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KEY=1 - DARRYL ESMERALDA

MOTIVATING MATHEMATICS

ENGAGING TEACHERS AND ENGAGED STUDENTS

World Scientific Publishing Company **Motivating Mathematics** demonstrates that pupils can be motivated by being given the Big Picture, including a clearer picture of the nature of maths, and by linking topics to the sciences, rather than teaching each topic in isolation. The author emphasises the many virtues of problem-solving, strongly emphasised in secondary education specifications, especially the role of perception, and the ability of pupils to create their own proofs and to appreciate 'cool' ideas and arguments. David Wells draws on his extensive experience of teaching primary and secondary pupils and his understanding not just of how students think about mathematics, but of how they feel about a subject which so often seems merely a collection of facts and rules to be mastered. This book will be of immediate practical use to teachers and students at all levels. Anyone involved in mathematics education will benefit from reading this inspiring book, whether classroom teacher, trainer, teacher in training or professional development, or even parent. The book will also be of interest to policy makers and others with an investment in the future of mathematics education.

PRENTICE HALL MATHEMATICS

COURSE 1

CONNECTING ABSTRACT ALGEBRA TO SECONDARY MATHEMATICS, FOR SECONDARY MATHEMATICS TEACHERS

Springer Secondary mathematics teachers are frequently required to take a large number of mathematics courses - including advanced mathematics courses such as abstract algebra - as part of their initial teacher preparation program and/or their continuing professional development. The content areas of advanced and secondary mathematics are closely connected. Yet, despite this connection many secondary teachers insist that such advanced mathematics is unrelated to their future professional work in the classroom. This edited volume elaborates on some of the connections between abstract algebra and secondary mathematics, including why and in what ways they may be important for secondary teachers. Notably, the volume disseminates research findings about how secondary teachers engage with, and make sense of, abstract algebra ideas, both in general and in relation to their own teaching, as well as offers itself as a place to share practical ideas and resources for secondary mathematics teacher preparation and professional development. Contributors to the book are scholars who have both experience in the mathematical preparation of secondary teachers, especially in relation to abstract algebra, as well as those who have engaged in related educational research. The volume addresses some of the persistent issues in secondary mathematics teacher education in connection to advanced mathematics courses, as well as situates and conceptualizes different ways in which abstract algebra might be influential for teachers of algebra. **Connecting Abstract Algebra to Secondary Mathematics, for Secondary Mathematics Teachers** is a productive resource for mathematics teacher educators who teach capstone courses or content-focused methods courses, as well as for abstract algebra instructors interested in making connections to secondary mathematics.

200 TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE OIL & GAS PLATFORMS

Petrogav International The job interview is probably the most important step you will take in your job search journey. Because it's always important to be prepared to respond effectively to the questions that employers typically ask at a job interview Petrogav International has prepared this eBooks that will help you to get a job in oil and gas industry. Since these questions are so common, hiring managers will expect you to be able to answer them smoothly and without hesitation. This eBook contains 200 questions and answers for job interview and as a BONUS web addresses to 200 video movies for a better understanding of the technological process. This course covers aspects like HSE, Process, Mechanical, Electrical and Instrumentation & Control that will enable you to apply for any position in the Oil and Gas Industry.

100 TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE OIL & GAS PLATFORMS

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MATH RUNNING RECORDS IN ACTION

A FRAMEWORK FOR ASSESSING BASIC FACT FLUENCY IN GRADES K-5

Routledge In this new book from popular consultant and bestselling author Dr. Nicki Newton, you'll discover how to use Math Running Records to assess students' basic fact fluency and increase student achievement. Like a GPS, Math Running Records pinpoint exactly where students are in their understanding of basic math facts and then outline the next steps toward comprehensive fluency. This practical book introduces a research-based framework to assess students' thinking and move them toward becoming confident, proficient, flexible mathematicians with a robust sense of numbers. Topics include: Learning how often to administer Math Running Records and how to strategically introduce them into your existing curriculum; Analyzing, and interpreting Math Running Records for addition, subtraction, multiplication, and division; Using the data gathered from Math Running Records to implement evidence-based, research-driven instruction. Evaluating students' speed, accuracy, flexibility, and efficiency to help them attain computational fluency; Each chapter offers a variety of charts and tools that you can use in the classroom immediately, and the strategies can easily be adapted for students at all levels of math fluency across grades K-8. Videos of sample running records are also available for download at <https://guidedmath.wordpress.com/math-running-records-videos>. Blackline masters are available on the Running Records Dropbox at <https://bit.ly/3gngglq>

ALGEBRA 2

PRENTICE HALL By the time teens are in high school, they have already spent years wrestling with a heavy backpack. It's time to solve this problem--and Pearson can help. Explore Pearson@home math products for home use.

100 QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE DRILLING PLATFORMS

Petrogav International This book offers you a brief, but very involved look into the operations in the drilling of an oil & gas wells that will help you to be prepared for job interview at oil & gas companies. From start to finish, you'll see a general prognosis of the drilling process. If you are new to the oil & gas industry, you'll enjoy having a leg up with the knowledge of these processes. If you are a seasoned oil & gas person, you'll enjoy reading what you may or may not know in these pages. This course provides a non-technical overview of the phases, operations and terminology used on offshore drilling platforms. It is intended also for non-drilling personnel who work in the offshore drilling, exploration and production industry. This includes marine and logistics personnel, accounting, administrative and support staff, environmental professionals, etc. No prior experience or knowledge of drilling operations is required. This course will provide participants a better understanding of the issues faced in all aspects of drilling operations, with a particular focus on the unique aspects of offshore operations.

MATH IN PLAIN ENGLISH

LITERACY STRATEGIES FOR THE MATHEMATICS CLASSROOM

Routledge Do word problems and math vocabulary confuse students in your mathematics classes? Do simple keywords like "value" and "portion" seem to mislead them? Many words that students already know can have a different meaning in mathematics. To grasp that difference, students need to connect English literacy skills to math. Successful students speak, read, write, and listen to each other so they can understand, retain, and apply mathematics concepts. This book explains how to use 10 classroom-ready literacy strategies in concert with your mathematics instruction. You'll learn how to develop students who are able to explain to themselves - and communicate to others - what problems mean and how to attack them. Embedding these strategies in your instruction will help your students gain the literacy skills required to achieve the eight Common Core State Standards for Mathematics. You'll discover the best answer to their question, "When am I ever going to use this?" The 10 Strategies: 1. Teaching mathematical words explicitly 2. Teaching academic words implicitly 3. Reinforcing reading comprehension skills that apply to mathematics 4. Teaching mathematics with metaphor and gesture 5. Unlocking the meaning of word problems 6. Teaching note-taking skills for mathematics 7. Using language-based formative assessment in mathematics 8. Connecting memorization to meaning in mathematics 9. Incorporating writing-to-learn activities in mathematics 10. Preparing students for algebraic thinking

BRINGING THE COMMON CORE MATH STANDARDS TO LIFE

EXEMPLARY PRACTICES FROM HIGH SCHOOLS

Routledge As high school math teachers shift to the Common Core State Standards, the question remains: What do the standards actually look like in the classroom? This book answers that question by taking you inside of real Common Core classrooms across the country. You'll see how exemplary teachers are meeting the new requirements and engaging students in math. Through these detailed examples of effective instruction, you will uncover how to bring the standards to life in your own classroom! **Special Features:** A clear explanation of the big shifts happening in the classroom as a result of the Common Core State Standards Real examples of how exemplary teachers are using engaging strategies and tasks to teach algebra, geometry, trigonometry, statistics, mathematics across the curriculum, and more A detailed analysis of each example to help you understand why it is effective and how you can try it with your own students Practical, ready-to-use tools you can take back to your classroom, including unit plans and classroom handouts

ALGEBRA 1

Pearson Prentice Hall Algebra success for all Basic concepts and properties of algebra are introduced early to prepare students for equation solving. Abundant exercises graded by difficulty level address a wide range of student abilities. The Basic Algebra Planning Guide assures that even the at-risk student can acquire course content. Multiple representations of concepts Concepts and skills are introduced algebraically, graphically, numerically, and verbally-often in the same lesson to help students make the connection and to address diverse learning styles. Focused on developing algebra concepts and skills Key algebraic concepts are introduced early and opportunities to develop conceptual understanding appear throughout the text, including in Activity Labs. Frequent and varied skill practice ensures student proficiency and success.

THE MATH TEACHER'S BOOK OF LISTS

Jossey-Bass Provides over 300 useful lists for developing instructional materials and planning lessons for elementary and secondary students.

QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE OIL & GAS PLATFORMS

Petrogav International The job interview is probably the most important step you will take in your job search journey. Because it's always important to be prepared to respond effectively to the questions that employers typically ask at a job interview Petrogav International has prepared this eBooks that will help you to get a job in oil and gas industry. Since these questions are so common, hiring managers will expect you to be able to answer them smoothly and without hesitation. This eBook contains 291 questions and answers for job interview and as a BONUS web addresses to 288 video movies for a better understanding of the technological process. This course covers aspects like HSE, Process, Mechanical, Electrical and Instrumentation & Control that will enable you to apply for any position in the Oil and Gas Industry.

TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE OIL & GAS PLATFORMS

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273 TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE DRILLING RIGS

Petrogav International The job interview is probably the most important step you will take in your job search journey. Because it's always important to be prepared to respond effectively to the questions that employers typically ask at a job interview Petrogav International has prepared this eBooks that will help you to get a job in oil and gas industry. Since these questions are so common, hiring managers will expect you to be able to answer them smoothly and without hesitation. This eBook contains 273 questions and answers for job interview and as a BONUS 230 links to video movies. This course covers aspects like HSE, Process, Mechanical, Electrical and Instrumentation & Control that will enable you to apply for any position in the Oil and Gas Industry.

150 TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE DRILLING RIGS

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273 TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE OIL & GAS RIGS

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200 TECHNICAL QUESTIONS AND ANSWERS FOR JOB INTERVIEW OFFSHORE OIL & GAS RIGS

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HANDBOOK OF RESEARCH ON TRANSFORMING MATHEMATICS TEACHER EDUCATION IN THE DIGITAL AGE

IGI Global The digital age provides ample opportunities for enhanced learning experiences for students; however, it can also present challenges for educators who must adapt to and implement new technologies in the classroom. The Handbook of Research on Transforming Mathematics Teacher Education in the Digital Age is a critical reference source featuring the latest research on the development of educators' knowledge for the integration of technologies to improve classroom instruction. Investigating emerging pedagogies for preservice and in-service teachers, this publication is ideal for professionals, researchers, and educational designers interested in the implementation of technology in the mathematics classroom.

ALGEBRA 1

CALIFORNIA STATE STANDARDS

THINK IT, SHOW IT MATHEMATICS: STRATEGIES FOR EXPLAINING THINKING

STRATEGIES FOR EXPLAINING THINKING

Teacher Created Materials Help students put their thinking onto paper with step-by-step strategies that develop concise writing and discussion skills. With Think It, Show It: Mathematics, students in grades 3-8 will learn through guided instruction how to express themselves mathematically, think conceptually, and gain essential critical-thinking skills. Strategy instruction is supported by the included student activities, sentence frames, rubrics, exemplar writing samples, and graphic organizers.

PREPARING PRE-SERVICE TEACHERS FOR THE INCLUSIVE CLASSROOM

IGI Global Teachers must be prepared to create an effective learning environment for both general education students and students with special needs. This can be accomplished by equipping teachers with the proper knowledge and strategies. Preparing Pre-Service Teachers for the Inclusive Classroom discusses the latest approaches, skills, and methodologies on how to support special needs students. Highlighting relevant perspectives on technology implementation, curriculum development, and instructional design, this book is an ideal reference source for pre-service teachers, teacher educators, researchers, professionals, and academics in the education field.

EXPERIENTIAL LEARNING

EXPERIENCE AS THE SOURCE OF LEARNING AND DEVELOPMENT

FT Press Experiential learning is a powerful and proven approach to teaching and learning that is based on one incontrovertible reality: people learn best through experience. Now, in

this extensively updated book, David A. Kolb offers a systematic and up-to-date statement of the theory of experiential learning and its modern applications to education, work, and adult development. *Experiential Learning, Second Edition* builds on the intellectual origins of experiential learning as defined by figures such as John Dewey, Kurt Lewin, Jean Piaget, and L.S. Vygotsky, while also reflecting three full decades of research and practice since the classic first edition. Kolb models the underlying structures of the learning process based on the latest insights in psychology, philosophy, and physiology. Building on his comprehensive structural model, he offers an exceptionally useful typology of individual learning styles and corresponding structures of knowledge in different academic disciplines and careers. Kolb also applies experiential learning to higher education and lifelong learning, especially with regard to adult education. This edition reviews recent applications and uses of experiential learning, updates Kolb's framework to address the current organizational and educational landscape, and features current examples of experiential learning both in the field and in the classroom. It will be an indispensable resource for everyone who wants to promote more effective learning: in higher education, training, organizational development, lifelong learning environments, and online.

RESOURCES FOR PREPARING MIDDLE SCHOOL MATHEMATICS TEACHERS

MAA "Cheryl Beaver, Laurie Burton, Maria Fung, Klay Kruczek, editors"--Cover.

PRENTICE HALL MATHEMATICS, ALGEBRA 2

STEM EDUCATION

CONCEPTS, METHODOLOGIES, TOOLS, AND APPLICATIONS

IGI Global "This reference brings together an impressive array of research on the development of Science, Technology, Engineering, and Mathematics curricula at all educational levels"--Provided by publisher.

WHY DON'T STUDENTS LIKE SCHOOL?

A COGNITIVE SCIENTIST ANSWERS QUESTIONS ABOUT HOW THE MIND WORKS AND WHAT IT MEANS FOR THE CLASSROOM

John Wiley & Sons Easy-to-apply, scientifically-based approaches for engaging students in the classroom Cognitive scientist Dan Willingham focuses his acclaimed research on the biological and cognitive basis of learning. His book will help teachers improve their practice by explaining how they and their students think and learn. It reveals the importance of story, emotion, memory, context, and routine in building knowledge and creating lasting learning experiences. Nine, easy-to-understand principles with clear applications for the classroom Includes surprising findings, such as that intelligence is malleable, and that you cannot develop "thinking skills" without facts How an understanding of the brain's workings can help teachers hone their teaching skills "Mr. Willingham's answers apply just as well outside the classroom. Corporate trainers, marketers and, not least, parents - anyone who cares about how we learn-should find his book valuable reading." —Wall Street Journal

TEACHER EDUCATION IN THE 21ST CENTURY

SINGAPORE'S EVOLUTION AND INNOVATION

Springer This book examines the evolution and innovation of teacher education in Singapore in the 21st century. It covers teacher education reforms in the conceptualising and implementing of the Teacher Education for the 21st Century (TE21) Model and discusses curriculum improvements that are aligned to new competencies; values development that re-envision teacher professionalism and calling; pedagogical changes that emphasise self-directed inquiry and technology-enabled learning; strengthened theory-practice linkages and enhanced teaching practices through school partnerships and mentoring; and impactful education research in areas such as assessment and developing teaching competencies, practices and mentoring. Teacher education in Singapore focuses on developing professional leaders in the field of education who are proactive problem-solvers and empowered researchers. It entails a long-term vision of education and an innovative approach to develop teachers with design skills and an inquiring mindset to understand learners in the fast-changing digital and mobile world. This book is aimed at scholars, researchers, policymakers, teacher educators and teachers as well as anyone interested in learning the philosophy behind Singapore's unique TE21 Model for the 21st century and beyond.

MATH INSTRUCTION FOR STUDENTS WITH LEARNING DIFFICULTIES

Routledge This richly updated third edition of *Math Instruction for Students with Learning Difficulties* presents a research-based approach to mathematics instruction designed to build confidence and competence in preservice and inservice PreK- 12 teachers. Referencing benchmarks of both the National Council of Teachers of Mathematics and Common Core State Standards for Mathematics, this essential text addresses teacher and student attitudes towards mathematics as well as language issues, specific mathematics disabilities, prior experiences, and cognitive and metacognitive factors. Chapters on assessment and instruction precede strands that focus on critical concepts. Replete with suggestions for class activities and field extensions, the new edition features current research across topics and an innovative thread throughout chapters and strands: multi-tiered systems of support as they apply to mathematics instruction.

TEACHERS DISCOVERING COMPUTERS: INTEGRATING TECHNOLOGY IN A CHANGING WORLD

Cengage Learning TEACHERS DISCOVERING COMPUTERS: INTEGRATING TECHNOLOGY IN A CHANGING WORLD, EIGHTH EDITION introduces future educators to technology and digital media in order to help them successfully teach the current generation of digital students. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

ALGEBRA AND GEOMETRY

American Mathematical Soc. This is the second of three volumes that, together, give an exposition of the mathematics of grades 9-12 that is simultaneously mathematically correct and grade-level appropriate. The volumes are consistent with CCSSM (Common Core State Standards for Mathematics) and aim at presenting the mathematics of K-12 as a totally transparent subject. The first part of this volume is devoted to the study of standard algebra topics: quadratic functions, graphs of equations of degree 2 in two variables, polynomials, exponentials and logarithms, complex numbers and the fundamental theorem of algebra, and the binomial theorem. Having translations and the concept of similarity at our disposal enables us to clarify the study of quadratic functions by concentrating on their graphs, the same way the study of linear functions is greatly clarified by knowing that their graphs are lines. We also introduce the concept of formal algebra in the study of polynomials with complex coefficients. The last three chapters in this volume complete the systematic exposition of high school geometry that is consistent with CCSSM. These chapters treat the geometry of the triangle and the circle, ruler and compass constructions, and a general discussion of axiomatic systems, including non-Euclidean geometry and the celebrated work of Hilbert on the foundations. This book should be useful for current and future teachers of K-12 mathematics, as well as for some high school students and for education professionals.

LATINOS/AS AND MATHEMATICS EDUCATION

RESEARCH ON LEARNING AND TEACHING IN CLASSROOMS AND COMMUNITIES

IAP This book that explores the mathematics education of Latinos/as in 13 original research studies. Each chapter represents research that grounds mathematics instruction for Latinos/as in the resources to be found in culture and language. By inverting the deficit perspective, this volume redresses the shortcomings found in the previous literature on Latino/a learners. Each study frames language (e.g. bilingualism) not as an obstacle to learning, but as a resource for mathematical reasoning. Other chapters explore the notion of cultural variation not as a liability but as a tool for educators to build upon in the teaching of mathematics. Specifically, the book reframes culture as a focus on the practices, objects, inscriptions, or people that connect mathematical concepts to student thinking and experiences, both in and out of school. The book's four sections divide the research: The first section of the book focuses on mathematic learning in classrooms, specifically exploring bilingual, Latino/a students; the second section explores Latino/a learners in communities, including the role parents can play in advancing learning; the third section includes chapters focused on teacher professional growth; the final section concerns the assessment (and mis-assessment) of Latino/a learners. The research shared in this volume provides ample evidence that mathematics educators who choose to ignore language or culture in their pedagogy risk shortchanging their Latino/a students.

LEARN SCIENCE, LEARN MATH, LEARN TO TEACH SCIENCE AND MATH, HOMO SAPIENS

Springer Science & Business Media Dr. Hedy Moscovici's life on three continents and her battle with ovarian cancer shaped the unique co-learning and participative leadership perspective on science and mathematics education shared in this book. This text has multiple audiences - prospective and practicing teachers wanting to motivate their students to learn, science and mathematics educators mentoring teachers to become transformative intellectuals and critical pedagogues, parents interested in their children's advancement, and interested policymakers and public wishing to deepen their understanding about learning in general and educational issues in science and mathematics. Two mottos, "I can't learn from you if you can't learn from me" and "to teach is to learn twice," summarize the essence of her message. The spotlight is on the critical interdependence of factors, specifically human ability to construct understanding; necessity of disequilibrium to spark neural rewiring; cognition-emotion (pleasure vs. pain, even science or math phobia) connections; sociocultural context; dilemma created by the absence of a clearly trustworthy "learning meter" for a society valuing objective measurement of quality of learning; human relationships sustained by three R's (rights, responsibilities, respect); and, heightened awareness of power relationships leading to a spirit of collaboration, recognition of each individual's strengths and expertise; and critical pedagogy.

ARTO SALOMAA: MATHEMATICIAN, COMPUTER SCIENTIST, AND TEACHER

A THEMATIC BIOGRAPHY

Springer Nature This book outlines the scientific career of Arto Salomaa, a pioneer in theoretical computer science and mathematics. The author first interviewed the subject and his family and collaborators, and he then researched this fascinating biography of an intellectual who was key in the development of these fields. Early chapters progress chronologically from Academician Salomaa's origins, childhood, and education to his professional successes in science, teaching, and publishing. His most impactful direct research efforts have been in the areas of automata and formal languages. Beyond that he has influenced many more scientists and professionals through collaborations, teaching, and books on topics such as biocomputing and cryptography. The author offers insights into Finnish history, culture, and academia, while historians of computer science will appreciate the vignettes describing some of the people who have shaped the field from the 1950s to today. The author and his subject return throughout to underlying themes such as the importance of family and the value of longstanding collegial relationships, while the work and achievements are leavened with humor and references to interests such as music, sport, and the sauna.

COMMUNITIES OF PRACTICE

FACILITATING SOCIAL LEARNING IN HIGHER EDUCATION

Springer In this book about communities of practice in the international, higher education sector, the authors articulate the theoretical foundations of communities of practice (CoPs), research into their application in higher education, leadership roles and how CoPs sustain and support professional learning. Research demonstrates that communities of practice build professional and personal links both within and across faculty, student services and administrative and support units. This book describes how community of practice members may be physically co-located and how social media can be used to connect members across geographically diverse locations. It positions higher education communities of practice within the broader community of practice and social learning literature, and articulates the importance of community of practice leadership roles, and the growing focus on the use of social media for community of practice implementation. The multiple perspectives provide higher education leaders, academic and professional staff with the means to establish, or reflect on existing CoPs, by sharing insights and critical reflections on their implementation strategies, practical guidelines and ideas on how community of practice's theoretical underpinnings can be tailored to the higher education context.

K-12 STEM EDUCATION: BREAKTHROUGHS IN RESEARCH AND PRACTICE

BREAKTHROUGHS IN RESEARCH AND PRACTICE

IGI Global Education is vital to the progression and sustainability of society. By developing effective learning programs, this creates numerous impacts and benefits for future generations to come. K-12 STEM Education: Breakthroughs in Research and Practice is a pivotal source of academic material on the latest trends, techniques, technological tools, and scholarly perspectives on STEM education in K-12 learning environments. Including a range of pertinent topics such as instructional design, online learning, and educational technologies, this book is an ideal reference source for teachers, teacher educators, professionals, students, researchers, and practitioners interested in the latest developments in K-12 STEM education.

DISPOSITIONAL DEVELOPMENT AND ASSESSMENT IN TEACHER PREPARATION PROGRAMS

IGI Global Little research exists on teacher dispositions, yet accrediting bodies such as the Council for the Accreditation of Educator Preparation (CAEP) require dispositional assessment as an integral part of teacher preparation programs. Furthermore, research has shown that dispositions are a key indicator in teacher success both in terms of instructional effectiveness and long-term retention. Teacher preparation programs require research examples and support in understanding the desired dispositions of teachers as well as how to implement these qualities and characteristics into a robust curriculum. Teacher preparation programs also need help in articulating how to assess dispositional traits of teachers and how to provide remediation in this area. Dispositional Development and Assessment in Teacher Preparation Programs addresses dispositional development for teachers including the definition, instruction, practical application, and assessment of dispositional traits. It includes research involving teacher development and preparation for the enhancement of instructional practices and teacher retention. Covering topics such as culturally relevant pedagogy, social emotional learning, and teaching philosophy, this premier reference source is an excellent resource for preservice teachers, teacher preparation programs, faculty and administration of K-12 and higher education, academic libraries, accrediting bodies, researchers, and academicians.

WASTING MINDS

WHY OUR EDUCATION SYSTEM IS FAILING AND WHAT WE CAN DO ABOUT IT

ASCD Why has successful school reform been so difficult to achieve, despite decades of well-intentioned efforts, endless rhetoric, and billions of dollars of investment? Why do most U.S. schools continue to produce disappointing results? Why is there such a disconnect between the schools we need and the schools we have? In this thoughtful and insightful book, Ronald A. Wolk tackles these questions head-on, identifying key assumptions that have shaped the debate on school reform for the past several decades, including the emphasis on standards and testing, calls for a longer school day and year, the push to enroll more students in advanced math classes, and the quest to place a highly qualified teacher in every classroom. Backed by research and other evidence, he points out the flaws in each assumption, and then proposes alternative assumptions as the basis for new, innovative schools that would emphasize such elements as * Individualized instruction, with various pathways for learning; * Real-world contexts for learning; * Performance assessment; * A restructuring of public education to expand preschool; and * Transformation of the teachers' role from instructor to advisor. Acknowledging that the current system is too entrenched to accept radical reform, Wolk suggests incorporating his assumptions into a separate, parallel strategy for new schools. The result is a provocative proposal for teachers, administrators, policymakers, parents, and others to consider as they contemplate the future of public education in the United States.

CONTEMPORARY RESEARCH AND PERSPECTIVES ON EARLY CHILDHOOD MATHEMATICS EDUCATION

Springer This book brings together a collection of research-based papers on current issues in early childhood mathematics education that were presented in the Topic Study Group 1 (TSG 1) at the 13th International Congress on Mathematical Education (ICME-13), held at the University of Hamburg in 2016. It will help readers understand a range of key issues that early childhood mathematics educators encounter today. Research on early childhood mathematics education has grown in recent years, due in part to the well-documented, positive relation between children's early mathematical knowledge and their later mathematics learning, and to the considerable emphasis many countries are now placing on preschool education. The book addresses a number of central questions, including: What is mathematical structural development and how can we promote it in early childhood? How can multimodality and embodiment contribute to early mathematics learning and to acquiring a better understanding of young children's mathematical development? How can children's informal mathematics-related experiences affect instruction and children's learning in different mathematics content areas? What is the role of tools, including technology and picture books, in supporting early mathematics learning? What are the challenges in early childhood mathematics education for teachers' education and professional development?

TEACHING MATHEMATICS TO ENGLISH LANGUAGE LEARNERS

Routledge Today's mathematics classrooms increasingly include students for whom English is a second language. Teaching Mathematics to English Language Learners provides readers a comprehensive understanding of both the challenges that face English language learners (ELLs) and ways in which educators might address them in the secondary mathematics classroom. Framed by a research perspective, Teaching Mathematics to English Language Learners presents practical instructional strategies for engaging learners that can be incorporated as a regular part of instruction. The authors offer context-specific strategies for everything from facilitating classroom discussions with all students, to reading and interpreting math textbooks, to tackling word problems. A fully annotated list of math web and print resources completes the volume, making this a valuable reference to help mathematics teachers meet the challenges of including all learners in effective instruction. Features and updates to this new edition include: An updated and streamlined Part 1 provides an essential overview of ELL theory in a mathematics specific context. Additional practical examples of mathematics problems and exercises make turning theory into practice easy when teaching ELLs New pedagogical elements in Part 3 include tips on harnessing new technologies, discussion questions and reflection points. New coverage of the Common Core State Standards, as well as updates to the web and print resources in Part 4.