 3-D learning. They also learn criteria for evaluating the quality of assessment tasks.

Using Student-Work Protocols to Evaluate 3-D Learning

Participants learn a protocol to examine student work for evidence of 3-D learning, provide feedback, and inform next steps of instruction. The protocol can be used by individual teachers or within professional learning communities.

New Online Opportunity: Personalized Web Seminars

Add a series of private web seminars to extend your onsite learning, help deepen understanding, and offer educators a virtual space for collaboration through the Learning Center. Examples include the following:

- Supporting Student Discourse
- Phenomena Driving Student Learning
- Unpacking the Science and Engineering Practices

Learn about more professional learning opportunities at www.nsta.org/district/ngss.aspx

NSTA will customize any program to match your educators’ needs and goals and to best fit your professional learning schedule.

Shifting to the NGSS: Professional Book Study for Secondary School Teachers

[https://learningcenter.nsta.org/bookstudy/2019-Fall.aspx](https://learningcenter.nsta.org/bookstudy/2019-Fall.aspx)
September 17 – October 8, 2019 | Virtual

Three-Dimensional Teaching and Learning Powered by STEM Workshop

[www.nsta.org/conferences/ngss2.aspx](http://www.nsta.org/conferences/ngss2.aspx)
November 16, 2019 | Cincinnati, OH

Assessing Three-Dimensional Learning Workshop

[www.nsta.org/conferences/ngss3.aspx](http://www.nsta.org/conferences/ngss3.aspx)
December 14, 2019 | Seattle, WA

Making Sense of Three-Dimensional Teaching and Learning Workshop

[www.nsta.org/conferences/ngss.aspx](http://www.nsta.org/conferences/ngss.aspx)
October 25 – 26, 2019 | Salt Lake City, UT

Science and Engineering Practices: Professional Book Study for K–12 Teachers

January 28 – February 18, 2020 | Virtual
Explore the Newest NSTA Professional Learning Programs Now Available!

NSTA will customize any program to match your educators’ needs and goals and to best fit your professional learning schedule.

Three-Dimensional Teaching and Learning Powered by STEM
Empower educators to better integrate STEM and three-dimensional (3-D) standards for teaching and learning, and learn how STEM initiatives and 3-D instruction support each other. Participants explore the vision of a scientifically literate society described in *A Framework for K–12 Science Education*. They examine how this vision supports and is supported by STEM education, focusing on aspects of the designed world through the application of science and engineering practices.

Achieving Equity With Three-Dimensional Teaching and Learning
Explore how 3-D science instruction, driven by phenomena and problem solving, can create opportunities for ALL students to develop scientific literacy. Participants develop an understanding of 3-D teaching and learning and gain a powerful toolkit to support learning for all students in the classroom.

Assessing Three-Dimensional Learning
3-D teaching and learning poses new challenges—and new opportunities—in assessment. Participants learn how to examine student models for evidence of 3-D learning. They also learn criteria for evaluating the quality of assessment tasks.

Using Student-Work Protocols to Evaluate 3-D Learning
Participants learn a protocol to examine student work for evidence of 3-D learning, provide feedback, and inform next steps of instruction. The protocol can be used by individual teachers or within professional learning communities.

New Online Opportunity: Personalized Web Seminars
Add a series of private web seminars to extend your onsite learning, help deepen understanding, and offer educators a virtual space for collaboration through the Learning Center. Examples include the following:
- Supporting Student Discourse
- Phenomena Driving Student Learning
- Unpacking the Science and Engineering Practices

Learn about more professional learning opportunities at [www.nsta.org/district/ngss.aspx](http://www.nsta.org/district/ngss.aspx)
Would your school or district profit from a presentation on the full range of NSTA resources and literacy solutions? If so, please find your state in the table below and contact your regional representative. NSTA reps can arrange for special pricing for bulk purchases, introduce you and your team to professional development opportunities, and even set up districtwide licenses that provide digital access to bestselling NSTA books. For more information, contact Rick Bounds, NSTA’s National Sales Manager, at rbounds@nsta.org.

<table>
<thead>
<tr>
<th>State</th>
<th>Regional Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Paula Fabbro</td>
</tr>
<tr>
<td>Alaska</td>
<td>Dan Taylor</td>
</tr>
<tr>
<td>Arizona</td>
<td>Kim Peters</td>
</tr>
<tr>
<td>Arkansas</td>
<td>Rick Bounds</td>
</tr>
<tr>
<td>British Columbia</td>
<td>Dan Taylor</td>
</tr>
<tr>
<td>California</td>
<td>Marguerite Morgan Pollard</td>
</tr>
<tr>
<td>Colorado</td>
<td>Jill Netz-Fulkerson, PhD</td>
</tr>
<tr>
<td>Connecticut</td>
<td>Bill Ross</td>
</tr>
<tr>
<td>Delaware</td>
<td>Debra Sawyer, PhD</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>Debra Sawyer, PhD</td>
</tr>
<tr>
<td>Florida</td>
<td>Sylvia Fumero</td>
</tr>
<tr>
<td>Georgia</td>
<td>Petra Griffin</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Marguerite Morgan Pollard</td>
</tr>
<tr>
<td>Idaho</td>
<td>Dan Taylor</td>
</tr>
<tr>
<td>Illinois</td>
<td>Terry Shulman</td>
</tr>
<tr>
<td>Indiana</td>
<td>Carla Westphal</td>
</tr>
<tr>
<td>Iowa</td>
<td>Randy Brooks</td>
</tr>
<tr>
<td>Kansas</td>
<td>Rick Bounds</td>
</tr>
<tr>
<td>Kentucky</td>
<td>Dee Camp</td>
</tr>
<tr>
<td>Louisiana</td>
<td>Robert Wallace</td>
</tr>
<tr>
<td>Maine</td>
<td>Bill Ross</td>
</tr>
<tr>
<td>Maryland</td>
<td>Debra Sawyer, PhD</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Bill Ross</td>
</tr>
<tr>
<td>Michigan</td>
<td>Kathy Stratton</td>
</tr>
<tr>
<td>Minnesota</td>
<td>Randy Brooks</td>
</tr>
<tr>
<td>Mississippi</td>
<td>Hannah Fabbro Smith</td>
</tr>
<tr>
<td>Missouri</td>
<td>Rick Bounds</td>
</tr>
<tr>
<td>Montana</td>
<td>Molly Ward</td>
</tr>
<tr>
<td>Nebraska</td>
<td>Randy Brooks</td>
</tr>
<tr>
<td>Nevada</td>
<td>Rick Bounds</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Bill Ross</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Joseph Toscano</td>
</tr>
<tr>
<td>New Mexico</td>
<td>Edie Sanchez &amp; Max Sanchez</td>
</tr>
<tr>
<td>New York</td>
<td>Himanshu Jain</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Amber Harlow &amp; Ricky Harlow</td>
</tr>
<tr>
<td>North Dakota</td>
<td>Randy Brooks</td>
</tr>
<tr>
<td>Ohio</td>
<td>Dee Camp</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Rick Bounds</td>
</tr>
<tr>
<td>Oregon</td>
<td>Dan Taylor</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Debra Sawyer, PhD</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Bill Ross</td>
</tr>
<tr>
<td>South Carolina</td>
<td>Amber Harlow &amp; Ricky Harlow</td>
</tr>
<tr>
<td>South Dakota</td>
<td>Randy Brooks</td>
</tr>
<tr>
<td>Tennessee</td>
<td>Paula Fabbro</td>
</tr>
<tr>
<td>Texas</td>
<td>Jackie Amos</td>
</tr>
<tr>
<td>Utah</td>
<td>Dan Taylor</td>
</tr>
<tr>
<td>Vermont</td>
<td>Bill Ross</td>
</tr>
<tr>
<td>Virginia</td>
<td>Debra Sawyer, PhD</td>
</tr>
<tr>
<td>Washington</td>
<td>Dan Taylor</td>
</tr>
<tr>
<td>West Virginia</td>
<td>Debra Sawyer, PhD</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Terry Shulman</td>
</tr>
<tr>
<td>Wyoming</td>
<td>Molly Ward</td>
</tr>
</tbody>
</table>

Read sample chapters and order online: [www.nsta.org/store](http://www.nsta.org/store)
<table>
<thead>
<tr>
<th>State</th>
<th>Regional Representative</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Paula Fabbro</td>
<td>Tel: 850-293-4027, E-mail: <a href="mailto:pfabbro@bellsouth.net">pfabbro@bellsouth.net</a></td>
</tr>
<tr>
<td>Arizona</td>
<td>Kim Peters</td>
<td>Tel: 602-757-2575, E-mail: <a href="mailto:josephtoscano@hotmail.com">josephtoscano@hotmail.com</a></td>
</tr>
<tr>
<td>Arkansas</td>
<td>Jackie Amos</td>
<td>Tel: 940-222-9978, E-mail: <a href="mailto:jackie.amos@nsta.com">jackie.amos@nsta.com</a></td>
</tr>
<tr>
<td>Arkansas, Kansas, Nebraska, North Dakota, South Dakota</td>
<td>Randy Brooks</td>
<td>Tel: 641-226-0654, E-mail: <a href="mailto:rbrooks@coresolutions.com">rbrooks@coresolutions.com</a></td>
</tr>
<tr>
<td>California</td>
<td>Marguerite Morgan Pollard</td>
<td>Tel: 916-799-8703, E-mail: <a href="mailto:mpollard.nsta@gmail.com">mpollard.nsta@gmail.com</a></td>
</tr>
<tr>
<td>Colorado</td>
<td>Jill Netz-Fulkerson, PhD</td>
<td>Tel: 303-237-5005, E-mail: <a href="mailto:jilltfulkerson@comcast.net">jilltfulkerson@comcast.net</a></td>
</tr>
<tr>
<td>Connecticut, Maine</td>
<td>Bill Ross</td>
<td>Tel: 860-999-3743, E-mail: <a href="mailto:bross@needres.com">bross@needres.com</a></td>
</tr>
<tr>
<td>Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia</td>
<td>Debra Sawyer, PhD</td>
<td>Tel: 303-638-9585, E-mail: <a href="mailto:debrasmoulton@aol.com">debrasmoulton@aol.com</a></td>
</tr>
<tr>
<td>Florida</td>
<td>Sylvia Fumero</td>
<td>Tel: 504-281-0505, E-mail: <a href="mailto:jfambro@bellsouth.net">jfambro@bellsouth.net</a></td>
</tr>
<tr>
<td>Georgia</td>
<td>Petra Griffin</td>
<td>Tel: 678-963-0938, E-mail: <a href="mailto:petragriffin@earthlink.net">petragriffin@earthlink.net</a></td>
</tr>
<tr>
<td>Georgia</td>
<td>Jeff Enos</td>
<td>Tel: 407-758-7253, E-mail: <a href="mailto:jeff@eduresourcesolutions.com">jeff@eduresourcesolutions.com</a></td>
</tr>
<tr>
<td>Hawaii</td>
<td>Anne Bagateles &amp; Anthony Bagateles</td>
<td>Tel: 650-889-7294, E-mail: <a href="mailto:caytonres@aol.com">caytonres@aol.com</a></td>
</tr>
<tr>
<td>Hawaii, San Francisco Bay Area, &amp; North Coast</td>
<td>Peter Doering</td>
<td>Tel: 510-364-5966, E-mail: <a href="mailto:peterdoering5@gmail.com">peterdoering5@gmail.com</a></td>
</tr>
<tr>
<td>Idaho, Oregon, Utah, Washington</td>
<td>Dan Taylor</td>
<td>Tel: 360-608-2069, E-mail: <a href="mailto:dan@tayloreducationalmedia.com">dan@tayloreducationalmedia.com</a></td>
</tr>
<tr>
<td>Indiana</td>
<td>Carla Westphal</td>
<td>Tel: 317-753-5247, E-mail: <a href="mailto:carla@carlawestphaalandassociates.com">carla@carlawestphaalandassociates.com</a></td>
</tr>
<tr>
<td>Iowa, Minnesota</td>
<td>Robert Wallace</td>
<td>Tel: 703-312-9210, E-mail: <a href="mailto:rbounds@nsta.org">rbounds@nsta.org</a></td>
</tr>
<tr>
<td>Louisiana</td>
<td>Joseph Toscano</td>
<td>Tel: 201-320-0124, E-mail: <a href="mailto:josephtoscano@hotmail.com">josephtoscano@hotmail.com</a></td>
</tr>
<tr>
<td>Maine</td>
<td>Bill Ross</td>
<td>Tel: 602-600-8040, E-mail: <a href="mailto:hhfabbrosmith@gmail.com">hhfabbrosmith@gmail.com</a></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Bill Ross</td>
<td>Tel: 850-602-8040, E-mail: <a href="mailto:petragriffin@earthlink.net">petragriffin@earthlink.net</a></td>
</tr>
<tr>
<td>Maryland</td>
<td>Debra Sawyer, PhD</td>
<td>Tel: 303-638-9585, E-mail: <a href="mailto:debrasmoulton@aol.com">debrasmoulton@aol.com</a></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Bill Ross</td>
<td>Tel: 602-600-8040, E-mail: <a href="mailto:hhfabbrosmith@gmail.com">hhfabbrosmith@gmail.com</a></td>
</tr>
<tr>
<td>Michigan</td>
<td>Kathy Stratton</td>
<td>Tel: 850-293-4027, E-mail: <a href="mailto:pfabbro@bellsouth.net">pfabbro@bellsouth.net</a></td>
</tr>
<tr>
<td>Minnesota</td>
<td>Jeff Enos</td>
<td>Tel: 407-758-7253, E-mail: <a href="mailto:jeff@eduresourcesolutions.com">jeff@eduresourcesolutions.com</a></td>
</tr>
<tr>
<td>Missouri</td>
<td>Rick Bounds</td>
<td>Tel: 860-999-3743, E-mail: <a href="mailto:bross@needres.com">bross@needres.com</a></td>
</tr>
<tr>
<td>Montana, Wyoming</td>
<td>Molly Ward</td>
<td>Tel: 406-600-7638, E-mail: <a href="mailto:molly@mtngoatinstructionaldesign.com">molly@mtngoatinstructionaldesign.com</a></td>
</tr>
<tr>
<td>Nebraska</td>
<td>Matt Lair</td>
<td>Tel: 407-617-2637, E-mail: <a href="mailto:mattrair@eduresourcesolutions.com">mattrair@eduresourcesolutions.com</a></td>
</tr>
<tr>
<td>New Mexico</td>
<td>Edie Sanchez &amp; Max Sanchez</td>
<td>Tel: 505-264-3407, E-mail: <a href="mailto:emsanchez@centralcoast.net">emsanchez@centralcoast.net</a></td>
</tr>
<tr>
<td>New York</td>
<td>Himanshu Jain</td>
<td>Tel: 917-674-0391, E-mail: <a href="mailto:hjain05@gmail.com">hjain05@gmail.com</a></td>
</tr>
<tr>
<td>North Carolina</td>
<td>Amber Harlow &amp; Ricky Harlow</td>
<td>Tel: 919-395-3653, E-mail: <a href="mailto:rharlow@myedupartners.com">rharlow@myedupartners.com</a></td>
</tr>
<tr>
<td>North Dakota</td>
<td>Paula Fabbro</td>
<td>Tel: 850-293-4027, E-mail: <a href="mailto:pfabbro@bellsouth.net">pfabbro@bellsouth.net</a></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Jeff Enos</td>
<td>Tel: 407-758-7253, E-mail: <a href="mailto:jeff@eduresourcesolutions.com">jeff@eduresourcesolutions.com</a></td>
</tr>
<tr>
<td>Oregon</td>
<td>Dan Taylor</td>
<td>Tel: 360-608-2069, E-mail: <a href="mailto:dan@tayloreducationalmedia.com">dan@tayloreducationalmedia.com</a></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Dee Camp</td>
<td>Tel: 317-514-6515, E-mail: <a href="mailto:dcamp@indyrr.com">dcamp@indyrr.com</a></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Joseph Toscano</td>
<td>Tel: 201-320-0124, E-mail: <a href="mailto:josephtoscano@hotmail.com">josephtoscano@hotmail.com</a></td>
</tr>
<tr>
<td>South Carolina</td>
<td>Judy Quick &amp; Annie Nguyen</td>
<td>Tel: 714-960-9295, E-mail: <a href="mailto:juliet@theschooltechpeople.com">juliet@theschooltechpeople.com</a> and <a href="mailto:annie@theschooltechpeople.com">annie@theschooltechpeople.com</a></td>
</tr>
<tr>
<td>Tennessee</td>
<td>Rick Bounds</td>
<td>Tel: 860-999-3743, E-mail: <a href="mailto:bross@needres.com">bross@needres.com</a></td>
</tr>
<tr>
<td>Texas</td>
<td>Jackie Amos</td>
<td>Tel: 940-222-9978, E-mail: <a href="mailto:jackie.amos@nsta.com">jackie.amos@nsta.com</a></td>
</tr>
<tr>
<td>Utah</td>
<td>Jeff Enos</td>
<td>Tel: 407-758-7253, E-mail: <a href="mailto:jeff@eduresourcesolutions.com">jeff@eduresourcesolutions.com</a></td>
</tr>
<tr>
<td>Vermont</td>
<td>Rick Bounds</td>
<td>Tel: 860-999-3743, E-mail: <a href="mailto:bross@needres.com">bross@needres.com</a></td>
</tr>
</tbody>
</table>

NSTA Press publishes 20–25 new books per year for preK–college science teachers. Book Beat is our monthly e-newsletter that helps you stay on top of all our exciting teaching resources. It puts these useful items right at your fingertips:

- Tips and lesson ideas that include FREE content from our publications
- Information on any special offers or discounts active in NSTA’s online Science Store
- Snapshots of our hot-off-the-press resources so you know what’s next on your reading list

Sign up today at www.nsta.org/publications/archive-bookbeat.aspx
Thank you for your order!

For our ordering and return policies and bulk discount information, please see www.nsta.org/store/faq.aspx

1. Today’s date ____________________________
   
   • NSTA Member (No.____________________)
     (If no Member number is indicated, you will be charged
     Non-member prices.)
   
   • Non-member
     (If not a member, join at
     www.nsta.org/membership and
discount will be applied.)

2. Bill to (institutions only):
   Name________________________________________
   Address______________________________________
   City__________________________________________
   State/Province ______ Zip/Postal Code__________
   Country______________________________________
   Daytime Phone (__)__________________________
   Fax (__)____________________________________
   E-mail______________________________________

   Ship to (no P.O. boxes):
   Name________________________________________
   Address______________________________________
   City__________________________________________
   State/Province ______ Zip/Postal Code__________
   Country______________________________________
   Daytime Phone (__)__________________________
   Fax (__)____________________________________
   E-mail______________________________________

3. |
   Qty | Stock No. | Title or Description | Unit Price | Total |
   ---|----------|----------------------|------------|-------|
   |
   |
   |
   |
   |
   |

4. Grade level(s) you teach
   ____________________________

   Shipping and Handling

   Regular delivery orders are sent via UPS (Note: UPS cannot deliver to a P.O. box) and take 7–12 days at most. For regular orders to any of the 50 states, your cost is 10% of the total. Expedited shipping is sent two-day mail and is charged a fee of 20% of the entire order. All rush orders are billed at 30%.

   Outside the 50 states, all shipments to Canada, Mexico, and Puerto Rico are treated as regular orders but billed at 15% of the total. International customers farther afield are strongly encouraged to purchase e-book versions—because print orders are subject to a 25% shipping charge.

   Must be in U.S. dollars, payable at a U.S. bank. International orders must be prepaid.

Photocopy this page for additional order forms.

*If your organization is exempt from sales tax, include state documents that support your exemption with your faxed order form.
FREE SHIPPING

on purchases of $75 or more with promo code SHIP19 through October 31, 2019.
Offer valid only on orders placed on the web of NSTA Press books and NSTA Kids books shipping to U.S. addresses. May not be combined with any other offer.

Write for NSTA Press!

Do you have a book idea for NSTA Press? We want to hear from both established and prospective authors who have great ideas for new books for teachers of science in grades preK through college. Topics of the greatest current interest include

- STEM education
- Assessment
- Reading and writing in science
- Elementary science
- Themes related to A Framework for K–12 Science Education and the Next Generation Science Standards

Visit www.nsta.org/publications/press/authors.aspx for details and to submit your book idea, or contact nstapress@nsta.org with any questions.