

Oxford Secondary Science 2 Teachers Guide

In the science classroom, there are some ideas that are as difficult for young students to grasp as they are for teachers to explain. Forces, electricity, light, and basic astronomy are all examples of conceptual domains that come into this category. How should a teacher teach them? The authors of this monograph reject the traditional separation of subject and pedagogic knowledge. They believe that to develop effective teaching for meaningful learning in science, we must identify how teachers themselves interpret difficult ideas in science and, in particular, what supports their own learning in coming to a professional understanding of how to teach science concepts to young children. To do so, they analyzed trainee and practising teachers' responses to engaging with difficult ideas when learning science in higher education settings. The text demonstrates how professional insight emerges as teachers identify the elements that supported their understanding during their own learning. In this paradigm, professional awareness derives from the practitioner interrogating their own learning and identifying implications for their teaching of science. The book draws on a significant body of critically analysed empirical evidence collated and documented over a five-year period involving large numbers of trainee and practising teachers. It concludes that it is essential to 'problematize' subject knowledge, both for learner and teacher. The book's theoretical perspective draws on the field of cognitive psychology in learning. In particular, the role of metacognition and cognitive conflict in learning are examined and subsequently applied in a range of contexts. The work offers a unique and refreshing approach in addressing the important professional dimension of supporting teacher understanding of pedagogy and critically examines assumptions in contemporary debates about constructivism in science education.

Becoming a Teacher provides a broad context for understanding education, addressing issues such as the influence of international policy and practice, education ideology and social justice. This is balanced with practical advice for the classroom on topics such as assessment for learning, learning technologies, literacy, numeracy and English as an additional language. Becoming a Teacher draws extensively on contemporary research and empirical evidence to support critical reflection about learning and teaching.

Encouraging you to reflect on your knowledge and beliefs, it explores some of the complex social and cultural influences that influence professional learning and practice. The approach chimes with the government's recognition that trainee teachers should take a research-informed approach towards classroom practice. The fifth edition is refreshed and revitalized throughout, with:

- a complete revision of each chapter
- new chapters on 'Reforming ITE', 'Teachers Lives and Careers', 'International Influences', 'Engagement and Motivation', 'Learning and the Emotions', 'Data Usage in Schools', 'Safeguarding' and 'Learning with Digital Technologies'
- up-to-date referencing of research findings
- insightful policy analysis
- critical commentary on issues

For those training to teach in secondary school on a Postgraduate Certificate in Education (PGCE) or a School Direct programme, or taking an undergraduate or postgraduate Education Studies course, Becoming a Teacher provides invaluable support, insight and guidance. "With every new edition this book confirms its place as one of the most commanding, authoritative and influential texts in teacher education". Meg Maguire's leadership of this new editorial team means that this book remains my umbilical cord to those pivotal principals that I cherish in education: integrity, passion, critical engagement and transformation." Gerry Czerniawski, Professor of Education, University of East London, UK "An excellent contribution to the Teacher Education and development literature". "Many of the authors are leading thinkers in their field and as such the book offers a significant breadth, depth and coherence to the teacher development discourse." Professor David Spendlove, School of Environment, Education and Development, The University of Manchester, UK

?This edited volume explores how primary school teachers create rich opportunities for science learning, higher order thinking and reasoning, and how the teaching of science in Australia, Germany and Taiwan is culturally framed. It draws from the international and cross-cultural science education study EQUALPRIME: Exploring quality primary education in different cultures: A cross-national study of teaching and learning in primary science classrooms. Video cases of Year 4 science teaching were gathered by research teams based at Edith Cowan University, Deakin University, the Freie Universität Berlin, the National Taiwan Normal University and the National Taipei University of Education. Meetings of these research teams over a five year period at which data were shared, analysed and interpreted have revealed significant new insights into the social and cultural framing of primary science teaching, the complexities of conducting cross-cultural video-based research studies, and the strategies and semiotic resources employed by teachers to engage students in reasoning and meaning making. The book's purpose is to disseminate the new insights into quality science teaching and how it is framed in different cultures; methodological advancements in the field of video-based classroom research in cross-cultural settings; and, implications for practice, teacher education and research. "The chapters (of this book) address issues of contemporary relevance and theoretical significance: embodiment, discursive moves, the social unit of learning and instruction, inquiry, and reasoning through representations. Through all of these, the EQUALPRIME team manages to connect the multiple cultural perspectives that characterise this research study. The 'meta-reflection' chapters offer a different form of connection, linking cultural and theoretical perspectives on reasoning, quality teaching and video-based research methodologies. The final two chapters offer connective links to implications for practice in teacher education and in cross-cultural comparative research into teaching and learning. These multiple and extensive connections constitute one of the books most significant accomplishments. The EQUALPRIME project, as reported in this book, provides an important empirical base that must be considered by any system seeking to promote sophisticated science learning and instructional practices in primary school classrooms. By exploring the classroom realisation of aspirational science pedagogies, the EQUALPRIME project also speaks to those involved in teacher education and to teachers. I commend this book to the reader. It offers important insights, together with a model of effective, collegial, collaborative inter-cultural research. It will help us to move forward in

important ways". Professor David Clarke, Melbourne University

Helping teachers understand and apply theory and research is one of the most challenging tasks of teacher preparation and professional development. As they learn about motivation and engagement, teachers need conceptually rich, yet easy-to-use, frameworks. At the same time, teachers must understand that student engagement is not separate from development, instructional decision-making, classroom management, student relationships, and assessment. This volume on teaching teachers about motivation addresses these challenges. The authors share multiple approaches and frameworks to cut through the growing complexity and variety of motivational theories, and tie theory and research to real-world experiences that teachers are likely to encounter in their courses and classroom experiences. Additionally, each chapter is summarized with key "take away" practices. A shared perspective across all the chapters in this volume on teaching teachers about motivation is "walking the talk." In every chapter, readers will be provided with rich examples of how research on and principles of classroom motivation can be re-conceptualized through a variety of college teaching strategies. Teachers and future teachers learning about motivation need to experience explicit modeling, practice, and constructive feedback in their college courses and professional development in order to incorporate those into their own practice. In addition, a core assumption throughout this volume is the importance of understanding the situated nature of motivation, and avoiding a "one-size-fits" all approach in the classroom. Teachers need to fully interrogate their instructional practices not only in terms of motivational principles, but also for their cultural relevance, equity, and developmental appropriateness. Just like P-12 students, college students bring their histories as learners and beliefs about motivation to their formal study of motivation. That is why college instructors teaching motivation must begin by helping students evaluate their personal beliefs and experiences. Relatedly, college instructors need to know their students and model differentiating their interactions to support each of them. The authors in this volume have, collectively, decades of experience teaching at the college level and conducting research in motivation, and provide readers with a variety of strategies to help teachers and future teachers explore how motivation is supported and undermined. In each chapter in this volume, readers will learn how college instructors can demonstrate what effective, motivationally supportive classrooms look, sound, and feel like.

This book targets students who are going to be K-12 teachers and points out the responsibilities that both science and education faculty members face. These responsibilities not only include providing fundamental information and skills related to teaching, but also mentoring teachers to reflect their understanding. The National Science Education Standards specifically address grades K-12; however, these standards have a great significance for higher education in that they also address systematic issues of teacher preparation and professional development. This document discusses ways in which the Standards are meaningful to higher education. Chapters 1 and 3 focus on the teaching and assessment standards. Chapter 2 concerns professional development standards. Chapter 4 addresses content standards. Chapter 5 discusses science education program standards. Chapter 6 describes the science education system standards. (YDS)

In the second edition, respected author Anton Lawson provides future teachers with a thorough, accessible introduction to using inquiry to teach science. His book is built around the following questions: What is science? Why teach science? What is the nature of scientific knowledge? How do people develop scientific thinking skills?

This book is the sixth in a series of publications on the subject of integrated science teaching and is based on the proceedings of a consultation meeting held on the theme "Recent Developments in Integrated Science Teaching Worldwide". The meeting was organized by the Australian National Commission for Unesco, in cooperation with the International Council of Associations in Science Education (ICASE) and with the Australian Science Teachers' Association. The intention of the book is to reflect how far integrated science teaching had spread around the world. The chapters in the first part of this book describe key issues in integrated science and broad trends in the approaches to integrated science teaching worldwide. They include the conclusions of five working groups set up during the meeting to discuss the key issues in the following areas: (1) content (developments in science and technology and their implications for science education); (2) curriculum and resource materials; (3) teaching, learning, and assessment; (4) equipment and science teaching facilities; and (5) teacher education. The following articles are included in eight chapters of Part I: "What Is Integrated Science Teaching: Its Beginnings and Its Place Today" (Dennis G. Chisman); "Reflections on the Development of Integrated Science Teaching Projects for 4-16 Year Olds" (Kerst Th. Boersma, and others); "The Integration of Science Teaching through Science-Technology-Society Courses" (John Holman); and "Teacher Behaviours Which Facilitate Integrated Science Teaching" (Ronald J. Bonnstetter). The second part of the book describes national and regional developments in the teaching of integrated science in Africa, the Arab States, Asia and the South Pacific, Europe and North America, Latin America and the Caribbean; and is based largely on the reports and discussions at the meeting. The third part contains some examples of topics and modules of integrated science courses taken from recent courses in Botswana, the Caribbean, the Netherlands, the Philippines, Sierra Leone, and the United Kingdom. The fourth part is an annotated bibliography (over 370 entries) which attempts to sample literature relevant to integrated science. (KR)

Secondary Science Teaching for English Learners: Developing Supportive and Responsive Learning Context for Sense-making and Language Development provides a resource for multiple audiences, including pre- and in-service secondary science teachers, science teacher educators, instructional coaches, curriculum specialists, and administrators, to learn about a research-based approach to teaching science that responds to the growing population of English learners in the United States. The book offers clear definitions of pedagogical practices supported by classroom examples and a cohesive framework for teaching science in linguistically diverse classrooms. The Secondary Science Teaching with English Language and Literacy Acquisition (or SSELLA) Framework addresses how learning science is enhanced through meaningful and relevant learning experiences

that integrate discipline-specific literacy. In particular, four core science teaching practices are described: (1) contextualized science activity, (2) scientific sense-making through scientific and engineering practices, (3) scientific discourse, and (4) English language and disciplinary literacy development. These four core practices are supported by sound theory and research based on unscripted guidelines and flexible modifications of science lessons. Moreover, the four interrelated practices promote students' use of core science ideas while reading, writing, talking, and doing science, thus reflecting principles from Next Generation Science Standards, Common Core State Standards for English Language Arts, and English language proficiency standards. Secondary Science Teaching provides readers with a historical and theoretical basis for integrating language, literacy, and science in multilingual science classrooms, and well as explicit models and guided support teachers in enacting effective teaching practices in the classroom, including comparative vignettes to distinguish between different types of classroom practice.

Using an inquiry-based approach to learning, Oxford Discover develops the communication skills and thinking skills students need for success in the 21st century. Who are your family and friends? Where can we see colors? How can we make music? Oxford Discover uses Big Questions such as these to tap into students' natural curiosity. It enables them to ask their own questions, find their own answers, and explore the world around them. This approach to language learning and literacy, supported by a controlled grammar and skills syllabus, helps students achieve near-native fluency in English. Oxford Discover gives teachers the tools to develop children's 21st century skills, creating young thinkers with great futures. Use with Show and Tell as part of 9-level course.

Published to glowing praise in 1990, Science for All Americans defined the science-literate American--describing the knowledge, skills, and attitudes all students should retain from their learning experience--and offered a series of recommendations for reforming our system of education in science, mathematics, and technology. Benchmarks for Science Literacy takes this one step further. Created in close consultation with a cross-section of American teachers, administrators, and scientists, Benchmarks elaborates on the recommendations to provide guidelines for what all students should know and be able to do in science, mathematics, and technology by the end of grades 2, 5, 8, and 12. These grade levels offer reasonable checkpoints for student progress toward science literacy, but do not suggest a rigid formula for teaching. Benchmarks is not a proposed curriculum, nor is it a plan for one: it is a tool educators can use as they design curricula that fit their student's needs and meet the goals first outlined in Science for All Americans. Far from pressing for a single educational program, Project 2061 advocates a reform strategy that will lead to more curriculum diversity than is common today. IBenchmarks emerged from the work of six diverse school-district teams who were asked to rethink the K-12 curriculum and outline alternative ways of achieving science literacy for all students. These teams based their work on published research and the continuing advice of prominent educators, as well as their own teaching experience. Focusing on the understanding and interconnection of key concepts rather than rote memorization of terms and isolated facts, Benchmarks advocates building a lasting understanding of science and related fields. In a culture increasingly pervaded by science, mathematics, and technology, science literacy require habits of mind that will enable citizens to understand the world around them, make some sense of new technologies as they emerge and grow, and deal sensibly with problems that involve evidence, numbers, patterns, logical arguments, and technology--as well as the relationship of these disciplines to the arts, humanities, and vocational sciences--making science literacy relevant to all students, regardless of their career paths. If Americans are to participate in a world shaped by modern science and mathematics, a world where technological know-how will offer the keys to economic and political stability in the twenty-first century, education in these areas must become one of the nation's highest priorities. Together with Science for All Americans, Benchmarks for Science Literacy offers a bold new agenda for the future of science education in this country, one that is certain to prepare our children for life in the twenty-first century.

Science education has changed radically in recent years, both as a result of debates within the subject and because of curriculum legislation. Jerry Wellington discusses the major issues in science education today - such questions as the balance of content and process in the curriculum, the role of practical work and the nature of science as a subject - and uses this discussion to support a very practical resource for teachers in training and their mentors. The book covers every aspect of science teaching, including: Planning Differentiation and special needs Assessment Practical work Problem solving and investigations IT in science Handling sensitive issues, e.g. sex education Building on children's prior learning Throughout, Wellington's guidance is accompanied by suggestions for discussion, activities for individual and group use and annotated lists of further reaing aimed at helping the reader to build up a personal approach to the teaching of the subject. Students will also be helped by the glossaries of specialist terminology at the end of each chapter and by the references to National Curriculum attainment targets at every point in the book.

A companion to Aspects of Teaching Secondary Science, the first section of this reader provides an overview of the key issues, discussing the nature of science and its role in the school curriculum. The second section goes on to examine critically the ways in which science is reflected in the school curriculum, while the third section discusses recent curriculum initiatives and developments. Turning the focus from what is taught on to who is taught, section four shows that students are very much active learners in the classroom, making sense of their experiences and constructing their own meanings. The final section covers the role of research in science education, giving examples of research papers and considering how productive collaboration between teachers and researchers can impact upon the effectiveness of classroom practice.

Study conducted at Demonstration Multipurpose School and Kendriya Vidyalaya situated in Mysore, Karnataka, India.

This book supports teachers of all subject specialisms to consolidate their existing knowledge of language and shows them how to develop skills to use language to build subject knowledge at secondary level. Tasks guide the reader to think about the language we use for different purposes, and how we use it to describe, explain and learn about our world. This paves an accessible way for subject-related language to become more visible and enables readers to use accessible terminology to confidently talk about it, as well as modelling it and guiding the development of its use with all learners, including those with English as an Additional Language (EAL). Starting from basic educational principles, the book asks readers to consider the processes of learning and why every good teacher needs knowledge about language to support this, addressing a range of questions including: Who are the EAL learners? What are the processes of language development? How is language used to present and discuss knowledge in my subject? Why does every good teacher need knowledge about language to support subject literacy? The authors

provide examples, discovery tasks, reflections and templates for activities, to help the reader identify the tools they need to set up a framework for scaffolding pupils' language development. With a progression plan, directed tasks, and formative feedback, this framework provides a template for classroom practice and further professional development.

This practical, comprehensive and accessible book will prove invaluable for students on secondary initial teacher training courses, PGCE students, lecturers on science education programmes and newly qualified secondary teachers. It provides: the pedagogical knowledge needed to teach science in secondary schools support activities for work in schools and self-study information on professional development for secondary teachers.

New Lower Secondary Science Improving Secondary Science Teaching Psychology Press

This third edition of the bestselling textbook Science 5–11 has been fully updated to provide a synthesis of research and best practice in teaching and learning that focuses on successful ways to engage and motivate young scientists. Responding to the new curriculum, particularly 'Working Scientifically', this edition now includes: New sections on whole-school assessment, mentoring, transitions and a topics-based approach. Reference to the 'big ideas' of biology, chemistry and physics with chapters clearly related to this new subject structure. Updated tables of progression in each topic area and reference to cross-curricular contexts. New self-assessment questions for teachers, the option for higher-level thinking and further reading. An updated chapter on subject leadership with an increasing emphasis on monitoring progress. Bringing together research undertaken from a range of activities in the field, this book forms a comprehensive and clear guide, outlining the subject knowledge that a teacher needs, the curriculum requirements and the best ways to go about teaching. A practical guide ideal for students, trainees, mentors and other practising teachers, the book provides information on appropriate science topics for Key Stage 1 and 2.

Now more than ever, as a worldwide STEM community, we need to know what pre-collegiate teachers and students explore, learn, and implement in relation to computer science and engineering education. As computer science and engineering education are not always "stand-alone" courses in pre-collegiate schools, how are pre-collegiate teachers and students learning about these topics? How can these subjects be integrated? Explore six articles in this book that directly relate to the currently hot topics of computer science and engineering education as they tie into pre-collegiate science, technology, and mathematics realms. There is a systematic review article to set the stage of the problem.

Following this overview are two teacher-focused articles on professional development in computer science and entrepreneurship venture training. The final three articles focus on varying levels of student work including pre-collegiate secondary students' exploration of engineering design technology, future science teachers' (collegiate students) perceptions of engineering, and pre-collegiate future engineers' exploration of environmental radioactivity. All six articles speak to computer science and engineering education in pre-collegiate forums, but blend into the collegiate world for a look at what all audiences can bring to the conversation about these topics.

A comprehensive and critical guide for new and experienced teachers on the teaching and learning of science. It combines an overview of current research with an account of curriculum changes to provide a valuable and practical guide to the business of classroom teaching.

Since its emergence over two decades ago, the construct of pedagogical content knowledge (PCK) has significantly impacted preservice and inservice teacher education, educational policy, and educational research. PCK has served to re-focus educators' attention on the important role of subject matter in educational practice and away from the more generic approach to teacher education that dominated the field prior to 1975. This ambitious text is the first of its kind to summarize the theory, research, and practice related to pedagogical content knowledge. The audience is provided with a functional understanding of the basic tenets of the construct as well as its applications to research on science teacher education and the development of science teacher education programs. The authors are prominent educators representing a variety of subject matter areas and K-12 grade levels. Although the focus of the text is science education, it should provide valuable reading for any individuals with interests in professional teacher education.

Now fully updated in its fourth edition, Science Learning, Science Teaching offers an accessible, practical guide to creative classroom teaching and a comprehensive introduction to contemporary issues in science education. Aiming to encourage and assist professionals with the process of reflection in the science classroom, the new edition re-examines the latest advances in the field and changes to the curriculum, and explores the use of mobile technology and coding, and its impact on ICT in science education. With extra tasks integrated throughout the book and a brand new chapter, 'Working scientifically', to help develop learners' investigative skills, key topics include: • The art and craft of science teaching. • The science curriculum and science in the curriculum. • Planning and managing learning. • Inclusive science education. • Laboratory safety in science learning and teaching. • Language and numeracy in science teaching and learning. • Computers and computing in science education. • Citizenship and sustainability in science education. Including points for reflection and useful information about further reading and recommended websites, Science Learning, Science Teaching is an essential source of support, guidance and inspiration for all students, teachers, mentors and those involved in science education wishing to reflect upon, improve and enrich their practice.

The classic guide for designing robust science and mathematics professional development programs! This expanded edition of one of the most widely cited resources in the field of professional development for mathematics and science educators demonstrates how to design professional development experiences for teachers that lead to improved student learning. Presenting an updated professional development (PD) planning framework, the third edition of the bestseller reflects recent research on PD design, underscores how beliefs and local factors can influence PD design, illustrates a wide range of PD strategies, and emphasizes the importance of: Continuous program monitoring Combining strategies to address diverse needs Building cultures that sustain learning

Activate is a new Key Stage 3 Science course for the 2014 curriculum, designed to support every student on their journey through Key Stage 3 to Key Stage 4 success. This student book will spark students' curiosity in science, whilst gradually building the maths, literacy and working scientifically skills vital for success in the new GCSEs.

This practical and accessible workbook is designed to support student teachers as they develop their basic teaching skills and increase their broader knowledge and understanding for teaching science. Newly qualified and beginning teachers should also find it useful. It contains all the advice, guidance and resources new and student science teachers need to reflect on and develop their teaching practice, helping them to plan lessons across the subject in a variety of teaching situations. Helpful features include: case studies examples of pupils' work examples of existing good practice a range of tried-and-tested teaching strategies photocopiable resources and training materials activities in each chapter to help student history teachers analyse their learning and performance web links for further reading on evidence-based practice.

This book's structure reflects the different dimensions to learning science. The first section focuses on the importance of talk in the science classroom, while the second explores the key role of practical work. The third section is concerned with the creative, theoretical aspect of science. Section four follows this by considering the communication of ideas and how pupils learn to participate in the discourse of the scientific community. Section five emphasizes the place of science in the broader context, considering its moral and ethical dimensions and its place in a cultural context. Finally, section six explores the complexity of the task faced by science teachers, highlighting the knowledge and skills science teachers must acquire in order to create an environment in which students are motivated to learn science.

Science Works enables you to deliver the skills-based How Science Works approach in an integrated, manageable and fully supported way.

Oxford Mathematics for the Caribbean has been updated to cater for the needs of the classroom in the 21st century. Features of each book in the series include: prior learning points; fully differentiated exercises to cater for a wide range of ability; activities and investigations to encourage mathematical thinking; summaries of the main points of each unit with questions to check understanding, so that students can test themselves; and regular revision exercises to help monitor progress. The series is intended for secondary school pupils studying for the Caribbean Examinations Council (CXC) examinations in mathematics.

With its teen appeal and carefully paced syllabus, Teen2Teen makes learning English irresistible and teaching English effortless. Teen2Teen reflects the social nature of teenagers. Realistic language models and dialogues correspond to their patterns of communication, and controlled speaking practice exploits their enjoyment of social interaction, thus building their confidence. The grammar syllabus is carefully paced and clearly presented, and new vocabulary is taught explicitly using visual cues and definitions.

Offers more than 40 teacher-friendly, ready-to-use analogies for science classrooms and shows teachers how to select analogies for instruction, gauge their impact, and improve their effectiveness.

Improving Secondary Science Teaching has been written to help teachers both new and experienced reflect on their current practice and consider how to improve the effectiveness of their teaching. The book examines each of the common teaching methods used in science in relation to pupils' learning and provides guidance on management issues and procedures. With underlying themes such as pupils' interest in science and their motivation to learn; how pupils learn science; the type of science currently being taught in school; and the value of educational research; the book includes chapters on: the improvement process planning for progression and continuity promoting pupils' learning dealing with differences making use of information from assessment learning about the nature of science This timely book will be of interest to practising science teachers, particularly those who are working to improve the management of science departments or their own teaching practice. It will also be a valuable resource for science education researchers and students on higher degree courses in science education.

This title provides full coverage of the Cambridge Primary Science Curriculum Framework and the series is endorsed by Cambridge International Examinations. The course is practically focused, scientifically rigorous and culturally sensitive, making it ideal for use in international schools around the world.

This book introduces readers to the concept of task-based language teaching (TBLT), a learner-centred and experiential approach to language teaching and learning. Based on the premise that language learners can enhance their second language acquisition (SLA) through engagement in communicative tasks that compel them to use language for themselves, TBLT stands in contrast to more traditional approaches. Accessible and comprehensive, this book provides a foundational overview of the principles and practice of TBLT and demystifies what TBLT looks like in the classroom. Complete with questions for reflection, pedagogical extensions for application in real classrooms and further reading suggestions in every chapter, this valuable and informative text is vital for anyone interested in TBLT, whether as students, researchers or teachers.

This title is intended to identify the ways in which ICT can be used to enhance secondary science education.

Oxford Psychology 2nd Edition is a psychology course developed for VCE Psychology students. Written by an expert author team and with the assistance of the Krongold Centre at Monash University, the course offers unparalleled expertise and authority. Oxford Psychology is your complete psychology solution and passport to student success. The Oxford Psychology Units 3 & 4 2nd Edition Student Book has been updated to match the new VCE Psychology 2013-2016 Study Design. The new edition includes the latest research in psychology and the design and features of the book are now even more accessible. The author team has provided a strong emphasis on assessment, covering all requirements in the Study Design including accurate weighting of marks and exam-style questions. Written from the perspective of an examiner, the content covers all students

need to succeed in VCE Psychology. Additional FREE online teacher support for all adopting schools includes: Suggested answers for all questions in the student book
Additional assessment tasks for each Area of Study with full marking guidelines
Revision notes for every chapter of Unit 3 & 4 that break down the Study Design key knowledge into easy-to-remember dot points
For access please contact your Oxford Secondary sales representative. For all related titles in this series, please click [here](#)

This book project poses a major challenge to Japanese science education researchers in order to disseminate research findings on and to work towards maintaining the strength and nature of Japanese science education. It also presents a unique opportunity to initiate change and/or develop science education research in Japan. It provides some historical reasons essential to Japanese students' success in international science tests such as TIMSS and PISA. Also, it helps to tap the potential of younger generation of science education researchers by introducing them to methods and designs in the research practice.

This edited volume presents a collection of empirical studies examining the teaching and learning processes in science classrooms in Content and Language Integrated Learning (CLIL) contexts. It is a timely contribution to the rapidly growing body of CLIL research in response to scholars' consistent calls for more classroom-based research on the issues in integration of content and language teaching in lessons. With the dual goal of content and language learning, students in CLIL programmes are also facing double challenges – mastery of abstract, cognitively demanding content knowledge and unfamiliar academic language. Focusing on the notion of “scaffolding”, this edited volume demonstrates how science teachers can provide appropriate and timely scaffolding for their students to overcome the challenges in CLIL science classrooms. With studies from different educational settings (Hong Kong, Mainland China, Singapore and Australia) and epistemological paradigms, and adopting a variety of research designs, this volume will provide key insights into CLIL pedagogy and teacher education. Originally published as special issue of *Journal of Immersion and Content-Based Language Education* 7:2 (2019).

Affirming the professional knowledge, practice, and engagement of teachers in the face of recurring media attacks on their profession, this examination of the role of writing in various teaching and learning contexts by English teachers provides richly reflective perspectives on the relationship between the writing and learning of both students and professionals.

Offering a unique, data-led, evidence-based approach to reflective practice in English language teaching, this book brings together theory, research and practice in an accessible way to demonstrate what reflective practice looks like and how it is undertaken in a range of contexts. Readers learn how to do and to research reflective practice in their own settings. Through the use of data, dialogue and appropriate tools, the authors show how reflective practice can be used as an ongoing teaching tool that supports professional self-development.

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