



The theme for this issue is:

## WRAPPING UP THE SCHOOL YEAR SUCCESSFULLY

We hope you find the information helpful in reflecting on this past year and preparing for the next!

## MTB Quote

"*Math Trailblazers* has been an extremely rewarding math program in my first grade classroom. The students love working with the hands-on manipulatives. They are learning from one another, due to the partner/group approach to learning that *Math Trailblazers* takes. My students enjoy math time and look forward to it. Math is fun again thanks to this wonderful new program!"

Suzanne Martin  
1st Grade Teacher  
Clay City Elementary  
Stanton, Kentucky

## Managing the Math Trailblazers Classroom

As we are on the downhill side of this school year, it is a good time to ask ourselves if our classroom atmosphere and the student-student relationships have been all that we would have liked for them to be. Have our students interacted with their peers in a healthy, productive way (at least MOST of the time)? Have our classroom group activities been as strong a learning environment as we want them to be? And last, but not least, has our classroom been a safe haven for our students, where they can share questions, answers and thoughts without fear of ridicule or embarrassment?

If we as teachers are reflective of our practice, and we believe that our classroom community could be "better" than it has been this year, there are some things we can do to build a better community next year.

*Math Trailblazers* is a powerful curriculum where mathematical discourse is promoted and valued in order for children to learn to communicate their mathematical ideas and thinking. That communication will not happen in a whole class setting, and possibly not even in a small group setting, if students do not feel safe. As we know, the fear of ridicule and "put-downs" or of being made fun of are huge barriers to students sharing their ideas. We, as teachers of *Math Trailblazers*, must constantly strive to create the accepting classroom where optimum learning takes place.

How do we create such a place? TIME! It does not happen automatically, and it does not happen by spending a few minutes at the start of the school year talking about it. We must allow students to catch the vision of a comfortable, caring community...But TIME is always in short supply. Maybe we even believe that there is no way that we have enough of it to even try to talk about or to cultivate the idea classroom...

Here is something that we all know, but tend to forget. Times spent establishing classroom expectations for self-management and responsibility, for helping others to learn, and for contributing to a positive classroom atmosphere pays huge rewards all year long. Students spend more time-on-task, are more relaxed and happy, are more positive about coming to school, and therefore MORE LEARNING HAPPENS! Just what we all have wanted... No time has been wasted, in fact, more time has been redeemed when we, as teachers, are not spending valuable teaching and learning time on classroom management!

Here are some resources that will help us build such a community:

*Cooperative Learning*  
by Spencer Kagan

*The Cooperative Classroom*  
by Lynda Baloche

*The New Circles of Learning*  
by Johnson, Johnson, Holubec

*Classbuilding: Cooperative Learning Activities*  
by Spencer Kagan

Karen Busch  
Former Math Trailblazers Teacher  
Kendall/Hunt Sales Representative



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Available Summer 2005

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# KINDERGARTEN

## Wrapping Up the Math Program at the Kindergarten Level



As a Kindergarten teacher I am always so surprised when I turn the calendar and it is May! Looking back over the year and reflecting on what the children have learned is exciting! I think back to when the children first did the lesson Rings on Fingers, and smile when I remember how each time they were asked how many fingers they had altogether they counted them repeatedly. It was clear none of them had number sense or conservation of number. I have told the children about this memory and they think it is funny that they did not remember how many fingers they had.

Now that the end of the year is here and the children have grown so much mathematically, it is exciting for them to use their knowledge and make decisions about how to solve problems independently. The children are experts in relying on many different strategies to figure things out and are pleased to instruct others. For example, one day the boys connected all the links we had and wanted to see how far it would stretch. They took it to the hallway and were amazed at how far their chain extended. Then they questioned how many links they used. I challenged them to figure it out. After a lot of brainstorming and discussion among themselves, I watched them disconnect the links and reconnect them in groups of 10. Once they completed their chain they reported it was 96 groups of 10 long, shouting that it was 960 links! I asked how many more they would need to go down our hall through the pod, down the next hall and back to our class. Again the group got together and discussed the problem. They reported back that it would take 256 groups of ten, the grand total would be 2,560 links.

I am so pleased at calendar time that they use our 100 charts and ten frames to determine how many days smarter we are. And not only can the children tell me the correct number but also the place value of the numeral. I could pretty much sit back and rest during calendar because each of the children is competent in leading at calendar time and in creating good ways to stimulate each other's math thinking. They are eager to ask questions that are similar to ones I had asked them all year. They will say: "I have a math challenge for someone. If today is the 14th of April what day of the week will the number 23 be on?" or "Let's figure out how we could take the numerals 1, 2, 3, 4, and 5 and work them mathematically and end up with a sum of 5." Much to my surprise children will respond with alternate ways to solve these problems.

During free time it is rewarding to see them want to get out the math mats and lessons they have previously learned and "play math." Of course Domino Docks is a favorite. We added a twist to the lesson by pretending to charge money for each boat parked in the dock and determining which dock generated the most money. The boys and girls like to play this on their own now and make up little bills to send their clients. (Dock 6 had 4 boats. I charge \$10.00 a boat. Dock 6 owes \$40.00) (Dock 8 owed \$100.00, it earned \$60.00 more!) Not only are they practicing part-part-whole

*continued...*



## Mr. Origin's Adventures



I recently traveled to San Francisco with my dear friend Phyllis Handler. We had great fun riding on the famous cable cars! Thanks for sending me copies of the pictures, Phyllis!

Best regards,  
**Mr. Origin**



If Mr. Origin goes anywhere interesting with you, take a picture and send it to us!

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# KINDERGARTEN *continued...*

relationships but also counting by 10s and thinking about greater and less values.

I believe that the *Math Trailblazers* program provides children with positive and supportive math experiences that allow children to gain trust in their abilities to learn mathematics. Developing a solid mathematical foundation in the early grades nurtures children's confidence so that mathematic learning is within their reach and facilitates success. Children learn by talking about what they learn. Allowing children to investigate and explore while the teacher stands back and acts as a guide to learning generates mathematical understanding. Teaching math in the early grades should encourage and build upon strategies of children to develop more general ideas and systematic approaches to aid in mathematical success in later grades.

How to wrap up a year of Kindergarten mathematics? Allow the children to use everything they have learned independently, within groups, and led by group lessons all year, to explore and discover what they are capable of doing mathematically.

*Donna Szymkowski  
Kindergarten Teacher  
Blue Valley School District  
Overland Park, Kansas*

# GRADE ONE

## Year Review and Summer Practice



To wrap up the year in first grade, I combine the unit 20 DPPs, Problem Solving Problems 1-21, and the End of the Year Test with a review of all of the games we learned in *Math Trailblazers* this year. We begin the math lessons with the DPPs, work several problem solving problems, and then have a quick review of how to play one of the first grade games. Then the rest of our

math hour consists of the children working cooperatively with one another to play the game of the day. When parents ask for math homework for the summer, I send home the *Math Trailblazers'* first grade games. That ensures that the students are practicing math in a fun, meaningful, hands-on way during their summer break.

I also believe that the End of the Year Test for first grade is an extremely valuable assessment piece. The students complete it independently and I assess each one individually. Then I pass back the student pages and we discuss each problem more deeply, asking "What strategies did you use to figure it out? How did you know which shapes were the squares?" The End of the Year Test is a great piece for a pass along portfolio to inform next year's teacher of each child's math learning in first grade.

*Julie A. Vodehnal  
1st Grade Teacher  
Cedar Hills Elementary  
Blue Valley School District, Kansas*



## Upgrading to the 2nd Edition of *Math Trailblazers*

My district adopted the 2nd edition of *Math Trailblazers* last year after using the 1st edition for four years. Our teachers are thrilled with the changes and constantly tell me how glad they are that we upgraded. Let me tell you about the changes and the reasons that I like using MTB 2 so much:

- The new edition aligns with the 2000 NCTM *Principles and Standards for School Mathematics*; and content expectations, especially computation, have been realigned
- More organized teacher materials positively impact instruction
- The Kindergarten Teacher Resource Book is a binder organized by months with recommended lessons, a teacher friendly format, and a cross referenced list of lessons by content strand to help differentiate instruction
- First and second grade formerly used two workbooks - the Student Guide and the Discovery Assignment Book - that are now combined into one Student Guide for Units 1-10 and one SG for Units 11-20. There is now a 100 or 200 chart on the back of the SG as well as a glossary in each book.
- Second grade now has lessons and DPPs which use triangle flash cards to help improve fluency with addition and subtraction facts; they were previously used only in grades 3-5

## GRADE ONE *continued...*

### First Grade Reflection

Who can believe that we once again need to begin thinking about wrapping up the school year? I have been teaching *Math Trailblazers* since the 2000-2001 school year. The year I began I was the only 1st grade teacher in the district to pilot this program. I remember how excited I was to jump in and get the program started. The program was entirely different for my students. They were not used to this math curriculum and lessons were slow going in the beginning. By the time June rolled around the students were so completely comfortable with the vocabulary, working with partners, working in small groups, working individually, and the daily practice problems. Unit 20 covers all the areas we have been exploring all year. This is a great review and assessment for the entire year. The children have learned the strategies they need to solve problems and they retain these strategies more readily.

*Gale Phillips  
1st Grade Teacher  
Wayside Elementary School  
Ocean, New Jersey*

## GRADE TWO

### Math, My Favorite Class



Oh, no! A new math program for the next year! These were my first thoughts as I listened to our Title One Coordinator telling the teachers of our school how wonderful *Math Trailblazers* would be. This year of math has been a very good learning experience for my students and me! Using manipulatives and being active in math has helped the students learn and enjoy their math experience. I have had students tell me, "Math is my favorite class!" As a teacher, I feel excited when seeing my students acquiring skills and having fun!

*Rosalie Dawson  
Grades 2/3 Teacher  
Bowen Elementary  
Stanton, Kentucky*

### Real-World Math

I have seen a great improvement in the students' problem-solving skills and in their ability to interpret and analyze graphs. The students seem more capable of handling real-world problems and enjoy seeing real-world applications involving what they are learning in math.

*Amanda Gentry  
2nd Grade Teacher  
Overdale Elementary  
Louisville, Kentucky*



- There is now a Facts Resource Guide for grades 2-5 which is a compilation of computation lessons, games, fact quizzes, and DPPs

- The Unit Resource Guides have been reformatted in a two-column page with student pages shown on the same page as the lesson directions; answer keys are in all URGs grades 1-5; DPPs are placed within the daily lessons rather than just at the front of the URG; and literature connections have been updated

- Grades 3-5 SGs now have a multiplication table on the back, student rubrics, a glossary, and an index

- All grades have some reorganization of lessons

- Grades 1-5 have a Teacher Resource CD-ROM that contains letters home, DPPs, assessment record sheets, black line and transparency masters, teacher and student rubrics, and the Fact Resource Guide materials; our teachers love the CD for convenience in making extra copies on their printers, keeping grades, and using an LCD projector to put graphs, DPPs, etc. up on the screen or white board

Sorry to go on so long, but I really believe that upgrading to MTB 2 has been fantastic for the teachers in my district. K-2 teachers are especially happy.

*Phyllis Handler  
Formerly Elem. Math Resource Teacher,  
Caesar Rodney School District  
Currently Director,  
Delaware Teacher Center*

## GRADE THREE

### Students Create Story Problems



One of the things I liked about *Math Trailblazers* this year was the additional background information provided through the Adventure Books. I also thought it helped students to put their thoughts into journal writings, and they did so more eagerly as it related to the subject of math. I really like how students are asked to relate math to real life situations by writing story problems. They were really resistant in the beginning, but as I gave them examples they began to see they could come up with examples of their own, from everyday trips to the store, or buying more than one pencil. The students enjoy the math activities and are eager to do the TIMS Labs.

*Janice Pelfrey  
Grades 2/3 Teacher  
Bowen Elementary  
Stanton, Kentucky*

### Cross-curricular Connections

This is my first year using Math Trailblazers, so I am still learning about the program. We departmentalize, so I teach all the math for the 3rd grade. I have really enjoyed the hands-on activities that the series offers. I also like the way that it connects with science in so many ways. Students are always talking in class about activities from Science class that go along with our math lessons!

*Traci L. Rupard  
3rd Grade Teacher  
Overdale Elementary  
Louisville, Kentucky*

## GRADE FOUR

### Making a Difference



*Math Trailblazers* has made such a difference in the mathematical lives of my fourth graders. They are making connections and solving problems at a much higher level. The Daily Practice and Problems help the students reinforce and review previously learned skills. Math computational skills are embedded into the program which makes the learning of these skills much more fun for the students.

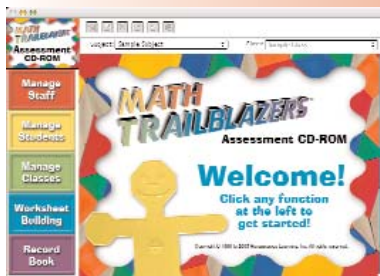
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**New!**

Coming Fall 2005

**Assessment  
CD-ROM  
for Grades 3, 4 & 5**



The *Math Trailblazers* Assessment CD-ROM will complement, not replace, the multiple assessment indicators found in *Math Trailblazers*.

- Assessment can be easily generated for each lesson and unit or for a specific skill set tied to the NCTM's *Principles and Standards for Mathematics*.
- Fully customizable, teachers can choose from a broad selection of problem types, or add their own problems.

The CD-ROM reinforces the concepts developed in *Math Trailblazers* in order for the student to prepare for standardized testing beginning in grades 3, 4 and 5. The customized assessments enrich the child's learning experience and validate the concepts learned and developed in *Math Trailblazers*.

**GRADE FOUR** *continued...*

Also, in fourth grade, the connection to science is unbelievable. The science teacher and myself have collaborated on a number of projects. The scientific process is explored and the students see the connection between math and science. Two of the activities that directly come to mind are the "Better Picker Upper" and the "Downhill Racer". What a wonderful program *Math Trailblazers* has been for my classroom.

*Leslie Hicks  
4th Grade Teacher  
Overdale Elementary  
Louisville, Kentucky*

**Enthusiasm for Math**

As everyone knows it's as easy as pie to teach math to inner-city children. Not to mention the fact that every elementary school teacher is a math whiz who relishes challenges and needs no help at all with the subject....Yeah Right! I was a psychology major in college and got a "C" in statistics. I'm not the one to teach probability to a bunch of 4th graders who don't even know their times tables!

When I first started teaching, I didn't know what I was going to do about math. Just the thought of it made me sweat. This feeling persisted even after I completed the training for *Math Trailblazers*. I felt like I had all this information to give, but the students weren't going to accept it. Not from me, anyway. I was a writer, not a mathematician. But I was wrong.

When we started *Math Trailblazers* with that first "Arm Span vs. Height" lab, my students didn't want to stop! They were asking me all day, "Ms. Dawkins, when are we going to do math?" All of my students were so engaged and excited. They loved the investigations and the unique ways that traditional concepts were taught. I saw an improvement immediately.

Besides producing a newfound enthusiasm for math, *Math Trailblazers* has expanded my students' knowledge of science concepts. This is a big deal in Kentucky where 4th grade is an accountability grade for science. We just finished taking the *Kentucky Core Content Test* for Science, and there were items that my students knew, not from our science lessons, but from our math.

As the year comes to an end, I rejoice in the fact that my students are beginning to love math. My goal when I decided to become an elementary school teacher was to encourage children to be life-long learners. I think that *Math Trailblazers* has my students on the way to becoming just that.

*Jimica C. Dawkins  
4th Grade Teacher  
Hazelwood Elementary  
Louisville, Kentucky*



## Summer Institutes Schedule 2005

### **Math Trailblazers Assessment Workshop**

Seattle, WA June 28-29, 2005  
Registration Deadline: May 20, 2005  
Fee: \$395

Colorado Springs, CO July 7-8, 2005  
Registration Deadline: May 20, 2005  
Fee: \$395

Chicago, IL August 1-2, 2005  
Registration Deadline: June 17, 2005  
Fee: \$395

### **Math Trailblazers 2 Day Summer Institute**

Colorado Springs, CO July 7-8, 2005  
Registration Deadline: May 20, 2005  
Fee: \$295

### **Math Trailblazers Lead Teacher Training**

Colorado Springs, CO July 7, 2005  
Registration Deadline: May 20, 2005  
Fee: \$195

### **Math Trailblazers Special Education Teacher Training**

Colorado Springs, CO July 8, 2005  
Registration Deadline: May 20, 2005  
Fee: \$195

### **Math Trailblazers 4 Day Summer Institute**

Chicago, IL July 25-28, 2005  
Registration Deadline: June 17, 2005  
Fee: \$595

### **Math Trailblazers Administrator Workshop**

Chicago, IL August 3, 2005  
Registration Deadline: June 17, 2005  
Fee: \$295

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# GRADE FIVE

## End of the Year Tournament



It's hard to believe that another end of the school year is right around the corner! And while my first 2 years of *Math Trailblazers* were focused on completing as much curriculum possible, my third year gives me gives me time to reflect on ways to close out this year. One activity that I have planned is a tournament of the multiplication triangles. Throughout the year students kept each group of color-coded triangles in a baggie (of course I have a few extra copies for anyone who has lost theirs in that big black hole they call a desk!). The class will have a week of "training" and practice using all of the triangles.

The tournament will begin by partners timing each other on which facts they know in 3 seconds (students will use timers so that the cry "that wasn't 3 seconds!" will be greatly reduced). At the end of the first round, the students will be placed into brackets determined by the number of facts they knew in 3 seconds. Each student will play a game with everyone else in their group. The student who has more "know and can answer quickly" problems will receive 1 point.

*Carmen McDermott  
5th Grade Teacher  
Prairie Hills Elementary  
Academy 20 School District  
Colorado Springs, Colorado*

## No Problem Too Great

Fifth grade provides unique opportunities for *Math Trailblazers* toward the end of our Louisville, Kentucky school year. As we have just completed our statewide accountability tests (including mathematics for third and fifth graders) we have had an opportunity to "take stock" of our mathematics instruction for the year. We, of course, cheered when our students produced brilliant answers and groaned when they totally missed a concept but we now have an exciting four weeks ahead!

The remainder of the year allows us to make that last big push—to send students on to middle school with the knowledge that they really ARE mathematicians and that no problem is too great to be solved. *Math Trailblazers* has allowed us to deepen our students' mathematical understanding and boost their confidence by allowing them to discover multiple ways to approach problems of all types. Now we can go back and pull out those lessons that students really loved and let them pursue their ideas for extended periods of time. The Chinese Abacus is a perfect example! My students wanted to spend a whole week on that optional lesson but because of time constraints, we had to move on. Now we can go back and really dig!

Our lower grades teachers are using this time to introduce their students to concepts that are emphasized at the next grade up. For instance, second grade students will work on math concepts that have been identified by our third grade teachers as fundamental for mathematical success in third grade. We believe that this will

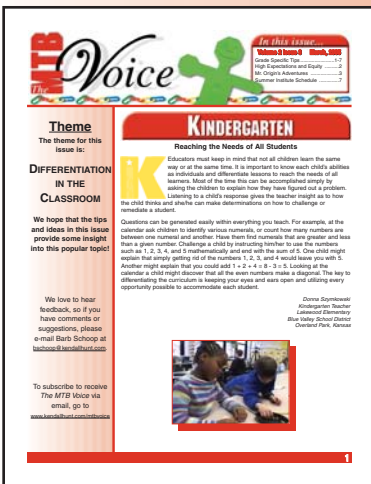
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# GRADE FIVE

## Want to Share Your Ideas?

Then volunteer to write an article or submit tips for **The MTB Voice!**



accomplish two things. One, it will continue the rigorous mathematical instruction that *Math Trailblazers* facilitates at all grade levels and two, it will give those children a glance ahead. Many of our younger students have gone all year not fully realizing that they were learning math because they were having so much fun! We hope to use this last few weeks to continue emphasizing the satisfaction that comes from mathematical discovery!

Ronah Bogert  
Math/Science Resource Teacher  
Cane Run Elementary School  
Louisville, Kentucky

### We Love It!

“No way!” That was my first reaction when we began teaching *Math Trailblazers*. It all seemed overwhelming to even consider teaching. Now I realize that was a silly reaction. The *Math Trailblazers* curriculum has worked wonderfully for my fifth graders. It does a wonderful job teaching students to look more in-depth at their math problems. They are actually THINKING to solve problems, not just doing rote memorization.

With our Kentucky standards and our Core Content Test, students need to know WHY they are doing certain steps. They have to be able to think through problems, not just solve facts. *Math Trailblazers* has enabled them to see that there are different ways to solve problems and it teaches them the steps to solving a problem. My students have discovered so many connections and revelations while solving problems. They not only impressed me, but also themselves. It gives me such a great feeling seeing them realize that they solved a problem that they thought they could not do.

*Math Trailblazers* has definitely improved my teaching skills in math. Math has always been my favorite subject and sometimes it was hard for me to be able to teach the lower students in math. The program does a wonderful job teaching so many strategies that my lower kids are very successful. I am more confident in teaching them now thanks to *Math Trailblazers*.

My fifth graders respond well to the curriculum. They enjoy the hands-on manipulatives that we use throughout the text. Most of my students start out very apprehensive with their math skills. I have seen *Math Trailblazers* give them the confidence they need to succeed. I have even asked my students how they feel about *Math Trailblazers*. Their response is the same as mine, “We love it!”

Beth Johnson  
5th Grade Teacher  
Overdale Elementary  
Louisville, Kentucky

The next issue will kick off the new 05-06 school year and we are looking for volunteers to submit ideas and write articles.

If you would be interested in sharing anything for the next issue or for future issues, please email:

**Barb Schoop at**  
**bschoop@kendallhunt.com**

or

submit any stories, quotes  
or tips at:

[www.kendallhunt.com/mtbvoicesubmit](http://www.kendallhunt.com/mtbvoicesubmit)