the young child and mathematics

The Young Child and Mathematics: Nurturing Early Numeracy Skills

the young child and mathematics share a fascinating relationship that often shapes a child’s future learning experiences. From the earliest moments, children start to explore numbers, patterns, shapes, and spatial awareness, laying the groundwork for more complex mathematical understanding. But how exactly does math unfold in the mind of a young learner? And what can parents, educators, and caregivers do to foster a positive and engaging mathematical journey?

Understanding the connection between early childhood development and mathematical concepts is vital. Children naturally notice quantities, compare sizes, and recognize patterns long before they can recite numbers. This innate curiosity is the perfect springboard for introducing math in playful, meaningful ways that don’t feel like formal lessons but instead spark genuine interest and confidence.

The Early Stages of Mathematical Thinking

Before a child can count or solve problems, they develop crucial cognitive skills that support mathematical thinking. These foundational abilities include pattern recognition, classification, and spatial reasoning. For instance, toddlers sorting blocks by color or shape are engaging in early math activities without even realizing it.

Number Sense and Counting

Number sense refers to an intuitive understanding of numbers, their magnitude, relationships, and how they come into play in everyday life. Young children might not instantly grasp that “3” means three objects, but they can tell when one pile is bigger than another or when something is missing from a group.

Counting aloud during daily routines, such as counting steps, snack pieces, or toys, helps solidify this number sense. It connects abstract numerals to real-world objects, making math tangible and relevant.

Spatial Awareness and Geometry

Young children are naturally curious about shapes and space. Identifying circles, squares, and triangles during playtime or noticing the way blocks fit together taps into early geometry skills. Activities like building with

blocks, drawing shapes, or even simple puzzles encourage spatial reasoning, which is essential for later success in math and science.

Creating a Math-Friendly Environment

A child’s environment plays a significant role in how they perceive and engage with mathematics. Surrounding young learners with math-related opportunities makes the subject approachable and fun.

Incorporating Math into Everyday Activities

Math isn’t confined to classrooms or textbooks. Everyday moments offer countless chances to integrate math learning naturally:

- Cooking together: measuring ingredients introduces concepts of volume and weight.
- Shopping trips: comparing prices and counting items encourage practical math skills.
- Setting the table: counting plates and utensils is a simple math exercise.
- Sorting laundry: categorizing clothes by color or type builds classification skills.

These real-life experiences help children see math as useful and relevant, fostering a positive attitude toward learning.

Utilizing Play and Manipulatives

Hands-on materials are invaluable for young children learning math. Manipulatives such as counting beads, shape sorters, or number puzzles transform abstract ideas into concrete experiences. Play-based learning encourages exploration and experimentation, which can lead to deeper understanding.

For example, using blocks to represent numbers can help children visualize addition and subtraction. Games that involve counting spaces or matching shapes also make math enjoyable and interactive.

Supporting Mathematical Language Development

Language is a powerful tool in learning mathematics. Introducing and reinforcing math vocabulary helps children communicate their thinking and understand concepts more clearly.

Key Mathematical Terms for Young Learners

Words like “more,” “less,” “equal,” “big,” “small,” “above,” “below,” and “between” form the building blocks of math language. Using these terms in context encourages children to describe their observations and reasoning.

For instance, while playing with blocks, a caregiver might say, “Can you find the bigger block?” or “Put the red block above the blue one.” This not only enhances vocabulary but also strengthens spatial and comparative understanding.

Encouraging Questions and Exploration

Inviting children to ask questions and explain their thinking nurtures critical thinking skills. When a child wonders why one pile is taller than another or how many steps it takes to get to the door, they engage in mathematical reasoning.

Responding with curiosity and providing opportunities to test ideas through counting, measuring, or comparing helps deepen their grasp of math concepts.

Challenges Young Children Face with Mathematics

While many children show early enthusiasm for math, some may find certain concepts difficult. Recognizing challenges early can lead to better support and prevent frustration.

Common Difficulties

Some young learners struggle with:

- Understanding one-to-one correspondence during counting.
- Recognizing number symbols and their meanings.

- Distinguishing between similar shapes or quantities.
- Applying math concepts in new contexts.

Patience and tailored approaches are key here. Encouraging repeated exposure through varied activities can help solidify understanding.

Strategies to Overcome Obstacles

Breaking tasks into smaller steps, using visual aids, and connecting math to a child’s interests can make learning more accessible. For example, a child who loves animals might count toy animals or sort them by size to practice classification.

Positive reinforcement and celebrating small successes build confidence and motivation. It’s also beneficial to maintain open communication between parents, caregivers, and educators to ensure consistent support.

The Role of Technology in Early Math Learning

In today’s digital age, technology is an increasingly popular tool for engaging young children in mathematics. Educational apps, games, and interactive videos can complement traditional learning methods.

Choosing Effective Digital Resources

Not all math apps are created equal. Selecting age-appropriate, research-backed tools that encourage active participation rather than passive consumption is crucial. Features that allow children to manipulate objects, solve puzzles, or receive immediate feedback tend to be most effective.

Balancing Screen Time with Hands-On Activities

Technology should enhance, not replace, real-world experiences. Balancing digital learning with physical play and interpersonal interaction ensures a well-rounded development of mathematical skills.

For example, after playing a counting game on a tablet, a child might practice counting actual objects or drawing numbers with crayons to reinforce learning.

Building a Lifelong Relationship with Mathematics

The young child and mathematics share a dynamic bond that goes beyond rote memorization or worksheets. When math is presented as a natural, enjoyable part of daily life, children develop curiosity, problem-solving skills, and resilience.

Encouraging exploration, asking open-ended questions, and providing diverse experiences lay a robust foundation for future academic success and everyday problem solving. It’s about nurturing a mindset where math is not intimidating but rather a fascinating puzzle waiting to be solved.

By embracing the natural mathematical abilities of young children and supporting their growth with patience and creativity, we can help shape confident learners ready to tackle the challenges and opportunities that numbers and patterns present throughout life.

Frequently Asked Questions

Why is early exposure to mathematics important for young children?

Early exposure to mathematics helps young children develop critical thinking and problem-solving skills, lays the foundation for later academic success, and fosters a positive attitude towards learning math.

What are some effective ways to teach math concepts to young children?

Using hands-on activities, visual aids, games, and real-life scenarios can make math concepts more engaging and understandable for young children.

How can parents support their child's mathematical development at home?

Parents can support their child's math skills by incorporating math into daily routines, such as counting objects, measuring ingredients while cooking, and playing math-related games.

What role does play have in learning mathematics for young children?

Play encourages exploration and experimentation, allowing young children to

naturally develop mathematical concepts like counting, sorting, and pattern recognition in a fun and stress-free environment.

At what age should children start learning basic math concepts?

Children can start learning basic math concepts such as counting, shapes, and patterns as early as preschool age (around 3 to 5 years old), depending on their individual development.

How can educators assess a young child's mathematical understanding?

Educators can assess understanding through observation during activities, asking open-ended questions, and using informal assessments like games and puzzles to gauge comprehension.

What are common challenges young children face in learning math, and how can they be addressed?

Common challenges include math anxiety, difficulty understanding abstract concepts, and lack of engagement. These can be addressed by using concrete materials, offering encouragement, and creating a supportive and interactive learning environment.

Additional Resources

The Young Child and Mathematics: Exploring Early Numeracy Development

the young child and mathematics forms a critical foundation for lifelong learning and cognitive development. Early exposure to mathematical concepts influences not only academic success but also problem-solving skills and logical reasoning in later years. As educators, parents, and policymakers increasingly recognize the importance of early numeracy, understanding how young children interact with and learn mathematics becomes essential. This article delves into the multifaceted relationship between early childhood and mathematics, examining developmental stages, teaching methodologies, and the implications of early math education.

The Significance of Early Math Learning

Mathematics is often perceived as an abstract and complex subject, yet for young children, it begins as a natural exploration of the world around them. Research indicates that children start developing mathematical thinking well before formal schooling, often through play and everyday interactions. The

early years, typically from birth to age five, are pivotal for establishing number sense, spatial awareness, and pattern recognition.

Studies have shown that children who engage with mathematical concepts early demonstrate better achievement in math during their school years. According to a 2017 report from the National Association for the Education of Young Children (NAEYC), early math skills are stronger predictors of later academic success than early reading skills. This underscores the importance of integrating numeracy into early childhood education frameworks.

Developmental Milestones in Early Numeracy

Understanding the developmental progression of mathematical skills in young children helps tailor effective teaching strategies. The acquisition of numeracy skills typically follows a predictable sequence:

- **Infants and toddlers:** Begin recognizing quantities and differences (e.g., more vs. less) through sensory experiences.
- **Preschoolers (3-5 years):** Develop counting skills, understand one-to-one correspondence, and start grasping basic arithmetic concepts such as addition and subtraction.
- **Kindergarten and early elementary:** Expand on counting to understand number operations, measurement, and simple problem-solving.

These stages highlight that mathematical understanding is not innate but grows through interaction and experience.

Teaching Mathematics to Young Children: Approaches and Challenges

Effective early math education requires more than rote memorization of numbers. It demands pedagogical approaches that align with children’s cognitive and emotional development. Several teaching methodologies have emerged, each with distinct advantages and limitations.

Play-Based Learning

One widely endorsed approach is play-based learning, where mathematical concepts are embedded within child-initiated activities. Through games, puzzles, and manipulatives like blocks or counting beads, children explore

numbers and spatial relationships in a hands-on manner. For example, sorting shapes or measuring ingredients during cooking introduces concepts of classification and measurement in a meaningful context.

Pros of play-based learning include fostering intrinsic motivation and allowing children to internalize math concepts at their own pace. However, critics argue that without structured guidance, some children may not achieve sufficient mastery of foundational skills.

Structured Instruction and Curriculum

Conversely, structured curricula focus on systematic instruction, often aligned with standardized benchmarks. Programs like “Number Talks” encourage verbal reasoning about numbers, while “Singapore Math” emphasizes problem-solving skills through stepwise learning.

Structured approaches can efficiently build essential skills and prepare children for formal schooling demands. Nevertheless, overly rigid instruction risks disengagement or anxiety in young learners who may require more exploratory experiences.

Influence of Environment and Socioeconomic Factors

The environment in which a young child learns mathematics profoundly impacts their proficiency and attitude toward the subject. Access to quality early childhood education, parental involvement, and exposure to numeracy-rich environments contribute positively to mathematical development.

Home Environment and Parental Role

Parental attitudes toward math and the frequency of math-related interactions at home influence children's early numeracy. Simple activities such as counting steps, identifying shapes, or discussing time can enhance a child’s mathematical vocabulary and conceptual understanding.

Research reveals disparities in math readiness linked to socioeconomic status. Children from low-income families often have less access to resources and educational opportunities, which may hinder early math skill acquisition. Addressing these gaps requires targeted interventions and community support.

Technology and Digital Tools

The integration of digital tools in early math education presents new opportunities and challenges. Educational apps and interactive games can engage children with adaptive learning experiences tailored to individual needs. However, excessive screen time and the quality of digital content remain concerns among educators and parents.

Balancing traditional hands-on activities with technology-enhanced learning can optimize outcomes, provided that digital tools are used thoughtfully and complement broader educational goals.

Key Mathematical Concepts for Young Learners

To effectively support young children in mathematics, it is important to focus on core concepts that build a strong foundation:

1. **Number Sense:** Understanding numbers, counting principles, and the ability to compare quantities.
2. **Patterns and Relationships:** Recognizing sequences, repetitions, and cause-effect relationships.
3. **Spatial Awareness:** Comprehending shapes, positions, and dimensions.
4. **Measurement:** Grasping concepts of length, weight, volume, and time.
5. **Problem Solving:** Applying logical reasoning to find solutions to simple mathematical problems.

These domains are interrelated and develop through both formal instruction and informal learning contexts.

Assessment and Progress Tracking

Assessing young children’s mathematical understanding remains complex due to developmental variability and the influence of language and motor skills. Authentic assessments involving observation, portfolios, and child-led demonstrations provide richer insights than standardized tests alone.

Effective progress tracking helps educators identify areas needing reinforcement and adapt instruction accordingly, ensuring each child's unique learning trajectory is supported.

The intricate relationship between the young child and mathematics continues to evolve as research uncovers deeper insights into cognitive development and educational best practices. Recognizing math as a natural, integral part of early childhood experience can transform approaches to teaching and learning, ultimately fostering confident and capable young learners prepared for future challenges.

The Young Child And Mathematics

the young child and mathematics: The Young Child and Mathematics Juanita V. Copley, 2010 Reflects recent developments in math education using vignettes from classrooms, activity ideas, and strategies for teaching young children about math processes and concepts. Incorporates standards and guidelines from NCTM and NAEYC.

the young child and mathematics: *The Young Child and Mathematics, Third Edition* Angela Chan Turrou, Nicholas C. Johnson, Megan L. Franke, 2021 Everything a child does has mathematical value--these words are at the heart of this completely revised and updated third edition of The Young Child and Mathematics. Grounded in current research, this classic book focuses on how teachers working with children ages 3 to 6 can find and build on the math inherent in children's ideas in ways that are playful and intentional. This resource: Illustrates through detailed vignettes how math concepts can be explored in planned learning experiences as well as informal spaces; Highlights in-the-moment instructional decision-making and child-teacher interactions that meaningfully and dynamically support children in making math connections; Provides an overview of what children know about counting and operations, spatial relations, measurement and data, and patterns and algebra; Offers examples of informal documentation and assessment approaches that are embedded within classroom practice Deepen your understanding of how math is an integral part of your classroom all day, every day.

the young child and mathematics: Engaging Young Children in Mathematics Douglas H. Clements, Julie Sarama, Associate Edito DiBiase, Ann-Marie DiBiase, 2003-10-17 This book consists of conclusions drawn from the expertise shared at the Conference on Standards for Prekindergarten and Kindergarten Mathematics Education. It offers substantive detail regarding young students' understandings of mathematical ideas.

the young child and mathematics: Teaching Young Children Mathematics Sydney L. Schwartz, 2005-09-30 Children learn mathematics most effectively in contexts that are meaningful to them. Realizing the potential of these contexts for fostering young children's mathematical learning while nurturing and challenging them, requires knowledge of mathematics as well as of child development. Avoiding the debates surrounding hands-on learning vs. direct instruction, the author focuses on the value of different contexts for learning, and illustrates ways to genuinely engage children as active learners. The work is rich with examples of children's interactions with each other and with adults as they utilize and extend their understanding of mathematics. Examples and guidelines for developing lessons and activities will be useful to educators and parents. Chapters explore how we underestimate young children's mathematical capabilities; how appropriate sequencing of learning and building on prior knowledge will enhance understanding; what teachers, including parent-teachers, need to know; and high-stakes testing. This is a work that brings together the connections between knowing the basics and constructing knowledge in accessible and practical ways.

the young child and mathematics: Showcasing Mathematics for the Young Child Juanita V. Copley, 2004 Written for all teachers of young children, this book illustrates activities that promote early mathematics development for children ages three to five and showcases mathematics

for the young child. The thirty-five activities in this book are distributed into five content areas: number and operations, geometry, algebra, measurement and data analysis. The content areas are connected by a continuing story, Hanny the Honey Bear Discovers the World of Mathematics in the Big Zoo. Teachers can use this book to help themselves teach mathematics, learn mathematics and most important, listen to children think!

the young child and mathematics: Math & Science for Young Children Rosalind Charlesworth, Karen Lind, 2009-02-09 MATH AND SCIENCE FOR YOUNG CHILDREN, 6th Edition is a unique text that focuses on the integration of math and science along with the other important areas of child development during the crucial birth-through-eight age range. It also carefully addresses the ever-changing and important national standards: The National Association for the Education of Young Children (NAEYC), National Council of Teachers of Math (NCTM), National Science Teachers Association (NSTA), American Association for the Advancement of Science (AAAS), and the National Research Council (NRC). Both math and science are presented from a common conceptual framework, and problem solving is emphasized as the major means for constructing concepts. The systematic approach of the book promotes developmentally appropriate assessment through observation, documentation of records, audio and video use, performance evaluations, and student portfolios. This text covers the use of literature and the promotion of the written language with an emphasis on dramatic play, and provides information regarding materials and resources as well as parent involvement. With the units developed sequentially from pre-kindergarten to primary level, the book is easy and logical to follow. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

the young child and mathematics: Young Children Learning Mathematics Robert Hunting, Judy Mousley, Bob Perry, 2012-03-01 Can young children learn mathematics before school? What ideas and concepts are they capable of learning? How can adults develop a child's mathematical thinking from birth to five years? Early learning plays a critical role in laying a foundation for later success in schooling. Young children learning mathematics: A guide for educators and families explores the possibilities and potential for early childhood educators, parents and carers to stimulate young children's mathematical thinking. Drawing on the authors' significant research, it answers frequently asked questions about early childhood mathematics, discusses the experiences, activities and conversations that could lead to mathematics learning, and provides simple, easy-to-follow guidelines on introducing and building on the mathematical concepts underpinning play and activity in young children aged from birth to five.

the young child and mathematics: Teaching Young Children Mathematics Janice Minetola, Robert G. Ziegenfuss, J. Kent Chrisman, 2013-09-11 Teaching Young Children Mathematics provides a comprehensive overview of mathematics instruction in the early childhood classroom. Taking into account family differences, language barriers, and the presence of special needs students in many classrooms throughout the U.S., this textbook situates best practices for mathematics instruction within the larger frameworks of federal and state standards as well as contemporary understandings of child development. Key topics covered include: developmental information of conceptual understanding in mathematics from birth through 3rd grade, use of national and state standards in math, including the new Common Core State Standards, information for adapting ideas to meet special needs and English Language Learners, literacy connections in each chapter, ‘real-world’ connections to the content, and information for family connections to the content.

the young child and mathematics: Experiments in Math for Young Children Rosalind Charlesworth, 1996-02-01 Experiences in Math for Young Children is based on theories of child development and learning and is compatible with the guidelines of the National Association for the Education of Young Children (NAEYC) and the National Council of Teachers of Mathematics (NCTM). Developmentally appropriate integrated curriculum is stressed as well as language and literature.

the young child and mathematics: *Math and Science for Young Children* , 2015

the young child and mathematics: Mathematics in the Early Years Juanita V. Copley, 1999

Noting that young children are capable of surprisingly complex forms of mathematical thinking and learning, this book presents a collection of articles depicting children discovering mathematical ideas, teachers fostering students' informal mathematical knowledge, adults asking questions and listening to answers, and researchers examining children's mathematical thinking. The chapters are: (1) Why Do We Teach Young Children So Little Mathematics? Some Historical Considerations (Balfanz); (2) Children's Ways of Knowing: Lessons from Cognitive Development Research (Sophian); (3) The Sociology of Day Care (McDill and Natriello); (4) Cultural Aspects of Young Children's Mathematics Knowledge (Guberman); (5) Ready To Learn: Developing Young Children's Mathematical Powers (Greenes); (6) The Development of Informal Counting, Number, and Arithmetic Skills and Concepts (Baroody and Wilkins); (7) Geometric and Spatial Thinking in Young Children (Clements); (8) Rational-Number Learning in the Early Years: What Is Possible? (Hunting); (9) Young Children Doing Mathematics: Observations of Everyday Activities (Ginsburg, Inoue, and Seo); (10) Cognitively Guided Instruction in One Kindergarten Classroom (Warfield and Yttri); (11) Supporting Students' Ways of Reasoning about Patterns and Partitions (McClain and Cobb); (12) The Effective Use of Computers with Young Children (Clements); (13) Making Connections: A 'Number Curriculum' for Preschoolers (Shane); (14) Within Easy Reach: Using a Shelf-Based Curriculum To Increase the Range of Mathematical Concepts Accessible to Young Children (Nelson); (15) Teaching Mathematics through Musical Activities (Kim); (16) The Boston University--Chelsea Project (Greenes); (17) The Outdoors as a Context for Mathematics in the Early Years (Basile); (18) Using Storybooks To Help Young Children Make Sense of Mathematics (Hong); (19) Movement, Mathematics, and Learning: Experiences Using a Family Learning Model (Coates and Franco); (20) Math in Motion (Goodway, Rudisill, Hamilton, and Hart); (21) Assessing the Mathematical Understanding of the Young Child (Copley); (22) Improving Opportunities and Access to Mathematics Learning in the Early Years (Padron); (23) What To Do When They Don't Speak English: Teaching Mathematics to English-Language Learners in the Early Childhood Classroom (Weaver and Gaines); (24) Involving Parents of Four- and Five-Year-Olds in Their Children's Mathematics Education: The FAMILY MATH Experience (Coates and Thompson); (25) Perspectives on Mathematics Education and Professional Development through the Eyes of Early Childhood Administrators (Weber); and (26) Early Childhood Mathematics in Japan (Hatano and Inagaki). (Each chapter contains references.) (KB)

the young child and mathematics: Engaging Young Children in Mathematics Douglas H. Clements, Julie Sarama, 2004 Engaging Young Children in Mathematics: Standards for Early Childhood Mathematics Education brings together the combined wisdom of a diverse group of experts involved with early childhood mathematics. The book originates from the landmark 2000 Conference on Standards for Pre-kindergarten and Kindergarten Mathematics Education, attended by representatives from almost every state developing standards for young children's mathematics; federal government officials; mathematicians; mathematics educators; researchers from mathematics education, early childhood education, and psychology; curriculum developers; teachers; policymakers; and professionals from organizations such as the National Conference of Teachers of Mathematics and the National Association for the Education of Young Children. The main goal of the Conference was to work collectively to help those responsible for framing and implementing early childhood mathematics standards. Although it has its roots in the Conference, the expanded scope of the standards and recommendations covered in this book includes the full range of kindergarten to grade 2. The volume is organized into two main parts and an online appendix (http://www.gse.buffalo.edu/org/conference/). Part One, Major Themes and Recommendations, offers a framework for thinking about pre-kindergarten - grade 2 mathematics education and specific recommendations. Part Two, Elaboration of Major Themes and Recommendations, provides substantive detail regarding young students' understandings of mathematical ideas. Each Part includes five parallel subsections: Standards in Early Childhood Education; Math Standards and Guidelines; Curriculum, Learning, Teaching, and Assessment; Professional Development; and Toward the Future: Implementation and Policy. As a whole the book:

* presents comprehensive summaries of research that provide specific guidelines for standards, curriculum, and teaching; * takes the recent reports and recommendations for early childhood mathematics education to the next level; * integrates practical details and research throughout; and * provides a succinct, but thorough review of research on the topics, sequences, and learning trajectories that children can and should learn at each of their first years of life, with specific developmental guidelines that suggest appropriate content for each topic for each year from 2-year-olds to 7-year-olds. This is an indispensable volume for mathematics educators, researchers, curriculum developers, teachers and policymakers, including those who create standards, scope and sequences, and curricula for young children and professional teacher development materials, and students in mathematics education, early childhood trainers, teacher educators, and faculty in mathematics education.

the young child and mathematics: Math and Science for Young Children Rosalind Charlesworth, Karen Lind, 1995 Math and Science for Young Children, 5e is a unique reference that focuses on the integration of math and science with the other important areas of child development during the crucial birth through eight age range. It also carefully addresses the ever changing and significant national standards of the following organizations: The National Association for the Education of Young Children (NAEYC), National Council of Teachers of Math (NCTM), National Science Teachers Association (NSTA), American Association for the Advancement of Science (AAAS), and the National Research Council (NRC). A valuable resource for the student learner, working professional, as well as the involved parent, Math and Science for Young Children, 5e is the most current volume of information of itsa kind available on the market today.

the young child and mathematics: Mathematics for the Young Child Joseph Neal Payne,

the young child and mathematics: Math and Science for Young Children Rosalind Charlesworth, Karen K. Lind, 2012-01-17 MATH AND SCIENCE FOR YOUNG CHILDREN, Seventh Edition, is a unique reference that focuses on the integration of math and science in early childhood education programs, while addressing other important areas of child development during the crucial birth-through-eight age range. It also carefully addresses the ever-changing and significant national standards of the following organizations: The National Association for the Education of Young Children (NAEYC), National Council of Teachers of Math (NCTM), National Science Teachers Association (NSTA), American Association for the Advancement of Science (AAAS), and the National Research Council (NRC). A valuable resource for working professionals and involved parents, MATH AND SCIENCE FOR YOUNG CHILDREN, Seventh Edition, is the most current volume of information of its kind available on the market today.

the young child and mathematics: Spotlight on Young Children Amy Shillady, 2012 It is important for teachers to incorporate mathematics into the daily curriculum to ensure young children gain the foundational skills for later success in math. In this collection of articles from NAEYC's journal Young Children, teachers of children from infancy through age 8 will learn how to help children develop, construct, use, and reflect on their mathematical understandings. Articles offer ways to provide in-depth, engaging learning experiences focusing on key math concept areas: number and operations, geometry, measurement, and data analysis. The book provides a comprehensive resource list and a professional development guide with questions and activities to help readers reflect on current practices and incorporate new ones. This book is part of NAEYC's best-selling Spotlight series--great resources for the college classroom and for professional development.

the young child and mathematics: Experiences in Math for Young Children Rosalind Charlesworth, 1996 Section 1 describes how math concepts are developed, acquired, promoted and assessed. Section 2 describes fundamental concepts of counting, number sets, shape, space, parts and whole. Section 3 includes applications; measuring volume, weight, length, temperature, graphs and time. It also includes thematic units. Section 4 describes higher level activities; symbols and sets. Section 5 includes concepts & operation for primary grades; patterns, fractions, geometry, graphs, charts and standard units of measure.

the young child and mathematics: Young Children Reinvent Arithmetic Constance Kamii, 1999 In this fully revised second edition of the classic Young Children Reinvent Arithmetic, Constance Kamii describes and develops an innovative program of teaching arithmetic in the early elementary grades. Kamii bases her educational strategies on renowned constructivist Jean Piaget's scientific ideas of how children develop logico-mathematical thinking. Written in collaboration with a classroom teacher, and premised upon the conviction that children are capable of much more than teachers and parents generally realize, the book provides a rich theoretical foundation and a compelling explanation of educational goals and objectives. Kamii calls attention to the ways in which traditional textbook-based teaching can be harmful to children's development of numerical reasoning, and uses extensive research and classroom-tested studies to illuminate the efficacy of the approach. This book is full of practical suggestions and developmentally appropriate activities that can be used to stimulate numerical thinking among students of varying abilities and learning styles, both within and outside of the classroom. "In this new edition of her important book, Connie Kamii demonstrates scholarship not just in what she has written, but in her willingness to incorporate new ideas and findings. Many people update their books; few assiduously revise them, confronting what they believe to be past errors or gaps in their thinking. Such intellectual honesty, along with consistent connections between theory and practice, make this book a solid contribution to mathematics education of young children." —Douglas Clements, State University of New York at Buffalo "The development of young children's logico-mathematical knowledge is at the heart of this text. Similar to the first edition, this revision provides a rich theoretical foundation as well as child-centered activities and principles of teaching that support problem solving, communicating, reasoning, making connections, and representing mathematical ideas. In this great resource for preservice and in-service elementary teachers, Professor Kamii continues to help us understand the implications of Piagetian theory." —Frances R. Curcio, New York University

the young child and mathematics: Teaching Young Children Mathematics Janice Minetola, Robert Ziegenfuss, J. Kent Chrisman, 2013-09-11 Teaching Young Children Mathematics provides a comprehensive overview of mathematics instruction in the early childhood classroom. Taking into account family differences, language barriers, and the presence of special needs students in many classrooms throughout the U.S., this textbook situates best practices for mathematics instruction within the larger frameworks of federal and state standards as well as contemporary understandings of child development. Key topics covered include: developmental information of conceptual understanding in mathematics from birth through 3rd grade, use of national and state standards in math, including the new Common Core State Standards, information for adapting ideas to meet special needs and English Language Learners, literacy connections in each chapter, 'real-world' connections to the content, and information for family connections to the content.

the young child and mathematics: Spotlight on Young Children and Math Derry Gosselin Koralek, 2003-01-01 Summary: Too often as early childhood teachers we give math short shrift. All of the highly readable articles here, collected from Young Children, reflect the research-based recommendations for practice in NAEYC's joint position statement with the National Council of Teachers of Mathematics (NCTM). The authors offer proven strategies to introduce key mathematics concepts, foster problem solving and mathematical thinking, and encourage use of math across the curriculum. This attractive resource also includes a list of top resources in the area and carefully designed questions and activities to aid students and other readers in reflecting on the articles.--Publisher description.

Related to the young child and mathematics

Young Global Leaders | World Economic Forum The Forum of Young Global Leaders is a Foundation dedicated to shaping responsible leaders who are committed to improving the state of the world. Through its three-year program, it

Youth face a mental health perfect storm. Here's how to help Young people worldwide are

facing a generational mental health crisis. Economic, social and environmental issues are putting them under unprecedented pressure. The Youth

These are the countries where child marriage is legal If current trends continue, the number of girls who marry as children will reach nearly one billion by 2030. That’s according to the UN, which launched an initiative earlier this

Why investing in young people has never been more important Young people are pioneering new ways to tackle urgent crises. The Global Shapers Impact Report calls for more support for young changemakers

Young people have the power to break barriers to women’s Women continue to face systemic obstacles in education, employment, digital access and more – but three youth-led initiatives show how gender equality can begin at the

Empowering young people is future-proofing business and society Young people bring critical perspectives that are often dramatically different to those of older generations, especially when it comes to digital and societal expectations.

Why young people worldwide want and need ‘meaningful work’ Young people say they want 'meaningful work' that is fair, fulfilling and impactful. Meaningful work isn’t only about fair wages and benefits – it encompasses a sense of purpose,

Jonathan Haidt: How to make the 'anxious generation' happy again Since around 2011, young people — historically one of the happiest demographics — have been reporting increased levels of depression and anxiety. Jonathan Haidt, Professor

3 biggest issues affecting youth today - World Economic Forum If we talk about youth problems, here are the 3 biggest issues that affect the youth in today's time. Youth challenges are different today than they were 50 years ago

Bringing young leaders together now matters more than ever The Global Shapers network of young leaders will meet in Geneva to unlock new ideas, build partnerships and ignite collective action for lasting impact

Young Global Leaders | World Economic Forum The Forum of Young Global Leaders is a Foundation dedicated to shaping responsible leaders who are committed to improving the state of the world. Through its three-year program, it

Youth face a mental health perfect storm. Here's how to help Young people worldwide are facing a generational mental health crisis. Economic, social and environmental issues are putting them under unprecedented pressure. The Youth

These are the countries where child marriage is legal If current trends continue, the number of girls who marry as children will reach nearly one billion by 2030. That’s according to the UN, which launched an initiative earlier this

Why investing in young people has never been more important Young people are pioneering new ways to tackle urgent crises. The Global Shapers Impact Report calls for more support for young changemakers

Young people have the power to break barriers to women’s Women continue to face systemic obstacles in education, employment, digital access and more – but three youth-led initiatives show how gender equality can begin at the

Empowering young people is future-proofing business and society Young people bring critical perspectives that are often dramatically different to those of older generations, especially when it comes to digital and societal expectations.

Why young people worldwide want and need ‘meaningful work’ Young people say they want 'meaningful work' that is fair, fulfilling and impactful. Meaningful work isn’t only about fair wages and benefits – it encompasses a sense of purpose,

Jonathan Haidt: How to make the 'anxious generation' happy again Since around 2011, young people — historically one of the happiest demographics — have been reporting increased levels of depression and anxiety. Jonathan Haidt, Professor

3 biggest issues affecting youth today - World Economic Forum If we talk about youth

problems, here are the 3 biggest issues that affect the youth in today's time. Youth challenges are different today than they were 50 years ago

Bringing young leaders together now matters more than ever The Global Shapers network of young leaders will meet in Geneva to unlock new ideas, build partnerships and ignite collective action for lasting impact

Young Global Leaders | World Economic Forum The Forum of Young Global Leaders is a Foundation dedicated to shaping responsible leaders who are committed to improving the state of the world. Through its three-year program, it

Youth face a mental health perfect storm. Here's how to help Young people worldwide are facing a generational mental health crisis. Economic, social and environmental issues are putting them under unprecedented pressure. The Youth

These are the countries where child marriage is legal If current trends continue, the number of girls who marry as children will reach nearly one billion by 2030. That’s according to the UN, which launched an initiative earlier this

Why investing in young people has never been more important Young people are pioneering new ways to tackle urgent crises. The Global Shapers Impact Report calls for more support for young changemakers

Young people have the power to break barriers to women’s Women continue to face systemic obstacles in education, employment, digital access and more – but three youth-led initiatives show how gender equality can begin at the

Empowering young people is future-proofing business and society Young people bring critical perspectives that are often dramatically different to those of older generations, especially when it comes to digital and societal expectations.

Why young people worldwide want and need ‘meaningful work’ Young people say they want 'meaningful work' that is fair, fulfilling and impactful. Meaningful work isn’t only about fair wages and benefits – it encompasses a sense of purpose,

Jonathan Haidt: How to make the 'anxious generation' happy again Since around 2011, young people — historically one of the happiest demographics — have been reporting increased levels of depression and anxiety. Jonathan Haidt, Professor

3 biggest issues affecting youth today - World Economic Forum If we talk about youth problems, here are the 3 biggest issues that affect the youth in today's time. Youth challenges are different today than they were 50 years ago

Bringing young leaders together now matters more than ever The Global Shapers network of young leaders will meet in Geneva to unlock new ideas, build partnerships and ignite collective action for lasting impact

Young Global Leaders | World Economic Forum The Forum of Young Global Leaders is a Foundation dedicated to shaping responsible leaders who are committed to improving the state of the world. Through its three-year program, it

Youth face a mental health perfect storm. Here's how to help Young people worldwide are facing a generational mental health crisis. Economic, social and environmental issues are putting them under unprecedented pressure. The Youth

These are the countries where child marriage is legal If current trends continue, the number of girls who marry as children will reach nearly one billion by 2030. That’s according to the UN, which launched an initiative earlier this

Why investing in young people has never been more important Young people are pioneering new ways to tackle urgent crises. The Global Shapers Impact Report calls for more support for young changemakers

Young people have the power to break barriers to women’s Women continue to face systemic obstacles in education, employment, digital access and more – but three youth-led initiatives show how gender equality can begin at the

Empowering young people is future-proofing business and society Young people bring

critical perspectives that are often dramatically different to those of older generations, especially when it comes to digital and societal expectations.

Why young people worldwide want and need ‘meaningful work’ Young people say they want 'meaningful work' that is fair, fulfilling and impactful. Meaningful work isn’t only about fair wages and benefits – it encompasses a sense of purpose,

Jonathan Haidt: How to make the 'anxious generation' happy again Since around 2011, young people — historically one of the happiest demographics — have been reporting increased levels of depression and anxiety. Jonathan Haidt, Professor

3 biggest issues affecting youth today - World Economic Forum If we talk about youth problems, here are the 3 biggest issues that affect the youth in today's time. Youth challenges are different today than they were 50 years ago

Bringing young leaders together now matters more than ever The Global Shapers network of young leaders will meet in Geneva to unlock new ideas, build partnerships and ignite collective action for lasting impact

Related Articles

- biggest bears in history
- themes in play therapy
- 48th flying training squadron crash

Back to Home