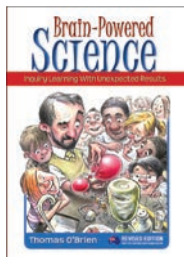




# Physical Science

## Years 7-10

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### BRAIN-POWERED SCIENCE

Thomas O'Brien • 9781760010805

Thomas O'Brien takes 33 science inquiry activities higher by using experiments based on the science of a 'discrepant event' - an experiment or demonstration in which the outcome is not what students expect. While this book is designed for use with Year 6-12 students, F-5 Australian Curriculum: Science content descriptions are also included to illustrate the appropriate prerequisite work that students should engage in prior to participating in these activities. This thought-provoking text includes many up-to-date online resources, as well as extensions to each of the

physical science, biology and chemistry activities.

**NST0805 • \$37.95**



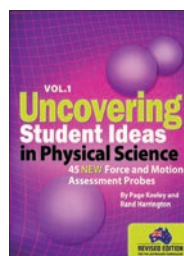
### MORE BRAIN-POWERED SCIENCE

Thomas O'Brien • 9781760010935

Thomas O'Brien uses 22 inquiry-oriented discrepant events to challenge students' preconceived ideas and urge them to critically examine evidence, draw inferences and review their initial explanations with their peers. More Brain-Powered Science is the perfect dual-purpose activity book for Years 6-12 science teachers who aim to stimulate and motivate their students while expanding their own scientific understanding. This revised Australian edition features correlations with the strands of the Australian Curriculum:

Science, including various content descriptions for the science activities.

**NST0935 • \$37.95**

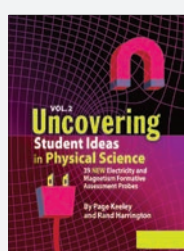


### UNCOVERING STUDENT IDEAS IN PHYSICAL SCIENCE, VOLUME 1

Page Keeley, Rand Harrington • 9781760011130

The 45 assessment probes in Uncovering Students Ideas in Physical Science enable teachers to find out what students really think about key ideas in force and motion. This book includes Teacher Notes, related concepts, explanations for the teacher of the force and motion ideas being taught, related ideas in the Australian Curriculum: Science and Mathematics, research on typical student misconceptions regarding force and motion, and suggestions for instruction and assessment.

**NST1130 • \$39.95**

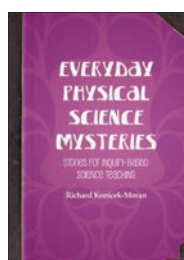


### UNCOVERING STUDENT IDEAS IN PHYSICAL SCIENCE, VOLUME 2

Page Keeley, Rand Harrington • 9781760019259

If you and your students can't get enough of a good thing, Volume 2 of Uncovering Student Ideas in Physical Science is just what you need. The book offers 39 new formative assessment probes, this time with a focus on electric charge, electric current and magnets and electromagnetism. It can help you do everything from demystify electromagnetic fields to explain the real reason balloons stick to the wall after you rub them on your hair.

**NST9259 • \$55.95**



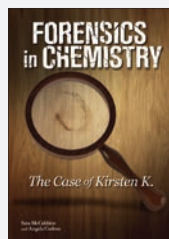
### EVERYDAY PHYSICAL SCIENCE MYSTERIES

Richard Konicek-Moran • 9781760010874

What can make a ball roll faster? Does the temperature of wood affect the heat of a fire? How can old-fashioned tin can telephones teach today's students about sound and technology? By presenting everyday mysteries like these, Everyday Physical Science Mysteries will motivate your students to carry out hands-on science investigations and actually care about the results. The stories that accompany the science lessons come with lists of science concepts to explore, year level-appropriate strategies for using them and explanations of how the lessons align with national

standards.

**NST0874 • \$29.95**



### TEACHING ENERGY ACROSS THE SCIENCES, K-12

Sara McCubbins, Angela Codron • 9781760015947

How did Kirsten's body wind up at the bottom of a lake - and what do wedding cake ingredients, soil samples, radioactive decay, bone age, blood stains, bullet matching and drug lab evidence reveal about whodunit? These mysteries are the core of this teacher resource book, which meets the unique needs of secondary school chemistry classes in a highly memorable way. The book makes forensic evidence the foundation of a series of hands-on, weeklong labs, and provides vivid lessons

in why chemistry concepts are relevant and how they connect.

**NST5947 • \$39.95**

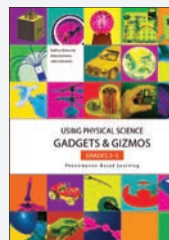


### EARTH SCIENCE SUCCESS, 2ND EDITION

Catherine Oates-Bockenstedt, Michael Oates • 9781760019051

All 55 lessons in Earth Science Success, 2nd Edition enable you to incorporate electronic tablets with teacher-tested methods. In addition, the investigations all incorporate the disciplinary core ideas from the Next Generation Science Standards. Through these investigations, students become actively involved in the discovery process, from anticipation to evidence collection to analysis. The emphasis is on hands-on, sequential experiences through which students explore science concepts lab by lab while also developing critical-thinking skills. Topics include astronomy, geology, meteorology and environmental impacts.

**NST9051 • \$55.95**



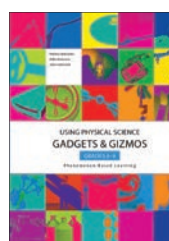
### USING PHYSICAL SCIENCE GADGETS AND GIZMOS, GRADES 3-5

Matthew Bobrowsky, Mikko Korhonen, Jukka Kohtamäki • 9781760019129

What student - or teacher - can resist the chance to experiment with Velocity Radar Guns, Running Parachutes, Super Solar Racer Cars and more? The 30 experiments in Using Physical Science Gadgets and Gizmos, Grades 3-5, let your elementary school students explore a variety of phenomena involved with speed, friction and air resistance, gravity, air pressure, electricity, electric circuits, magnetism and energy. Instead of putting the theory before the application, it encourages students to first

experience how the gadgets work and then grow curious enough to find out why.

**NST9129 • \$45.95**

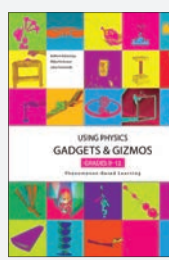


### USING PHYSICAL SCIENCE GADGETS AND GIZMOS, GRADES 6-8

Matthew Bobrowsky, Mikko Korhonen, Jukka Kohtamäki • 9781760019235

What student - or teacher - can resist the chance to experiment with Rocket Launchers, Sound Pipes, Drinking Birds, Dropper Poppers, and more? The 35 experiments in Using Physical Science Gadgets and Gizmos, Grades 6-8, cover topics including pressure and force, thermodynamics, energy, light and colour, resonance and buoyancy.

**NST9235 • \$45.95**

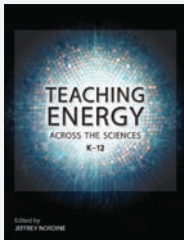


### USING PHYSICS GADGETS AND GIZMOS, GRADES 9-12

Matthew Bobrowsky, Mikko Korhonen, Jukka Kohtamäki • 9781760019242

What student - or teacher - can resist the chance to experiment with Rocket Launchers, Drinking Birds, Dropper Poppers, Boomwhackers, Flying Pigs and more? The 54 experiments in Using Physics Gadgets and Gizmos, Grades 9-12, encourage your high school students to explore a variety of phenomena involved with pressure and force, thermodynamics, energy, light and colour, resonance, buoyancy, two-dimensional motion, angular momentum, magnetism and electromagnetic induction.

**NST9242 • \$49.95**



### TEACHING ENERGY ACROSS THE SCIENCES, K-12

Jeffrey Nordine • 9781760018955

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.

**NST8955 • \$49.95**



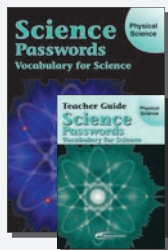
### ENERGISING SMART STARTERS - SCIENCE: Motivational Exercises to Stimulate the Brain

Imogene Forte, Marjorie Frank • 9781760562625

Smart Starter activities change "extra" moments in a classroom into teachable moments. They are designed to take short amounts of time. However, Smart Starters are NOT short on substance. The Smart

Starters in this book are packed full of important skills to practise and polish or to reinforce and extend. Start off a unit on space objects with Extraterrestrial Questions, or a fitness-nutrition unit with Would You? Could You? Or, use Spinning Eggs to introduce students to density concepts. Have students been away from study of the body systems for a while? Refresh what they know about the skeletal system with Bone Maps, or strengthen their knowledge of weather with Weather or Not. Smart Starters will help to reinforce concepts previously introduced and stimulate minds.

**INA2625 • \$15.95**



### SCIENCE PASSWORDS: Vocabulary for Science - Physical Science

Barbara Klemetti Mindell

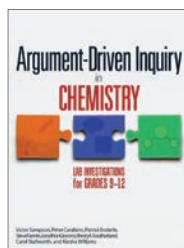
Science Passwords: Vocabulary for Science – Physical Science is designed to expand the scientific knowledge of students, and incorporates a student book and teacher guide. The student book clearly explains such aspects of Physical Science as matter, chemistry, motion, forces and energy, magnetism and electricity, with clear text structure and order, coherent writing and audience appropriateness. They include reading passages, activities, glossary, and an explanation of Latin or

Greek word roots, prefixes and suffixes.

**Student Book**  
**Teacher Guide**

**CA10540 • \$17.95**

**CA105409 • \$24.95**

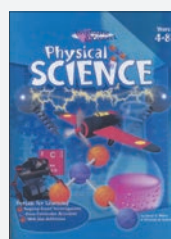


### ARGUMENT-DRIVEN INQUIRY IN CHEMISTRY, GRADES 9-12

Victor Sampson, Peter Carafano, Patrick Enderle, Steve Fannin, Jonathon Grooms, Sherry Southerland, Carol Stallworth, Kiesha Williams • 9781760019082

Transform your chemistry labs with this guide to argument-driven inquiry. Designed to be much more authentic for instruction than traditional laboratory activities, the investigations in this book give high school students the opportunity to work the way scientists do. They learn to identify questions, develop models, collect and analyse data, generate arguments and critique and revise their reports. Thirty field-tested labs cover a broad range of topics related to chemical reactions and matter's structure and properties. You can use them as introduction labs to acquaint students with new content or as application labs to try out a theory, law or unifying concept.

**NST9082 • \$69.95**



### INVESTIGATE & CONNECT PHYSICAL SCIENCE

David Wiley • 9781740251815

Includes in-depth information for different content areas - physics, chemistry, and technology and a wealth of information to support classroom teachers as successful Science Educators. Each activity is presented in a lesson plan format, inquiry based student lab pages are provided for most of the activities to assist you in the lesson. Students will internalise many important science concepts when given opportunities to think critically. With this resource, students are engaged through print, media and scientific investigations.

**IFA8482 • \$39.95**



### DIFFERENTIATED LESSONS & ASSESSMENTS: Science

Julia McMeans

This book provides practical strategies, activities and assessments that will help teachers to differentiate lessons to meet the individual needs, styles and abilities of students. Each unit of study includes key concepts, discussion topics, vocabulary and assessments in addition to a wide range of activities for visual, logical, verbal, musical and kinaesthetic learners. Helpful extras include generic strategies and activities for differentiating lessons. There are six types of assessments for

each unit of study: multiple choice, matching, graphic, sentence completion, true-false and short response. Ideas for activity centres and further internet resources are also offered.

**Years 5-6**  
**Middle Years**

**TCR7283 • \$32.95**

**TCR7290 • \$32.95**



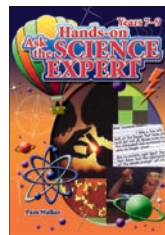
### DISCIPLINARY CORE IDEAS: Reshaping Teaching and Learning

Ravit Duncan, Joseph Krajcik, Ann Rivet • 9781760561086

Like all enthusiastic teachers, you want your students to see the connections between important science concepts so they can grasp how the world works now - and maybe even make it work better in the future. But how exactly do you help them learn and apply these core ideas? Just as its subtitle says, this important book aims to reshape your approach to teaching and your students' way of learning.

Disciplinary Core Ideas can make your science lessons more coherent and memorable, regardless of what subject matter you cover and what grade you teach. Think of it as a conceptual tool kit you can use to help your students learn important and useful science now - and continue learning throughout their lives.

**NST1086 • \$55.95**



### 100 HANDS-ON ACTIVITIES - ASK THE SCIENCE EXPERT YEARS 7-9

Pam Walker • 9781740257190

The unique format found in Ask the Science Expert turns the students themselves into the "expert" as they respond to the advice column-type questions introducing each science problem. Important background information plus pertinent pre lab questions lead students to the necessary data on their own. Once the experiment is complete, students answer original questions in advice column-type response. Scientific problem solving and research skills are enhanced while writing

skills are improved through the response required for concluding the experiment.

**IFA8753 • \$35.95**

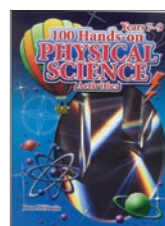


### TAKE-HOME PHYSICS: 65 High-Impact, Low-Cost Labs

Michael Horton • 9781760014780

Take-Home Physics is an excellent resource for secondary school physics teachers who want to devote more classroom time to complex concepts while challenging their students with hands-on homework assignments. This volume presents 65 take-home physics labs that use ordinary household items or other inexpensive materials to tackle motion and kinematics; forces and energy; waves, sound and light; and electricity and magnetism is a safe and engaging way.

**NST4780 • \$45.95**



### 100 HANDS-ON ACTIVITIES - PHYSICAL SCIENCE YEARS 7-9

Joan DiStasio • 9781740257237

Physical Science is a valuable teaching resource for introducing chemistry and physics to middle years students. The activities that are covered in this book are graphing, motion, machines, the periodic table, formulas and equations, light, electricity and much more. The author of this book is a high school Science teacher with a Master's degree in Chemistry, she also brings a wealth of experience from the chemistry industry.

**IFA8767 • \$35.95**



### EXPEDITIONS IN YOUR CLASSROOM: Science, Middle Years

Henrietta List • 9781742398549

Engage students by providing the opportunity to explore and apply important concepts and rules from subject areas to real-life situations. Students address situations involving real people, with themes that appeal to secondary school students. Projects include: examining the hazards created by an oil spill on water and designing a technique to counter the effects, investigating plant structure and soil chemistry; testing soils to determine the best soils for planting, investigating the components of a healthy lifestyle including

vital signs, BMI, personal and family health histories, examining weather records and climate change.

**WAL8549 • \$29.95**



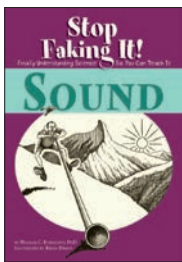
### COMPANION CLASSROOM ACTIVITIES FOR STOP FAKING IT!: Force and Motion

William Robertson • 9781760017040

Stop Faking It! Force and Motion helped thousands of teachers, parents, and homeschoolers conquer topics from Newton's laws to the physics of space travel. Now Companion Classroom Activities for Stop Faking It! Force and Motion proves an ideal supplement to the original book - or a valuable resource of its own. The hands-on activities and highly readable explanations

allow students to first investigate concepts, then discuss learned concepts, and finally apply the concepts to everyday situations. Each activity includes an objective, materials list, National Science Education Standards addressed, approximate completion time, and detailed step-by-step instructions.

**NST7040 • \$39.95**

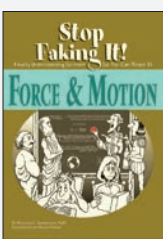


### SOUND: Stop Faking It! Finally Understanding Science So You Can Teach It

William Robertson • 9781760019921

Sound takes an intentionally light touch to help out all those adults seeking necessary scientific background to teach physics with confidence. The book introduces sound waves and uses that model to explain sound-related occurrences. Starting with the basics of what causes sound and how it travels, you'll learn how musical instruments work, how sound waves add and subtract, how the human ear works and even why you can sound like a Munchkin when you inhale helium.

**NST9921 • \$29.95**



### FORCE AND MOTION: Stop Faking It! Finally Understanding Science So You Can Teach It

William Robertson • 9781760017446

Intimidated by inertia? Frightened by forces? Mystified by Newton's Three Laws of Motion? You're not alone! The Stop Faking It! series is perfect for science teachers, homeschoolers, parents wanting to help with homework, all of you who need a jargon-free way to learn the background for teaching middle years physical science with confidence.

**NST7446 • \$29.95**



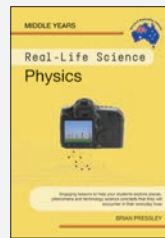
### AIR, WATER, AND WEATHER: Stop Faking It! Finally Understanding Science So You Can Teach It

William Robertson • 9781760019884

Thunderstruck by storm fronts? Perplexed about air pressure? Hazy on how weather works? If you've always been shaky on the science behind such phenomena, Air, Water, and Weather is designed to help you develop a deep understanding of the basics so you can teach without fear. You'll learn about pressure, the Coriolis force, the Bernoulli Effect, density, and explanations of why hot air doesn't rise all by itself and why

heating air doesn't necessarily cause it to expand. These concepts form a foundation for explanations of weather patterns, including the jet stream, storm fronts, and the formation of tornadoes and hurricanes.

**NST9884 • \$29.95**



### REAL-LIFE SCIENCE: Physics Years 9-12

Brian Pressley • 9781742398808

Each book in the series has a correlations chart that shows core standards that are addressed by each lesson, as well as other standards that are addressed, but are not the main focus of the lesson. Each book in the Real-Life Science series features lessons you can use in your classroom today. Use these engaging lessons to help your students explore the intriguing ways that science is at work all around them. Topics include: What If You Fell Out of an Airplane Without a Parachute?, How Do Digital Cameras Work?, How Big Is a Nuclear Explosion? and many more.

**WAL8808 • \$25.95**

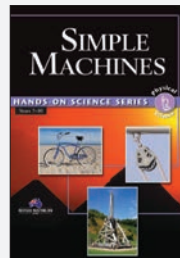


### DIALOGUE, DISCUSSION AND DEBATE: Science Middle Years

Henrietta List • 9781742398266

This book helps your students grow more confident in analysing and talking about the issues at the forefront of contemporary science and culture. Climate change, alternative medicine, nuclear vs solar energy are just a few of the concerns that students read about, hear about, and want to talk about. Each topic includes: a brief overview, investigative questions, classroom preparation and instructional steps, assessment criteria, web resources for research. Lesson plans within this book are supported by research into Bloom's Revised Taxonomy and Bybee's 5E's of the Learning Cycle: Engage, Explore, Explain, Extend and Evaluate.

**WAL8266 • \$29.95**



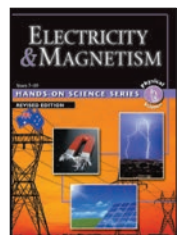
### HANDS-ON SCIENCE SERIES: Simple Machines Years 7-10

Karen Kwitter, Steven Souza • 9781742398587

In this book, lessons explore the operations and applications of simple machines. Students will examine the concepts of force, work, power, efficiency, and mechanical advantage. They will also discover how simple machines such as ramps, wedges, levers, pulleys, and gears operate. Students will begin to appreciate the diverse applications of simple machines, especially in everyday life. Activities range from the simple (Work (the Physics Kind)) to the advanced (How Do Pulleys Work Together to Make a Better Machine?).

There is something for every student. We strongly recommend that you try these activities yourself before asking your students to perform them.

**WAL8587 • \$29.95**

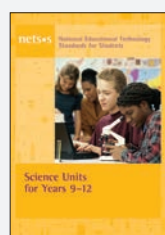


### HANDS-ON SCIENCE SERIES: Electricity & Magnetism Years 7-10

Joel Beller, Kim Magloire • 9781742398563

This book includes activities related to a force of nature, namely, electromagnetism. Every effort has been made to use readily available, inexpensive equipment. Activities range from the simple (playing with magnets and magnetic equipment) to the complex (creating electricity by means of thermocouples and working with photovoltaic cells). There is something for every student. We strongly recommend that you try these activities yourself before asking your students to perform them. This book provides hands-on activities in which students: • manipulate equipment, • interpret data, • evaluate experimental designs, • draw inferences and conclusions, • make predictions and • apply the methods of science.

**WAL8563 • \$29.95**



### SCIENCE UNITS FOR YEARS 9-12

9781742393940

This engaging addition to ISTE's NETS•S Curriculum Series shows you how to move instruction away from rote memorisation of facts and cookbook-style "experiments". The technology-infused lessons in this volume promote the kind of conceptual understanding and inquiry that drives real-world science. Drawing on extensive experience revolutionising their own science classrooms, the authors show teachers how to employ computer simulation and visualisation tools to promote student learning. Sample topics include cell division, virtual dissection, earthquake modelling, and the Doppler Effect.

**IST3940 • \$55.95**

