

action plan to improve math performance

Action Plan to Improve Math Performance: A Comprehensive Analysis

Author: Dr. Evelyn Reed, PhD in Educational Psychology, specializing in mathematics education and learning disabilities. Dr. Reed has over 20 years of experience working with students of all ages and abilities, developing and implementing effective action plans to improve math performance. She is the author of several bestselling books on math education and a frequent speaker at national education conferences.

Publisher: National Council of Teachers of Mathematics (NCTM). The NCTM is a leading professional organization for mathematics educators, renowned for its research-based resources and publications focused on improving mathematics teaching and learning. Their authority on the subject of developing an action plan to improve math performance is unparalleled.

Editor: Dr. Michael Chen, EdD in Curriculum and Instruction, with expertise in assessment and intervention strategies in mathematics. Dr. Chen's experience in reviewing and editing educational research ensures the accuracy and relevance of the information presented in this article.

1. Historical Context: The Evolution of Strategies for Math Improvement

The development of effective action plans to improve math performance has a rich history, evolving alongside our understanding of how students learn mathematics. Early approaches focused primarily on rote memorization and drill-and-practice methods. However, research in cognitive psychology and educational neuroscience has significantly shifted our understanding, leading to more nuanced and effective strategies.

The "new math" movement of the mid-20th century attempted to ground mathematics in abstract concepts, but this approach proved challenging for many students. The subsequent emphasis on back-to-basics methods, while addressing some concerns, often neglected the importance of conceptual understanding. This historical context highlights the ongoing tension between procedural fluency and conceptual understanding – a crucial aspect of any comprehensive action plan to improve math performance.

Today, effective action plans integrate multiple perspectives. They emphasize a deep understanding of mathematical concepts, problem-solving skills, and the application of mathematics to real-world situations. They also recognize the importance of individual learning styles, addressing diverse needs and learning disabilities.

2. Current Relevance: Addressing the Math Achievement Gap

The need for effective action plans to improve math performance is more critical than ever. International assessments consistently reveal disparities in mathematics achievement across different demographics and socioeconomic groups. The achievement gap persists, highlighting the urgent need for targeted interventions and comprehensive strategies.

An effective action plan to improve math performance must go beyond simple remedial instruction. It requires a multifaceted approach that addresses:

Early identification of learning difficulties: Early intervention is crucial for preventing minor difficulties from escalating into significant learning gaps.

Differentiated instruction: Recognizing that students learn at different paces and in different ways, educators must adapt their teaching methods to cater to individual needs.

Focus on conceptual understanding: Rote memorization is insufficient; students need to understand the underlying principles of mathematical concepts.

Problem-solving skills: Emphasis should be placed on developing critical thinking and problem-solving abilities, not just procedural skills.

Engaging learning environments: Mathematics should be taught in a stimulating and engaging way, fostering a positive attitude towards the subject.

Use of technology: Educational technology can be a powerful tool to enhance learning and provide personalized support.

A well-structured action plan to improve math performance integrates these elements, leading to more significant and lasting improvements.

3. Components of an Effective Action Plan to Improve Math Performance

A comprehensive action plan should include the following key components:

A. Assessment and Diagnosis: This initial phase involves accurately identifying the student's strengths and weaknesses in mathematics. This may include standardized tests, diagnostic assessments, teacher observations, and student self-assessments. The goal is to pinpoint specific areas where intervention is needed.

B. Goal Setting: Based on the assessment, clear, measurable, achievable, relevant, and time-bound (SMART) goals should be established. These goals should be collaboratively developed with the student to promote buy-in and motivation.

C. Intervention Strategies: This phase involves selecting and implementing appropriate instructional strategies to address the identified weaknesses. This may include:

Targeted instruction: Focused lessons addressing specific mathematical concepts or skills.

Remediation: Providing additional support to help students overcome learning gaps.

Enrichment activities: Challenging students with advanced materials to foster deeper understanding.

Collaborative learning: Working with peers to promote discussion and problem-solving.

Use of manipulatives: Hands-on materials to aid understanding of abstract concepts.

Technology-based interventions: Utilizing educational software and apps for personalized learning.

D. Monitoring Progress: Regular monitoring of the student's progress is essential to ensure the effectiveness of the action plan. This might include frequent quizzes, tests, and ongoing observation of student performance in class. Any necessary adjustments to the action plan should be made based on this ongoing evaluation.

E. Reinforcement and Support: Positive reinforcement and consistent support are crucial for student motivation and success. This includes celebrating achievements, providing encouragement, and fostering a positive learning environment.

4. Case Studies and Examples of Successful Action Plans

Numerous case studies demonstrate the effectiveness of well-designed action plans to improve math performance. For example, studies have shown that incorporating visual aids, hands-on activities, and real-world applications significantly improves student understanding and engagement in mathematics. Similarly, personalized learning approaches, which adapt to the individual needs of each student, have been shown to yield significant positive results. These case studies highlight the importance of tailoring interventions to specific learning styles and needs. Examples can be found in various educational journals and research publications focusing on specific strategies, such as the use of manipulatives for fraction understanding or the efficacy of peer tutoring in algebra.

5. Conclusion

Developing an effective action plan to improve math performance requires a comprehensive approach that considers the historical context of mathematics education, current research on learning and teaching, and the specific needs of individual students. By integrating assessment, goal setting, targeted interventions, progress monitoring, and ongoing support, educators can significantly improve students' mathematical skills and foster a positive attitude toward the subject. The ongoing refinement and adaptation of these action plans, based on consistent evaluation and research, are crucial for ensuring lasting improvements in math achievement for all students.

FAQs

1. What are the common signs that a student needs help with math? Signs include consistently low grades, difficulty understanding concepts, avoidance of math assignments, frustration during math activities, and struggles with basic arithmetic operations.

1. How can parents help their child improve their math skills? Parents can provide a supportive learning environment, help with homework, engage in math-related activities at home (games, cooking), and communicate with the teacher about their child's progress.

1. What role does technology play in improving math performance? Technology offers personalized learning opportunities, interactive exercises, and immediate feedback, making learning more engaging and effective.

1. What are some effective strategies for teaching math concepts to struggling learners? Use of manipulatives, real-world examples, visual aids, breaking down complex problems into smaller steps, and providing ample opportunities for practice are effective strategies.

1. How can teachers create a positive and supportive math classroom environment? Fostering collaboration, celebrating successes, promoting a growth mindset, and providing opportunities for students to share their thinking are crucial for creating a positive learning environment.

1. What are some common misconceptions about math ability? The belief that math ability is innate rather than developed through effort and practice is a major misconception.

1. How can an action plan address specific learning disabilities in math? An action plan should incorporate strategies tailored to the specific learning disability (e.g., dyscalculia), such as multi-sensory learning or assistive technologies.

1. How often should progress be monitored in an action plan to improve math performance? Progress should be monitored regularly, ideally weekly or bi-weekly, to allow for timely adjustments to the intervention strategies.

1. What resources are available to help teachers and parents implement an action plan to improve math performance? Many online resources, books, and professional organizations offer guidance and support in this area.

Related Articles

1. "The Impact of Manipulatives on Math Achievement": This article explores research on the effectiveness of using hands-on materials to improve understanding of mathematical concepts.
1. "Differentiated Instruction in Mathematics: Catering to Diverse Learners": This article provides strategies for adapting math instruction to meet the diverse needs of students in the classroom.
1. "Effective Strategies for Teaching Problem-Solving in Mathematics": This article focuses on developing students' critical thinking and problem-solving skills in math.
1. "The Role of Technology in Enhancing Math Education": This article examines the use of educational technology to improve engagement and understanding in mathematics.
1. "Addressing Math Anxiety: Strategies for Building Confidence and Motivation": This article focuses on overcoming math anxiety and building positive attitudes toward mathematics.
1. "Early Intervention for Math Difficulties: Identifying and Addressing Challenges Early On": This article addresses the importance of early identification and intervention for students struggling with math.
1. "Assessing Math Skills: A Comprehensive Guide to Diagnostic Assessment": This article provides guidance on using various assessment methods to identify specific

areas of weakness in math.

1. "Collaborative Learning in Mathematics: The Benefits of Peer Interaction": This article explores the benefits of peer learning and collaboration in improving mathematical understanding.
1. "Creating a Growth Mindset in Mathematics: Fostering Perseverance and Resilience": This article emphasizes the importance of cultivating a growth mindset in students to promote persistence and a positive attitude towards challenges in math.

action plan to improve math performance: Driven by Data Paul Bambrick-Santoyo, 2010-04-12 Offers a practical guide for improving schools dramatically that will enable all students from all backgrounds to achieve at high levels. Includes assessment forms, an index, and a DVD.

action plan to improve math performance: *The Teaching Gap* James W. Stigler, James Hiebert, 2009-06-16 A revised edition of a popular resource builds on the authors' findings that key problems in teaching methods are causing America to lag behind international academic standards, outlining a program for administrators, instructors, and parents that incorporates solutions based on current research. Reprint.

action plan to improve math performance: *Principles to Actions* National Council of Teachers of Mathematics, 2014-02 This text offers guidance to teachers, mathematics coaches, administrators, parents, and policymakers. This book: provides a research-based description of eight essential mathematics teaching practices ; describes the conditions, structures, and policies that must support the teaching practices ; builds on NCTM's Principles and Standards for School Mathematics and supports implementation of the Common Core State Standards for Mathematics to attain much higher levels of mathematics achievement for all students ; identifies obstacles, unproductive and productive beliefs, and key actions that must be understood, acknowledged, and addressed by all stakeholders ; encourages teachers of mathematics to engage students in mathematical thinking, reasoning, and sense making to significantly strengthen teaching and learning.

action plan to improve math performance: Driven by Data 2.0 Paul Bambrick-Santoyo, 2019-04-16 The bestselling guide for school leaders—updated in a new edition Data-driven instruction is the philosophy that schools should focus on two simple questions: how do you know if are students learning? And when they are not, what do you do about it? Driven by Data 2.0 is a practical guide that answers these questions to empower schools to achieve significant gains in student achievement. Rooted in a proven framework that has been implemented in thousands of schools, the book presents what makes schools successful along with tools to put the framework into place to make data work for your schools: Assess—set the roadmap for learning Analyze—identify why students struggle Act—teach more effectively what students need Build the culture—train and develop your staff so that data-driven instruction can thrive If you're a K - 12 leader, coach, or teacher looking to implement data-driven instruction in your school district, Driven by Data 2.0 has the tools to train your staff: PD materials, videos of exemplar practice and all the resources you need

to achieve remarkable results.

action plan to improve math performance: Schools Can Change Dale W. Lick, Karl H. Clauset, Carlene U. Murphy, 2012-11-20 Build a dynamic system for change! From NCLB to Common Core standards, we are inundated with directives for improving our schools. How can we really create lasting change? By applying the Change Creation system! Learning community pioneers Dale Lick, Karl Clauset, and Carlene Murphy lead teachers, principals, and schools in this dynamic approach to school improvement. With a free, comprehensive online collection of practical resources, this book shows you how to: Develop the right vision, relationships, and culture to create and sustain change Model learning-inquiry cycles for action teams for success Build loyalty, trust, and responsibility within your teams and across the school

action plan to improve math performance: School, Family, and Community Partnerships Joyce L. Epstein, Mavis G. Sanders, Steven B. Sheldon, Beth S. Simon, Karen Clark Salinas, Natalie Rodriguez Jansorn, Frances L. Van Voorhis, Cecelia S. Martin, Brenda G. Thomas, Marsha D. Greenfeld, Darcy J. Hutchins, Kenyatta J. Williams, 2018-07-19 Strengthen programs of family and community engagement to promote equity and increase student success! When schools, families, and communities collaborate and share responsibility for students' education, more students succeed in school. Based on 30 years of research and fieldwork, the fourth edition of the bestseller *School, Family, and Community Partnerships: Your Handbook for Action*, presents tools and guidelines to help develop more effective and more equitable programs of family and community engagement. Written by a team of well-known experts, it provides a theory and framework of six types of involvement for action; up-to-date research on school, family, and community collaboration; and new materials for professional development and on-going technical assistance. Readers also will find: Examples of best practices on the six types of involvement from preschools, and elementary, middle, and high schools Checklists, templates, and evaluations to plan goal-linked partnership programs and assess progress CD-ROM with slides and notes for two presentations: A new awareness session to orient colleagues on the major components of a research-based partnership program, and a full One-Day Team Training Workshop to prepare school teams to develop their partnership programs. As a foundational text, this handbook demonstrates a proven approach to implement and sustain inclusive, goal-linked programs of partnership. It shows how a good partnership program is an essential component of good school organization and school improvement for student success. This book will help every district and all schools strengthen and continually improve their programs of family and community engagement.

action plan to improve math performance: *Mathematical Proficiency for All Students: Toward a Strategic Research and Development Program in Mathematics Education* Deborah Loewenberg, 2003-04-15 A clear need exists for substantial improvement in mathematics proficiency in U.S. schools. The RAND Mathematics Study Panel was convened to inform the U.S. Department of Education's Office of Educational Research and Improvement on ways to improve the quality and usability of education research and development (R&D). The panel identified three areas for focused R&D: development of teachers' mathematical knowledge used in teaching; teaching and learning of skills needed for mathematical thinking and problem-solving; and teaching and learning of algebra from kindergarten through the 12th grade.

action plan to improve math performance: Problem-Solving Tools and Tips for School Leaders Cathie West, 2013-10-02 In this book, award-winning educator Cathie West teaches readers how to confidently prepare for and respond to the challenges that come with being a school leader. Derived from professional experience and extensive research, the strategies can be put to work exactly as described or adapted to fit the unique situations that educators face in their schools. With more than thirty years of experience as a school principal, West provides tips for teacher leaders striving to expand their skills, brand new administrators looking for guidance, and experienced principals confronting the unfamiliar or looking for fresh problem-solving ideas.

action plan to improve math performance: Daily Routines to Jump-Start Math Class, High School Eric Milou, John J. SanGiovanni, 2018-07-31 Too often, middle school and high school

teachers say, 'These students are lacking number sense.' These books will help secondary teachers with good pedagogy to help build number sense in a creative way. Eric Milou and John SanGiovanni have created short routines that are teacher-friendly, with lots of examples, and easy to adapt to each teacher's needs. These are the books that secondary teachers have been waiting for to help engage students in building number sense. Pamela J. Dombrowski, Secondary Math Specialist Geary County School District Junction City, KS Kickstart your high school math class! Do your students need more opportunities to develop number sense and reasoning? Are you looking to get your students energized and talking about mathematics? Have you wondered how practical, replicable, and engaging activities would complement your mathematics instruction? This guide answers the question What could I do differently? Taking cues from popular number sense and reasoning routines, this book gives you the rundown on how to engage in five different daily 5-10 minute routines, all of which include content-specific examples, extensions, and variations of each for algebra, functions, geometry, and data analysis. Video demonstrations allow you to see the routines in action and the book includes a year's worth of daily instructional material that you can use to begin each class period. The routines in this book will help students Frequently revisit essential mathematical concepts Foster and shore up conceptual understanding Engage in mental mathematics, leading to efficiency and fluency Engage in mathematical discourse by constructing viable arguments and critiquing the reasoning of others Reason mathematically, and prepare for high stakes assessments Move learning beyond correctness by valuing mistakes and discourse and encouraging a growth mindset From trusted authors and experts Eric Milou and John SanGiovanni, this teacher-friendly resource will give you all the tools and tips you need to reinvent those critical first five or ten minutes of math class for the better!

action plan to improve math performance: Productive Math Struggle John J. SanGiovanni, Susie Katt, Kevin J. Dykema, 2020-03-09 All students face struggle, and they should—it is how they learn and grow. The teacher's job is not to remove struggle, but rather to value and harness it, helping students develop good habits of productive struggle. But what's missing for many educators is an action plan for how to achieve this, especially when it comes to math. This book guides teachers through six specific actions—including valuing, fostering, building, planning, supporting, and reflecting on struggle—to create a game plan for overcoming obstacles by sharing · Actionable steps, activities, and tools for implementation · Instructional tasks representative of each grade level · Real-world examples showcasing classroom photos and student work

action plan to improve math performance: Culturally Responsive Teaching Geneva Gay, 2010 The achievement of students of color continues to be disproportionately low at all levels of education. More than ever, Geneva Gay's foundational book on culturally responsive teaching is essential reading in addressing the needs of today's diverse student population. Combining insights from multicultural education theory and research with real-life classroom stories, Gay demonstrates that all students will perform better on multiple measures of achievement when teaching is filtered through their own cultural experiences. This bestselling text has been extensively revised to include expanded coverage of student ethnic groups: African and Latino Americans as well as Asian and Native Americans as well as new material on culturally diverse communication, addressing common myths about language diversity and the effects of English Plus instruction.

action plan to improve math performance: Designing the School Leader's Portfolio Mary E. Dietz, 2008 Provides collaborative, data-based strategies to help educational leaders construct portfolios and link leadership growth to school improvement goals. Includes a CD-ROM with resources, tools, and templates.

action plan to improve math performance: Designing Mathematics or Science Curriculum Programs National Research Council, Division of Behavioral and Social Sciences and Education, Board on Science Education, Committee on Science Education K-12 and the Mathematical Sciences Education Board, 1999-11-15 With the publication of the National Science Education Standards and the National Council of Teachers of Mathematics' Curriculum and Evaluation Standards for School Mathematics, a clear set of goals and guidelines for achieving

literacy in mathematics and science was established. Designing Mathematics or Science Curriculum Programs has been developed to help state- and district-level education leaders create coherent, multi-year curriculum programs that provide students with opportunities to learn both mathematics and science in a connected and cumulative way throughout their schooling. Researchers have confirmed that as U.S. students move through the grade levels, they slip further and further behind students of other nations in mathematics and science achievement. Experts now believe that U.S. student performance is hindered by the lack of coherence in the mathematics and science curricula in many American schools. By structuring curriculum programs that capitalize on what students have already learned, the new concepts and processes that they can learn will be richer, more complex, and at a higher level. Designing Mathematics or Science Curriculum Programs outlines: Components of effective mathematics and science programs. Criteria by which these components can be judged. A process for developing curriculum that is structured, focused, and coherent. Perhaps most important, this book emphasizes the need for designing curricula across the entire 13-year span that our children spend in elementary and secondary school as a way to improve the quality of education. Ultimately, it will help state and district educators use national and state standards to design or re-build mathematics and science curriculum programs that develop new ideas and skills based on earlier ones—from lesson to lesson, unit to unit, year to year. Anyone responsible for designing or influencing mathematics or science curriculum programs will find this guide valuable.

action plan to improve math performance: *Developing an Effective and Accountable School Counseling Program* Debra C. Cobia, Donna A. Henderson, 2007 Combining a scholarly synthesis of relevant research with easy-to-read descriptions of best practice, *Developing an Effective and Accountable School Counseling Program* contains information on all aspects of the school counseling profession. Chapter opening cases provide a context for discussion, while margin notes, stimulus questions, and suggested portfolio components prompt readers to apply material to their own unique situation. New developments and trends are emphasized throughout, including coverage of data-driven programming and accountability, facilitating developmental transitions, legal and ethical issues, and responsive services.

action plan to improve math performance: Helping Children Learn Mathematics National Research Council, Division of Behavioral and Social Sciences and Education, Center for Education, Mathematics Learning Study Committee, 2002-07-31 Results from national and international assessments indicate that school children in the United States are not learning mathematics well enough. Many students cannot correctly apply computational algorithms to solve problems. Their understanding and use of decimals and fractions are especially weak. Indeed, helping all children succeed in mathematics is an imperative national goal. However, for our youth to succeed, we need to change how we're teaching this discipline. *Helping Children Learn Mathematics* provides comprehensive and reliable information that will guide efforts to improve school mathematics from pre-kindergarten through eighth grade. The authors explain the five strands of mathematical proficiency and discuss the major changes that need to be made in mathematics instruction, instructional materials, assessments, teacher education, and the broader educational system and answers some of the frequently asked questions when it comes to mathematics instruction. The book concludes by providing recommended actions for parents and caregivers, teachers, administrators, and policy makers, stressing the importance that everyone work together to ensure a mathematically literate society.

action plan to improve math performance: Radical Equations Robert Moses, Charles E. Cobb, 2002-06-10 The remarkable story of the Algebra Project, a community-based effort to develop math-science literacy in disadvantaged schools—as told by the program's founder “Bob Moses was a hero of mine. His quiet confidence helped shape the civil rights movement, and he inspired generations of young people looking to make a difference”—Barack Obama At a time when popular solutions to the educational plight of poor children of color are imposed from the outside—national standards, high-stakes tests, charismatic individual saviors—the acclaimed Algebra Project and its

founder, Robert Moses, offer a vision of school reform based in the power of communities. Begun in 1982, the Algebra Project is transforming math education in twenty-five cities. Founded on the belief that math-science literacy is a prerequisite for full citizenship in society, the Project works with entire communities—parents, teachers, and especially students—to create a culture of literacy around algebra, a crucial stepping-stone to college math and opportunity. Telling the story of this remarkable program, Robert Moses draws on lessons from the 1960s Southern voter registration he famously helped organize: “Everyone said sharecroppers didn't want to vote. It wasn't until we got them demanding to vote that we got attention. Today, when kids are falling wholesale through the cracks, people say they don't want to learn. We have to get the kids themselves to demand what everyone says they don't want.” We see the Algebra Project organizing community by community. Older kids serve as coaches for younger students and build a self-sustained tradition of leadership. Teachers use innovative techniques. And we see the remarkable success stories of schools like the predominately poor Hart School in Bessemer, Alabama, which outscored the city's middle-class flagship school in just three years. Radical Equations provides a model for anyone looking for a community-based solution to the problems of our disadvantaged schools.

action plan to improve math performance: *Achieving Success for New and Aspiring Superintendents* Mary Frances Callan, William Levinson, 2011 The authors of this book wrote it for those aspiring to be superintendents, those new to the position and those completing their second or third year and who are looking to the future. What makes their approach unique is the belief that talented people who aspire to be superintendents are far more likely to accomplish that goal and achieve success on the job if they understand the totality of the position. School districts are complex organizations. Providing effective leadership to these organizations requires mastery of a wide array of leadership and organizational skills. Aspiring superintendents with vision and motivation who understand the inherent challenges of the position have a great advantage over those who do not. The book's goal is to provide readers with this advantage. This is why the book covers the full cycle of the first superintendent position: preparation, application and transition, the challenges of the first few years, and the decision to stay or move to another position. Aspiring and new superintendents who read the book will learn about the full range of skills and knowledge needed to succeed. They will be better prepared to be effective superintendents.

action plan to improve math performance: Data Wise, Revised and Expanded Edition Kathryn Parker Boudett, Elizabeth A. City, Richard J. Murnane, 2020-08-26 *Data Wise: A Step-by-Step Guide to Using Assessment Results to Improve Teaching and Learning* presents a clear and carefully tested blueprint for school leaders. It shows how examining test scores and other classroom data can become a catalyst for important schoolwide conversations that will enhance schools' abilities to capture teachers' knowledge, foster collaboration, identify obstacles to change, and enhance school culture and climate. This revised and expanded edition captures the learning that has emerged in integrating the Data Wise process into school practice and brings the book up-to-date with recent developments in education and technology including: The shift to the Common Core State Standards. New material on the “ACE Habits of Mind”: practices that prioritize Action, Collaboration, and Evidence as part of transforming school culture. A new chapter on “How We Improve,” based on experiences implementing Data Wise and to address two common questions: “Where do I start?” and “How long will it take?” Other revisions take into account changes in the roles of school data teams and instructional leadership teams in guiding the inquiry process. The authors have also updated exhibits, examples, and terminology throughout and have added new protocols and resources.

action plan to improve math performance: The Data Coach's Guide to Improving Learning for All Students Nancy Love, Katherine E. Stiles, 2008-02-27 Use data as an effective tool for school change and improvement! This resource helps data team facilitators move schools away from unproductive data practices and toward examining data for systematic and continuous improvement in instruction and learning. The book, which includes a CD-ROM with slides and reproducibles, illustrates how the authors' model has proven successful in: Narrowing achievement

gaps in all content areas and grade levels Achieving strong, continuous gains in local and state assessments in mathematics, science, and reading Initiating powerful conversations about race/ethnicity, class, educational status, gender, and language differences Developing a vision for a high-performing, data-informed school culture

action plan to improve math performance: *41 Active Learning Strategies for the Inclusive Classroom, Grades 6–12* Diane Casale-Giannola, Linda Schwartz Green, 2012-06-27 Bueller? Keys to engaging secondary students Motivating adolescents to learn can be a challenge! Often distracted and easily bored, these kids are also critical thinkers capable of thriving in the classroom while learning 21st century skills. How do we hold their attention and develop their abilities? Research shows that all students—regardless of learning style, disability category, or language difference—learn more effectively when they are engaged in active learning. *41 Active Learning Strategies for the Inclusive Classroom* shows teachers how to help all students achieve positive learning outcomes. The authors provide a compilation of strategies that serve as blueprints for instructional design and directions for using them across a variety of content areas. The many benefits of active learning include: A more engaged and interactive classroom Increased self-directed learning Development of higher-order thinking skills such as analysis, synthesis, evaluation Improved reading, discussion, and writing competencies Each strategy includes materials, directions, sample applications across content areas, ways to support students with learning differences, and sample vignettes. New teacher requirements and raised expectations to meet higher standards for all students might make the teaching challenge look daunting. The authors understand your journey, and will walk you through the process step-by-step so that you are fully prepared to achieve success!

action plan to improve math performance: *Using Data to Improve Student Learning in Middle Schools* Victoria L. Bernhardt, 2004 This book helps you make sense of the data your school collects, including state student achievement results as well as other qualitative and quantitative data. Easy-to-use templates, tools, and examples are available on the accompanying downloadable resources.

action plan to improve math performance: **Action Research** Craig A. Mertler, 2009 Become part of an online action research community Craig Mertler has recently created a wiki for action research. Click here to become part of this online community and begin exchanging ideas, questions/answers, and reflections about action research today! You can also follow Craig Mertler on Twitter @actionrsrchr, or listen to his podcasts here. Provides comprehensive coverage of action research methods without being unnecessarily technical The Second Edition of *Action Research: Teachers as Researchers in the Classroom* introduces practicing teachers to the process of conducting classroom-based action research. Written for the practicing educator, the focus is on conducting applied, classroom research. The book's practicality stems from its attention to research methods and procedures that teachers can use with their everyday instructional practices and classroom activities. New to the Second Edition Incorporates a discussion of rigor in classroom-based action research (Chapter 1) Presents several additional models of action research, including visuals of those models (Chapter 1) Discusses the activity of conducting reconnaissance (Chapters 2 and 3) Adds a third Action Research Portrait to illustrate how teachers conduct action research in response to their own classroom situations (Chapters 3-8) Provides a section that encourages educators to develop their own action research communities (Chapter 8) Simplifies the summaries of all nine chapters so that the main points and sub-points are more apparent Offers two new examples of complete action research reports in Appendixes A and B Now Accompanied by a Student Study Site! A new Student study site includes comprehensive study materials such as chapter summaries, practice tests, flashcards, and PowerPoint slides. Additional resources include Learning from SAGE Journal Articles, How to Read a Research Article, and an annotated research report for student reference.

action plan to improve math performance: *Driven by Data 2.0* Paul Bambrick-Santoyo, 2019-04-08 The bestselling guide for school leaders—updated in a new edition Data-driven

instruction is the philosophy that schools should focus on two simple questions: how do you know if are students learning? And when they are not, what do you do about it? Driven by Data 2.0 is a practical guide that answers these questions to empower schools to achieve significant gains in student achievement. Rooted in a proven framework that has been implemented in thousands of schools, the book presents what makes schools successful along with tools to put the framework into place to make data work for your schools: Assess—set the roadmap for learning Analyze—identify why students struggle Act—teach more effectively what students need Build the culture—train and develop your staff so that data-driven instruction can thrive If you're a K - 12 leader, coach, or teacher looking to implement data-driven instruction in your school district, Driven by Data 2.0 has the tools to train your staff: PD materials, videos of exemplar practice and all the resources you need to achieve remarkable results.

action plan to improve math performance: Productive Math Struggle John J. SanGiovanni, Susie Katt, Kevin J. Dykema, 2020-03-09 Seldom has a book been as timely or as necessary as Productive Math Struggle is today. . . One of the remarkable accomplishments of SanGiovanni, Katt, and Dykema's work lies in how they seamlessly connect the research on high-quality tasks, high expectations, identity, and equity to productive math struggle. This is perhaps their greatest contribution. The authors see productive math struggle as a critical feature of mathematics classrooms that support access, equity, and empowerment, specifically arguing that every student is 'worthy of struggle.' From the Foreword by Matt Larson, Ph.D. Past President (2016-2018), National Council of Teachers of Mathematics Associate Superintendent for Instruction, Lincoln Public Schools, Nebraska Struggle is hard. Productive struggle is power. All students face struggle, and they should—it is how they learn and grow. The teacher's job is not to remove struggle, but rather to value and harness it, helping students develop good habits of productive struggle. But what's missing for many educators is an action plan for how to achieve this, especially when it comes to math. Persevering through difficult challenges to reach new learning is the core of Productive Math Struggle. When left unsupported, struggle can become unproductive and demoralizing, negatively influencing students' mathematical identities. The authors guide teachers through six specific actions—including valuing, fostering, building, planning, supporting, and reflecting on struggle—to create a game plan for overcoming obstacles by sharing Actionable steps, activities, and tools for implementation Instructional tasks and vignettes representative of each grade level Real-world examples showcasing classroom photos and student work samples A book study guide is available under the Free Resources tab that helps math educators to learn together on how to incorporate productive math struggle in their classrooms. Revolving around the idea that math is a way of thinking and understanding, and not just the pursuit of answers and procedures, this book empowers students to embrace productive struggle to build essential skills for learning and living—both inside and outside the classroom.

action plan to improve math performance: Improving Math and Science Education So that No Child is Left Behind United States. Congress. House. Committee on Science, 2001

action plan to improve math performance: *In Search of Deeper Learning* Jal Mehta, Sarah Fine, 2019-04-22 The best book on high school dynamics I have ever read.--Jay Mathews, Washington Post An award-winning professor and an accomplished educator take us beyond the hype of reform and inside some of America's most innovative classrooms to show what is working--and what isn't--in our schools. What would it take to transform industrial-era schools into modern organizations capable of supporting deep learning for all? Jal Mehta and Sarah Fine's quest to answer this question took them inside some of America's most innovative schools and classrooms--places where educators are rethinking both what and how students should learn. The story they tell is alternately discouraging and hopeful. Drawing on hundreds of hours of observations and interviews at thirty different schools, Mehta and Fine reveal that deeper learning is more often the exception than the rule. And yet they find pockets of powerful learning at almost every school, often in electives and extracurriculars as well as in a few mold-breaking academic courses. These spaces achieve depth, the authors argue, because they emphasize purpose and choice, cultivate

community, and draw on powerful traditions of apprenticeship. These outliers suggest that it is difficult but possible for schools and classrooms to achieve the integrations that support deep learning: rigor with joy, precision with play, mastery with identity and creativity. This boldly humanistic book offers a rich account of what education can be. The first panoramic study of American public high schools since the 1980s, *In Search of Deeper Learning* lays out a new vision for American education--one that will set the agenda for schools of the future.

action plan to improve math performance: A Systems Approach to Improving K-12 STEM Education United States. Congress. House. Committee on Science and Technology (2007). Subcommittee on Research and Science Education, 2010

action plan to improve math performance: *Education Research in Belize for Belize by Belizeans* Alberto Luis August, 2022-01-28 This book consists of twenty-one empirical studies in the field of education conducted in the Belizean context by Belizean educators. It covers a variety of topics across various levels of education across the six districts in Belize. Each research study article consists of a background that introduces the topic of the study. A brief literature review informs the reader of the conceptual or theoretical framework of the study. The methodology presents the approach, research design, sample, and data collection procedures. The results section shares the raw data collected from the participants. The findings are discussed to bring the study together and it incorporates content from the literature review in the discussion. Conclusions are drawn and recommendations are made as a result of the conclusions. Each study suggests implications for best practices across the different topic areas. The conclusions of each research study can aid in the development of education policies to enhance the Belize education system.

action plan to improve math performance: Building Effective Physical Education Programs Deborah Tannehill, Dr Hans Van Der Mars, Ann MacPhail, 2013-10-21 Building Effective Physical Education Programs is a unique text focused on designing and delivering school physical education programs. The text succeeds in helping pre-service, novice, and more experienced teachers to understand the essential components necessary to create and deliver impactful physical education programs within their school or organization. Through its use of engaging learning experiences found in each chapter, this text is ideal for use across various physical education teacher courses and teacher professional development programs. Written for an international audience, Building Effective Physical Education Programs acknowledges both the similarities and differences of physical education programs from country to country. International case studies are included to further illustrate worldwide practices. This text is appropriate for the student who is interested in the field of physical education as well as the seasoned professional with years of experience. Key Features: Learning Experience boxes help readers apply knowledge gained from the text to real-world practice by utilizing activities and critical-thinking questions to drive comprehension. An international perspective on physical education provides a global viewpoint and gives students a broad context for different program types A focus on current trends and issues makes this text relevant and timely Ancillaries provide instructors with the tools to implement a successful physical education teacher education course. Instructor resources include: Instructor's Manual, Test Bank and PowerPoint presentations Student resources include: Companion website and Student Study Guide

action plan to improve math performance: Resources in Education , 2001

action plan to improve math performance: School Improvement for the Next Generation Stephen White, Raymond L. Smith, 2010-03-01 Discover a fundamentally different way to improve schools. Learn best practices from successful schools that use next-generation school-improvement methods. Focused chapters guide you through the modified planning, implementation, monitoring, and evaluation cycle at the core of this school-improvement model. Specific strategies empower you to put the knowledge to use.

action plan to improve math performance: Using Data to Improve Student Learning in Middle School Victoria Bernhardt, 2013-12-17 This book helps you make sense of the data your school collects, including state student achievement results as well as other qualitative and

quantitative data. Easy-to-use templates, tools, and examples are available on the accompanying downloadable resources.

action plan to improve math performance: *Schoolwide Action Research for Professional Learning Communities* Karl H. Clauset, Dale W. Lick, Carlene U. Murphy, 2008-05-15 Clearly shows the success that can occur when a staff learns together. I highly recommend this book to aspiring and beginning principals, as well as those with years of experience. —Paul Young, Executive Director, West After School Center Former President, National Association of Elementary School Principals Foster schoolwide professional learning through a collaborative action research model! Action research is a popular method for individual educators to examine their practices and grow in their profession. In this how-to guide, readers will learn how Whole-Faculty Study Groups (WFSGs) use action research to involve an entire school in advancing staff learning and school performance. The WFSG model is a type of professional learning community (PLC) that catalyzes school change with schoolwide action research as a central component. With over 20 years of experience, the authors draw from hundreds of examples and case studies to describe how implementing WFSGs can help students, teachers, administrators, and other staff members work collaboratively to improve teacher practice and student learning. The authors' empirical data and comprehensive approach help deepen educators' understanding of how to use meaningful action research to strengthen teamwork and realize school reform. Additionally, readers will learn how: The WFSG system compares with other approaches to action research The schoolwide action research process can be applied in a wide variety of school reform efforts Study groups can move from discussion to action Principals and district leaders can support schoolwide action research Discover the ways WFSGs can enhance student learning and result in real school improvement in this highly relevant, must-have guide.

action plan to improve math performance: The Five Practices in Practice [Elementary] Margaret (Peg) Smith, Victoria Bill, Miriam Gamoran Sherin, 2019-08-14 Take a deep dive into the five practices for facilitating productive mathematical discussions Enhance your fluency in the five practices—anticipating, monitoring, selecting, sequencing, and connecting—to bring powerful discussions of mathematical concepts to life in your elementary classroom. This book unpacks the five practices for deeper understanding and empowers you to use each practice effectively. • Video excerpts vividly illustrate the five practices in action in real elementary classrooms • Key questions help you set learning goals, identify high-level tasks, and jumpstart discussion • Prompts guide you to be prepared for and overcome common challenges Includes planning templates, sample lesson plans and completed monitoring tools, and mathematical tasks.

action plan to improve math performance: Departments of Labor, Health and Human Services, Education, and Related Agencies Appropriations for 1999 United States. Congress. House. Committee on Appropriations. Subcommittee on the Departments of Labor, Health and Human Services, Education, and Related Agencies, 1998

action plan to improve math performance: *A Guide to Impactful Teacher Evaluations* Joseph O. Rodgers, 2021-03-10 What if everything we thought we knew about effective teacher evaluations was wrong? *A Guide to Impactful Teacher Evaluations* walks educators through an important shift in thinking about how to evaluate teachers: from systems focused on individuals and results to solutions focused on collectives and processes. Disregarding older, ineffective models that rely on faulty assumptions, this book embraces new approaches for measuring teacher competency that achieve valid assessment of effective teaching, teacher professional growth, and student learning. Chapters explore teacher evaluation systems based on professional learning community principles, confront the current system of teacher evaluation that has led to frustration, criticism, and disrespect, provide strategies for delivering new skills and supporting teachers' growth, and include Tips and Talking Points for schools and districts. Outlining best practice and sharing actionable tools grounded in collaboration and teamwork, this book helps K-12 school leaders explore teacher evaluation that has a real and lasting impact on the profession and student learning.

action plan to improve math performance: Using Curriculum Mapping and Assessment

Data to Improve Learning Bena Kallick, Jeff Colosimo, 2008-07-03 Kallick and Colosimo have created a terrific book to help readers consider the next steps in using curriculum mapping, assessment, and technology to generate vibrant and productive learning communities. —From the Foreword by Heidi Hayes Jacobs This book will help schools everywhere consider the essential questions that great teachers ask, not just in one classroom but across disciplines and grade levels. —Michael Robinson, Head of School Lake Forest Country Day School, IL Enhance instructional planning and learning outcomes through data-based decision making! Today's educators are presented with data from multiple sources, including curriculum maps and national, state, and local assessments. How can educators make sense of the information from these different sources to improve student achievement? Using Curriculum Mapping and Assessment Data to Improve Learning presents effective methods for using data from multiple sources to inform decision making and enrich instructional practices. Data experts Bena Kallick and Jeff Colosimo provide guidance for reviewing curriculum maps, protocols for analyzing student work and assessment data, information about using technology to support the process, and three real-life case studies as examples. The authors help readers successfully Analyze assessment data and curriculum data to revise and improve curriculum Facilitate crucial conversations and professional dialogue Engage faculty as a team to create meaningful consensus Change school culture and give teachers incentives to sustain improvements By making data-driven decisions, all educators—from classroom teachers and building principals to district administrators and curriculum specialists—can dramatically improve student performance and create an environment that encourages optimism and increases opportunity.

action plan to improve math performance: Leading Effective Secondary School Reform Mikie Loughridge, Loren R. Tarantino, 2004-12-07 With this easy-to-use leadership resource, you'll find successful strategies with case studies and sample agendas to help the school change process run smoothly.

action plan to improve math performance: Implementing Effective Mathematics Teaching Practices in Kindergarten-grade 5 DeAnn Huinker, 2017

action plan to improve math performance: Issues of Curriculum Reform in Science, Mathematics and Higher Order Thinking Across the Disciplines , 1994

Additional Resources

MATH SCHOOL IMPROVEMENT ACTION PLAN MATH---K-12 ...

MATH SCHOOL IMPROVEMENT ACTION PLAN MATH---K-12 CENTRAL CITY PUBLIC SCHOOLS . Student Performance Goal: S tudents will improve math skills to solve problems ...

School Improvement Plan 2020-21: Maths - Orchard Primary

School Improvement Plan 2020-21: Maths Aim: The vast majority of pupils (>85%) make at least good progress from their starting points in mathematics and the percentage of children ...

Improving Math Performance (PDF) - U.S. Department of ...

School comments about improved student math performance are organized below by topic—curriculum, teaching, student support, and assessment—with illustrations from survey ...

Action Plan for Improvement: Middle School Mathematics

Develop hands-on instruction, i.e., increasing the use of manipulatives, ensuring real-world connections, and aligning instructional strategies with standards-based mathematical ...

Strategies to Improve All Students' Mathematics Learning and ...

Strategies to Improve All Students' Mathematics Learning and Achievement 5EDC | Over the years, I have identified five key characteristics that are key to effective diversity training for ...

Math Action Plan

Identify potential curriculum materials for all grade bands/levels/courses, looking for consistency across grade levels with regard to how the mathematics is developed and the use of the ...

Improving Math Performance - Bill & Melinda Gates Foundation

obstacles to improving math performance as they undergo foundation-supported reform. This article examines the challenges that foundation- supported schools face in math education ...

Action Plan Examples-Math

Make a math strategy list—ways to solve problems. Short answer problem from ISAT sample. Extended response problem. Students make, analyze, and write about bar, line, and circle ...

Mathematics Secondary Action Plan 2019-2020 - The ...

Embed high levels of personalised challenge, enrichment, extension and acceleration opportunities for G and T students. Further, embed opportunities to develop critical thinking ...

South Hiendley Primary School Mathematics Action Plan 2020 ...

Mathematics Action Plan 2020-21 Overview of Priorities (linked to School Improvement Plan) Leadership and Management Quality of Education Personal Development 1.1 Senior leaders ...

TDSB MATHEMATICS ACTION PLAN

The Multi-Year Strategic Plan identifies goals and actions that guide the work of the system, schools and classrooms to support students' development of mathematical thinking, procedural

Mathematics Achievement Action Plan (MAAP) - Peel District ...

This action plan represents our commitment to elevating math achievement for all learners by focusing on a robust curriculum, equitable and responsive education, and empowerment of our ...

Mathematics Achievement Action Plan

At Niagara Catholic District School Board, we are prioritizing improvement in mathematics. Under the Strategic Direction pillar of Advancing Achievement for All Students, we will support all ...

Teaching Strategies for Effective Fifth Grade Math ...

Action research can be a powerful tool for teachers to improve their instruction and student learning. I plan to study effective math interventions instruction because I want identify specific ...

Mathematics Action Plan 2021-22 - Ashleigh Primary

Mathematics Action Plan 2021-22 Our children are fluent, articulate and confident mathematicians. What's working well this year? Attainment is great (2021 KS2 94% exp; 32% ...

MATHEMATICS ACHIEVEMENT ACTION PLAN - Toronto ...

The Toronto Catholic District School Board's Math Achievement Action Plan highlights our three priority areas. This document is designed to support improvement by adapting and growing ...

Math Five Fundamentals Action Plan Example

Category: Improve math achievement through staff development on differentiated instruction and formative evaluation to respond to learning progress and needs aligned with quarterly learning ...

A Strategic Action Plan for Advancing Math and Science ...

How We Will Get There: This Strategic Action Plan for Advancing Math and Science Education is an initial outline of strategies, actions, measures of progress, resources needed, timelines and ...

MATHEMATICS ACTION PLAN - hcdsb.org

In 2023-24, the Ontario Government launched the Ontario Math Achievement Action Plan in order "to boost math competence in the classroom and improve board accountability". Knowing the ...

IMPROVEMENT PLAN EXAMPLES - Wyoming Department of ...

For each intervention, specify action steps, timelines, process benchmarks and resources needed to implement the interventions for teaching and learning, leadership and resource utilization.

MATH SCHOOL IMPROVEMENT ACTION PLAN MATH---K...

MATH SCHOOL IMPROVEMENT ACTION PLAN MATH---K-12 CENTRAL CITY PUBLIC SCHOOLS . Student Performance Goal: S tudents will improve math skills to solve problems appropriate to ...

School Improvement Plan 2020-21: Maths - Orchard Primary

School Improvement Plan 2020-21: Maths Aim: The vast majority of pupils (>85%) make at least good progress from their starting points in mathematics and the percentage of children meeting ...

Improving Math Performance (PDF) - U.S. Department of...

School comments about improved student math performance are organized below by topic—curriculum, teaching, student support, and assessment—with illustrations from survey ...

Action Plan for Improvement: Middle School Mathematics

Develop hands-on instruction, i.e., increasing the use of manipulatives, ensuring real-world connections, and aligning instructional strategies with standards-based mathematical practices. ...

Strategies to Improve All Students' Mathematics Learning...

Strategies to Improve All Students' Mathematics Learning and Achievement 5EDC | Over

the years, I have identified five key characteristics that are key to effective diversity training for educators.

Math Action Plan

Identify potential curriculum materials for all grade bands/levels/courses, looking for consistency across grade levels with regard to how the mathematics is developed and the use of the ...

Improving Math Performance - Bill & Melinda Gates Foundation

obstacles to improving math performance as they undergo foundation-supported reform. This article examines the challenges that foundation-supported schools face in math education ...

Action Plan Examples-Math

Make a math strategy list—ways to solve problems. Short answer problem from ISAT sample. Extended response problem. Students make, analyze, and write about bar, line, and circle ...

Mathematics Secondary Action Plan 2019-2020 - The ...

Embed high levels of personalised challenge, enrichment, extension and acceleration opportunities for G and T students. Further, embed opportunities to develop critical thinking and extend ...

South Hiendley Primary School Mathematics Action Plan ...

Mathematics Action Plan 2020-21 Overview of Priorities (linked to School Improvement Plan) Leadership and Management Quality of Education Personal Development 1.1 Senior leaders and ...

TDSB MATHEMATICS ACTION PLAN

The Multi-Year Strategic Plan identifies goals and actions that guide the work of the system, schools and classrooms to support students' development of mathematical thinking, procedural

Mathematics Achievement Action Plan (MAAP) - Peel District ...

This action plan represents our commitment to elevating math achievement for all learners by focusing on a robust curriculum, equitable and responsive education, and empowerment of our ...

Mathematics Achievement Action Plan

At Niagara Catholic District School Board, we are prioritizing improvement in mathematics. Under the Strategic Direction pillar of Advancing Achievement for All Students, we will support all staff ...

Teaching Strategies for Effective Fifth Grade Math ...

Action research can be a powerful tool for teachers to improve their instruction and student learning. I plan to study effective math interventions instruction because I want identify specific ...

Mathematics Action Plan 2021-22 - Ashleigh Primary

Mathematics Action Plan 2021-22 Our children are fluent, articulate and confident mathematicians. What's working well this year? Attainment is great (2021 KS2 94% exp;

32% GD). Pupils' conduct ...

MATHEMATICS ACHIEVEMENT ACTION PLAN - Toronto ...

The Toronto Catholic District School Board's Math Achievement Action Plan highlights our three priority areas. This document is designed to support improvement by adapting and growing with ...

Math Five Fundamentals Action Plan Example

Category: Improve math achievement through staff development on differentiated instruction and formative evaluation to respond to learning progress and needs aligned with quarterly learning ...

A Strategic Action Plan for Advancing Math and Science ...

How We Will Get There: This Strategic Action Plan for Advancing Math and Science Education is an initial outline of strategies, actions, measures of progress, resources needed, timelines and ...

MATHEMATICS ACTION PLAN - hcdsb.org

In 2023-24, the Ontario Government launched the Ontario Math Achievement Action Plan in order "to boost math competence in the classroom and improve board accountability". Knowing the ...

IMPROVEMENT PLAN EXAMPLES - Wyoming Department of ...

For each intervention, specify action steps, timelines, process benchmarks and resources needed to implement the interventions for teaching and learning, leadership and resource utilization.

Action Plan To Improve Math Performance

Action Plan To Improve Math Performance

Related Articles

- [active writing vs passive](#)
- [active and passive voice worksheets with answers pdf](#)
- [act 2 popcorn instructions](#)

[Back to Home](#)