

Matrix of Articles for Mathematics Activities

The majority of the following articles are from *Teaching Children Mathematics (TCM)*, one of the official journals of the National Council of Teachers of Mathematics. These articles illustrate lessons to engage children in rich mathematics. Although many have been field-tested with fifth-grade children, some were field-tested in other grades but are easily adaptable to fifth grade. Interested readers should view other issues and articles from *Teaching Children Mathematics* (formerly the *Arithmetic Teacher*) for further ideas.

Article Reference	On CD	On NCTM web page	Reference only	Number & Operation	Measurement	Geometry	Algebraic Thinking	Data & Probability	Literature	Science	Social Studies	Questioning/ Problem Solving	Special Education / Special Needs
Alcaro, Patricia C., Alice S. Alston, and Nancy Katims. "Fractions Attack! Children Thinking and Talking Mathematically." <i>TCM</i> 6 (May 2000): 562-567.			X	X								X	
Anderson, Cindy L., Kevin M. Anderson, and Edward J. Wenzel. "Oil and Water Don't Mix but They Do Teach Fractions." <i>TCM</i> 7 (November 2000): 174-178.			X	X	X					X			
Atkins, Sandra L. "Listening to Students: The Power of Mathematical Conversations." <i>TCM</i> 5 (January 1999): 289-295.			X									X	
Austin, Richard A. and Denisse R. Thompson. "Exploring World History Along the Silk Route: A Social Studies Investigations Through Mathematics." <i>Trends & Issues</i> 12 (Fall 2000): 12-14.	X			X	X				X		X		
Austin, Richard A. and Patricia Biafore. "Perimeter Patterns." <i>TCM</i> 2 (December 1995): 238-240.			X			X	X						
Barkley, Cathy A. and Sandra Cruz. "Geometry through Beadwork Designs." <i>TCM</i> 7 (February 2001): 362-367.			X			X					X		

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Borden, Jorie and Elsa Geskus. "The Most Magnificent Strawberry Shortcake." TCM 7 (May 2001): 538-541.		X		X	X				X				
Botula, Mary Jean and Margaret I. Ford. "All About Us: Connecting Statistics with Real Life." TCM 4 (September 1997): 14-19.			X					X					
Brahier, Daniel J., Monica Kelly, and Jennifer Swihart. "This Little Piggy." TCM 5 (January 1999): 274-278, worksheets			X	X	X				X				
Brewer, Evelyn J. "Geometry and Op Art." TCM 6 (December 1999): 220-224, 236.			X			X							
Brinker, Laura. "Using Recipes and Ratio Tables to Build on Students' Understanding of Fractions." TCM 5 (December 1998): 218-224.			X	X									
Burton, Gail. "Huge Trees, Small Drawings: Ideas of Relative Sizes." TCM 2 (April 1996): 466-470.			X	X	X				X		X		
Cai, Jinfa. "Developing Algebraic Reasoning in the Elementary Grades." TCM 5 (December 1998): 225-229.			X				X						
Caldwell, Janet H. "Communicating About Fractions with Pattern Blocks." TCM 2 (November 1995): 156-161.			X	X									
Chia, David T. "Weather Mathematics: Integrating Science and Mathematics." TCM 5 (September 1998): 19-22.			X					X		X			

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Civil, Marta and Leslie H. Khan. "Mathematics Instruction Developed from a Garden Theme." TCM 7 (March 2001): 400-405.			X		X								
Clay, Ellen L. "Using Mathematics to Build an Understanding of the United States." TCM 6 (October 1999): 123-127.			X	X	X			X			X		
Curcio, Frances A. and Myra Zarnowski. "Revisiting the Powers of 2." TCM 2 (January 1996): 300-304.			X				X		X				
Curtis, Shirley. "Mouse Maze Tournament: Connecting Geometry and Measurement." TCM 7 (May 2001): 504-509.		X			X	X							
Edwards, Thomas C. and Sarah M. Hensien. "Using Probability Experiments to Foster Discourse." TCM 6 (April 2000): 524-529.		X						X				X	
Emenaker, Charles E. "Gingerbread-House Geometry." TCM 5 (December 1999): 208-215.			X		X	X			X				
Empson, Susan B. "Equal Sharing and the Roots of Fraction Equivalence." TCM 7 (March 2001): 421-425.			X	X									
Enright, Brian E. "Picky Patterns." TCM 5 (November 1998): 174-176, worksheets			X				X						
Falkner, Karen P., Linda Levi, and Thomas P. Carpenter. "Children's Understanding of Equality: A Foundation for Algebra." TCM 6 (December 1999): 232-236.		X					X						
Ferrini-Mundy, Joan, Glenda Lappan, and Elizabeth Phillips. "Experiences with Patterning." TCM 3 (February 1997): 282-288.			X				X						

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Loewen, A. Craig. "Creative Problem Solving." TCM 2 (October 1995): 96-99.			X									X	
Long, Betty B. and Deborah A. Crocker. "Adventures with Sir Cumference: Standard Shapes and Nonstandard Units." TCM 7 (December 2000): 242-245.			X			X			X				
MacGregor, Mollie and Kaye Stacey. "A Flying Start to Algebra." TCM 6 (October 1999): 78-85.			X				X						
Mack, Nancy K. "Building a Foundation for Understanding the Multiplication of Fractions." TCM 5 (September 1998): 34-38.			X	X								X	
Margerm, Pat. "An Old Tale with a New Turn- and Flip and Slide." TCM 6 (October 1999): 86-90.			X			X			X				
Mewborn, Denise S. and Patricia D. Huberty. "Questioning Your Way to the Standards." TCM 6 (December 1999): 226-227, 243-246.			X	X								X	
Moore, Deborah A. "Some Like It Hot." TCM 5 (May 1999): 538-543.			X					X		X			
Moyer, Patricia Seray. "A Remainder of One: Exploring Partitive Division." TCM 6 (April 2000): 517-521.			X	X					X				
Norwood, Karen S. and Glenda Carter. "Journal Writing: An Insight into Students' Understanding." TCM 1 (November 1994): 146-148.			X									X	
O'Brien, Thomas C. and Ann C. Moss. "On the Keeping of Several Things in Mind." TCM 6 (October 1999): 118-122.		X					X					X	

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Rowan, Thomas E. and Josepha Robles. "Using Questions to Help Children Build Mathematical Power." TCM 4 (May 1998): 504-509.			X	X				X				X	
Russell, Susan Jo and Jan Mokros. "What Do Children Understand about Average?" TCM 2 (February 1996): 360-364.			X	X				X					
Scavo, Thomas R. and Byron Petraroja. "Adventures in Statistics." TCM 4 (March 1998): 394-400.			X		X			X					
Schneider, Sally B. and Charles S. Thompson. "Incredible Equations Develop Incredible Number Sense." TCM 7 (November 2000): 146-148, 165-168.			X	X			X						
Sellke, Donald H. "Geometric Flips via the Arts." TCM 5 (February 1999): 379-383.			X			X							
Sharp, Janet M. and Karen Bush Hoiberg. "And Then There Was Luke: The Geometric Thinking of a Young Mathematician." TCM 7 (March 2001): 432-439.			X			X						X	X
Shaw, Jean M., Conn Thomas, Ann Hoffman, and Janis Bulgren. "Using Concept Diagrams to Promote Understanding in Geometry." TCM 2 (November 1995): 184-187.			X			X						X	
Silbey, Robyn. "What Is in the Daily News? Problem-Solving Opportunities!" TCM 5 (March 1999): 390-394.			X					X			X	X	

