Volume 13, Issue 3—June 2004

Connections

AMTE Association of Mathematics Teacher Educators

What Works: Supporting Mathematics Teacher Educators

Karen Karp, University of Louisville
AMTE President

Inside this issue:

Central to these conversations are the voices of lone faculty who need support and must look outside their institutions for a network of colleagues having similar interests.

As we explore ways that the AMTE organization can support members, we note many current and proposed initiatives that focus on increasing teaching effectiveness. AMTE members value quality teaching and have a passion for mathematics. Yet, many members are isolated and find that they are the only mathematics teacher educator in a mathematics department, or the only mathematics teacher educator in a School of Education. In either case opportunities are often limited for sharing the following:

- new research-based pedagogical strategies
- innovative approaches to teaching mathematics content
- meaningful assessments
- novel field experience opportunities or assignments
- methods of integrating technology
- ways to offer course content through virtual environments, and
- inventive "face-to-face" courses.

Discussions at the AMTE conference, the NCTM conference and in AMTE Board meetings are instrumental in helping us begin to provide teaching resources to members. Central to these conversations are the voices of lone faculty who need support and must look outside their institutions for a network of colleagues having similar interests. The following initiatives represent current efforts in seeking ways to support members in the area of teaching.

Essential Readings

Last year **Judith Jacobs** spearheaded an Essential Readings Task Force to examine critical readings in mathematics teacher education. A group comprised of Judith, **Joanne Rossi Becker**, **Marilyn Strutchens** and **Steve Willoughby** pored over recent books, journal articles and reports in the field. After careful scrutiny they identified several key readings to recommend to students in classes as well as other interested parties, such as school administrators and policy makers. Not meant to be comprehensive, this list highlights key pieces with which all educators should be familiar. These resources also should be on the shelves of AMTE members. To see the Essential Readings list with accompanying annotations visit the AMTE web site at www.amte.net.

In addition, there is a valuable web site that guides readers to teaching materials that are useful when providing professional development for teachers. It is supported by Horizon Research, the National Science Foundation and the Eisenhower National Clearinghouse, and is called the *Teacher Education Materials Project: A Database for K-12 Mathematics and Science Professional Development Providers* (**TE-MAT**). At www.te-mat.org readers will find a searchable database that includes reviews of materials to use with teachers. Importantly, TE-MAT developers provide a conceptual framework for their recommendations that includes a context for selecting, adapting, and implementing the resources suggested.

Task Force on Teaching Resources

In response to the success of the Essential Readings Task Force, the Task Force on Teaching Resources is poised to explore how a variety of resources can be used in mathematics methods and content courses. Co-Chaired by **Susan Friel** and **Peg Smith**, their first effort will address the use of case

(Continued on page 5)

AMTE Business

Awards Committee

The AMTE Board has established and appointed a new committee called the Awards Committee. The committee is charged with creating a mechanism for AMTE members to receive recognition for outstanding teaching, research or service in mathematics teacher education. The committee will begin its work by creating a process for the nomination and selection of award recipients. A call for nominations will appear in the not too distant future.

Special Strand for Mathematics Teacher Educators at the Baltimore NCTM Regional Meeting

At the NCTM Regional in Baltimore, MD on October 14-16, 2004, a special strand of sessions has been arranged by AMTE. These sessions address issues in teacher preparation and will be of interest to AMTE members. In addition, several AMTE members are presenting sessions in this strand. Thanks to Tom Rowan for all of his work that made it possible to have 16 sessions highlighted in a special AMTE Strand. We hope to see many of you at this meeting.

AMTE Connections Editor Sought

AMTE is now seeking candidates to become editor of *AMTE Connections*. This new position will officially begin as of January 2005 but the new appointee will aid in the October 2004 issue. Duties of the newsletter editor include management of content, production of the newsletter, and mailing. The editor is also responsible for attending Board meetings and participating in the ongoing discussions of the AMTE Board. Contact Sid Rachlin, president-elect, if you would like to be considered for this position.

2005 AMTE Annual Conference: On-line Hotel Reservations

Procedure for on-line hotel reservations:

1. Go to https://www.marriott.com/reservations/
2. In the "By State" column, click on Texas.
3. In the list of cities, find
   Dallas: Dallas Marriott Las Colinas.
4. Enter your desired check-in and check-out dates, and the number of guests attending.
5. In the box entitled Group Code, enter SUSSUSA.
6. You will then proceed to checkout.

Remember, reservations must be made by January 5th, 2005.

The Association of Mathematics Teacher Educators (AMTE)
Ninth Annual Conference

Dallas, TX
January 27 - 29, 2005

The Ninth Annual Conference of the Association of Mathematics Teacher Educators (AMTE) will be held in Dallas, Texas, from Friday, January 28, through Saturday, January 29, 2005. Conference activities will begin with a Pre-conference Symposium and Dinner on Thursday evening, January 27, 2005.

REGISTRATION INFORMATION

The conference registration fee includes admission to all sessions and the Browsing Room. In addition, a large portion of the fee includes continental breakfast, lunch, dinner, and afternoon snack on Friday and continental breakfast and lunch on Saturday. With your conference registration, you can renew your membership in AMTE by paying the $45 dues ($22.50 for students). The table found on the Conference Registration Form details the categories of registration. Notice that registration costs vary by postmark date, **total registration is limited to 400 participants** and there will be **no on-site registration available**, so we encourage you to register early.

PRE-CONFERENCE SYMPOSIUM and DINNER

The AMTE Pre-conference Symposium and Dinner will be held on Thursday, January 27, 2005 from 5:30 – 8:30 p.m. A separate registration fee of $48 will be charged and includes dinner. Please note that on-site registration is not available for the Pre-Conference Symposium; please make sure to register in advance for the Pre-Conference Symposium.

HOTEL RESERVATION INFORMATION

To reserve your room for the conference, call the phone number listed below or make your reservations online via the AMTE website. Be sure to mention the "Association of Mathematics Teacher Educators" conference when you call. The reservation deadline for the hotel is Wednesday, January 5, 2005.

Dallas Marriott Las Colinas Hotel
223 West Las Colinas Blvd
Irving, TX 75039

TEL: 800-264-1178 (Reservations)
Single or Double Occupancy: **$119 per night**
Reservations must be made by **January 5, 2005**.
Reservations made after that date will be accepted on a space-available basis at the hotel's prevailing rate.

THERE

WILL BE

NO ONSITE

REGISTRATION

AVAILABLE!

AMTE Ninth Annual Conference
Call for Proposals
Deadline Extended

THE DEADLINE FOR PROPOSALS HAS BEEN EXTENDED TO JUNE 15!

This year proposals to present will be submitted online at www.amte.net.

When completing the form you will be asked to submit the following for each proposed session:

Presenter Information: Provide information for the session contact person and all presenters (name, affiliation and position, mailing address, phone numbers, fax number, and e-mail address.)

Session Information: Indicate strand, level of teacher education addressed, equipment and technology needs, and type of proposed format (Thematic Presentation (60 minutes), Symposium or Working Group (60 or 90 minutes), Mini-Sessions (15 minutes), or Individual Session (30 minutes)). Detailed descriptions of the four formats are available on the call for proposals at www.amte.net.

Session Description: Provide a descriptive title, a list of the presenters along with role (e.g., speaker, moderator, discussant, or a combination of the above), and a 30-50 word description of the session to be used in the program.

Abstract: Provide a one-page abstract of your proposed session. The abstract should describe background information on the proposed topic, evidence of its educational significance, how the session will be organized and how it will promote participant interaction (question-oriented, short presentations and discussion, position statements), and the desired outcomes of the session. Include a rationale for the type of format selected. Be sure to address the implications of the session for teacher education.

Limits on Participation: Each individual may serve as lead speaker for no more than one session and can appear no more than twice on the program. The lead speaker/contact must personally certify that all listed presenters have confirmed their willingness to participate in the session. ALL presenters (including speakers, moderators, and discussants) must be registered for the conference.

Questions: If you have questions regarding proposal topic, format, or submission, contact Sid Rachlin, AMTE Program Chair, 404 Silver Creek Trail, Chapel Hill, NC 27514 (Telephone: 919-419-1852 or 919-843-4119; Email: rachlins@northcarolina.edu).

ALSO: The AMTE 2005 Program Committee is seeking your input regarding any "how-to" technology workshops you would like to have provided at the annual conference. Send your suggestions to sid@rachlin.org. As the subject of your email, please use "AMTE Workshop Request" exactly as quoted.

What Works *(Continued from page 1)*

studies in mathematics teacher education. Assisted by task force members **Lynn Breyfogle**, **Amy Roth McDuffie,** and **Kathy Morris** the group will investigate how case-based learning can be infused in classes for future mathematics teachers. The case studies method is widely used in such fields as business and medicine and has been effective in getting students involved in critical issues and problem solving. Via web site entries and a future monograph the Task Force on Teaching Resources will explore how to choose exemplary cases that organize, understand and explain experiences and problems related to mathematics education. The Task Force will then focus on how to use these cases as vehicles for analyzing common misunderstandings, learning key pieces of the curriculum, and applying or integrating a broad array of concepts. This will be realized through the use of "stories of practice" that describe how a high quality case was used in a mathematics content or methods course.

Syllabus Study

At the 2004 AMTE Conference in San Diego, participants in the "Syllabus Exchange" session discussed critical features of elementary, middle grades, and secondary methods course syllabi. Emerging from this dialogue, AMTE members **Mark Taylor**, **Sheryl Nussbaum** and **Bob Ronau** decided to study methods courses using syllabi as the primary data source. The questions that they are asking include:

1) What are the common elements of mathematics methods courses?
2) What elements might encourage the development of leadership skills?
3) What elements might lead to an increased capacity and/or inclination to collaborate?
4) What elements contribute to a commitment to continual professional development?
5) How might these elements vary among methods courses for different grade levels?

This study group requested that AMTE members send an electronic copy of mathematics methods course syllabi to be included in their study (if you would like to send yours please do so to pmark@utk.edu). Your anonymity will be preserved as the study group will report characteristics of the collective body of syllabi. Currently they are in receipt of approximately 80 syllabi, which they believe may be the largest repository of mathematics methods courses syllabi ever assembled. The team hopes to share the analysis of these data in an AMTE discussion session next January in Dallas.

Monographs

Within the next few months a monograph entitled *The Work of Mathematics Teacher Educators: Exchanging Ideas for Effective Practice*, edited by **Tad Watanabe** and **Denisse Thompson**, will be sent to all members. Introduced with an anchor chapter by AMTE member **Glenda Lappan** and Kelly Rivette on "Mathematics Teacher Education: At a Crossroad," the monograph explores the mathematics education profession from several angles. This compilation of outstanding chapters dealing with topics such as connecting the mathematics that teachers are learning with the mathematics they will teach, using experiments in a calculus course for middle school teachers, making conjectures within a dynamic geometry environment, incorporating interviews to assess teachers' content knowledge, and developing sustained collaboration models is sure to become a key resource for improving teaching. AMTE members **James Tarr**, **Ira Papick**, **David Coffey**, **Susann Mathews**, **Jose Contreras**, **Janet Sharp**, **Laura Van Zoest**, **Beatriz D'Ambrosio**, **Barbara O'Donnell**, **Ann Taylor**, **Patricia Moyer**, **Amy Roth McDuffie**, and **Roberta Schorr** are featured as authors in this first AMTE sponsored monograph.

During its most recent meeting, the AMTE Board asked **Denisse Thompson** to serve as a monograph series editor for the next three AMTE monographs. The Board hopes that these monographs will become outlets for the scholarship of AMTE members and resources that will help describe "what works." Currently the AMTE Board, in collaboration with Denisse, is looking at the possibility of another monograph on the work of mathematics teacher educators and a second on using case studies in mathematics education courses. If you have other ideas for possible monograph themes please contact Denisse at Thompson@tempest.coedu.usf.edu with your thoughts.

The AMTE leadership consistently strives to support its members in their teaching, scholarship and service to the profession. We anticipate that these initiatives will provide information and research on practices that will enhance the teaching of future teachers of mathematics. ■

The AMTE leadership consistently strives to support its members in their teaching, scholarship and service to the profession.

THE EXCHANGE: Target!

Developing the Commutative Property of Addition

David Feikes, Jeff Gregg, and Keith Schwingendorf
Purdue University North Central

We use Target in our first of three, 3-credit-hour mathematical content courses for elementary teachers. Topics covered in the course are: problem solving, numerical reasoning including self-generated and conventional algorithms, whole and fractional number systems, and elementary number theory. This activity fits nicely in the properties section of the chapter on whole numbers.

In elementary school Target is a common mental math activity. At this level the purpose of the activity is to practice computation where children have opportunities to provide a variety of solutions. For preservice elementary teachers Target serves a dual purpose. First, it is intended to help the preservice teachers understand how children think about the commutative property and, second, to help them construct the notion that the commutative property is a concept and cannot simply be told to children.

To illustrate how children think about the commutative property of addition, do "Target" with your college class. In the activity, students and children are to give two numbers that give the target number using the specified operation.

Directions:

- Tell your class you are going to do an activity that can be done with children.
- Write the target number on the board. (I would suggest 10.)
- Tell them they can only use addition and only two numbers that give the target number.
- Tell your class to solve the problem like first or second graders.
- Record their solutions on the board or overhead.
- Record incorrect solutions as well. Tell students they are also responsible for checking other students' solutions. (This is important with children.)
- If one student does give a reversed pair (e.g., "7 + 3" and "3 + 7"), try to have a class discussion about whether it is the same or not. If the class agrees to reverse the numbers, which is rare, this leads into the discussion below.
- Continue until they have given all their solutions.

Discussion:

Most groups of adults do not give the reversed pairs of numbers such as 7 + 3 and 3 + 7 because, from their perspective, they are the same. Invariably, you will get the following pairs of numbers: 5,5; 6,4; 7,3; 8,2; 9,1; and 10,0. However, first and second graders never stop here, unless they have been directly told to do so. They normally go on to give the following pairs: 4,6; 3,7; 2,8; 1,9; and 0,10. Ask your students, "Why don't children stop?" The reason is that addition is a counting activity for young children (Fuson, 2003). So the problems 7 + 3 and 3 + 7 are extremely different for children if they are counting on. For 7 + 3, the child might say, "7 … 8, 9, 10," holding up a finger for each of 8, 9, and 10. For 3 + 7, the child might say, "3 … 4, 5, 6, 7, 8, 9, 10," holding up a finger for each of 4 through 10. For young children addition is not commutative. In this example, 7 + 3 and 3 + 7 are two different problems for children because they solve them differently. They do not see beforehand that the answers will be the same. The commutative property is a concept and children will not be able to make sense of it until they are ready.

However, as early as second grade, some children do figure out that 4 + 3 gives the same sum as 3 + 4. From an adult perspective, it is tempting to say that

The Exchange is a new feature of AMTE Connections dedicated to sharing activities from courses for preservice teachers.

The Exchange is a new feature of *AMTE Connections* dedicated to sharing activities from courses for preservice teachers. If you are interested in sharing an activity from a mathematics content or methods course, please send a copy of your idea to the AMTE Connections editor at pmark@utk.edu.

(continued from previous page)

such children understand the commutative property of addition. We expect that they will be able to make sense of this formal statement of the property (and wonder why such a big deal is being made of it) when it is presented to them in an algebra class. However, closer examination of children's thinking about "commutativity" suggests that although they may view the equality of certain "turn-arounds" (e.g., 3 + 4, 4 + 3) as a fact, many are not certain that this would hold for any pair of numbers. For example, asked to find the sum 7 + 15, the same children who know that 3 + 4 = 4 + 3 will count on from 7 rather than reason that 7 + 15 = 15 + 7 and then count on from 15. Further, children's efforts to investigate the equality of "turn-arounds" for any pair of numbers reveal much about their developing understandings of addition. Some students check many pairs of numbers, often trying numbers larger than they usually work with. For these students, addition is a procedure applied to two numbers to get a result. Other students may use physical materials to represent the addition of two quantities. Interestingly, the use of physical materials can promote the construction of a more abstract argument because it enables students to make generalizations about how the addends and the sum are related to each other under the operation of addition. Still other students may explore whether or not the notion of "turn-arounds" holds for subtraction. This can lead to ideas about negative numbers (Schifter, 1997).

The important point here is that children do develop intuitive notions about commutativity, but they do not spontaneously construct the concept in full-blown richness of detail. Children need a multitude of experiences with adding numbers before they intuit the commutative property of addition let alone name it. Their understanding can be furthered through activities that ask them to explore ideas related to commutativity and, in doing so, generate hypotheses, attempt generalizations, and construct justifications. It is this type of mathematical activity that will more fully prepare them for their later study of algebra.

Source: This activity and the discussion are from the Connecting Mathematics for Elementary Teachers (CMET) project. The goal of the project is to connect prospective elementary teachers' learning of mathematics with how children understand and learn mathematics. CMET has developed supplementary materials for mathematical content courses for elementary teachers. The materials emphasize mathematics from children's perspectives and directly relate this to the mathematics the preservice teachers are learning and will eventually be teaching children. The CMET project is funded by the National Science Foundation, grant DUE 0341217. Opinions expressed are those of the authors and not necessarily those of the National Science Foundation.

References

Fuson, K. (2003). Developing mathematical power in whole number operations. In J. Kilpatrick, G. Martin, & D. Schifter (Eds.), *A Research Companion to the Principles and Standards for School Mathematics*. 68-113. Reston, VA: NCTM.

Schifter, D. (1997, March). *Developing Operation Sense as a Foundation for Algebra.* Paper presented at the annual meeting of the American Educational Research Association, Chicago.

■

Their understanding can be furthered through activities that ask them to explore ideas related to commutativity and, in doing so, generate hypotheses, attempt generalizations, and construct justifications.

THEORY & PRACTICE:
Preparing Teachers to Integrate Mathematics and Science

P. Mark Taylor, University of Tennessee

It has been more than eleven decades since the National Education Association appointed the "Committee of Ten" to make recommendations for the improvement of education in America. Among the more notable recommendations made by the committee was the suggestion that the teaching of the subjects should not be unnaturally separated. This call for integration of subjects has largely been ignored. Though faced with the challenge of the momentum of history, some teacher educators are attempting to making inroads. A common theme among the responses to the current Theory & Practice question is that of engaging the preservice teachers in an inquiry-based activity that requires both science and mathematics.

Theory & Practice Question: How do you prepare teachers to make connections between mathematics and science? To what extent is this embedded in your courses for preservice teachers?

Sandi Cooper, Mathematics Education, Texas Tech University

During a recent event where a university astronomer was conducting viewings of galaxies for local groups, a young boy raised his hand when time was allowed for questions. Very interested in what he was learning, he asked the astronomer, "If I want to become an astronomer, what do I need to do?" Much to the young boy's surprise, the astronomer responded, "Take all the math that you can." So, when do we really think about the connections between math and science? How do we prepare young children to think of these connections, before it's too late to consider various professions?

In my role as a mathematics teacher educator, I have worked closely with a science educator to create innovative ways to prepare teachers in elementary and middle level methods courses to integrate math and science. Although I teach a math methods course, there are times when I am able to coordinate activities with the instructor of the science methods course, so that we can maximize our efforts for integration. In addition, with a newly established program in our middle level math and science education degree, we are currently creating an integrated math and science methods course.

Although I teach a math methods course, there are times when I am able to coordinate activities with the instructor of the science methods course, so that we can maximize our efforts for integration.

Although both NCTM and NSTA support integrated math and science instruction, math and science are not usually taught in an integrated way in schools. Teacher education students in my methods course are involved in activities that allow them to understand the value of the connections between math and science, but difficult for them to experience actual classroom applications. However, we can encourage teacher education students to implement integrated instruction, by allowing them to experience this kind of learning for themselves.

There are two approaches that I have tried in my methods courses to allow students to explore learning through integrated instruction. One approach is to select a particular math concept or science topic. For example, for the science topic of Earth science, measurement, measurement conversions, charts and graphs, prediction and probability were integrated into information about the earth's interior, types of forces, locating and measuring earthquakes, and plate tectonics. When studying the math concepts of tessellations and fractals, we made connections to geometric patterns in nature (and even Fibonacci numbers in nature) and genetics. The other approach I have used is to involve students in inquiry-based investigations. One of these investigations is for students to engage in the process of creating a successful spinning top. Given various materials, such as paper plates, cups, pencils, paper clips, etc., students are to create a top that successfully spins. Students apply math concepts including finding diameter, circumference, measuring length of the spindle, averaging spin times, making graphs to represent data, finding ratios and they begin thinking about physics concepts such as angular velocity, conservation of angular momentum, center of mass, and torque.

By allowing students to experience integrated instruction themselves, they have the opportunity to examine how math and science concepts can be connected and how this can be implemented into instruction. Although this is not the entire focus of my math methods course, I have attempted to maintain a good

(Continued on page 9)

(Continued from page 8)
balance of activities, so that students can build a meaningful understanding of how integrating math and science can be beneficial.

Kristen Rearden, Science Education, University of Tennessee

As students progress in their education from preschool to college, the separation of content areas becomes more and more pronounced. While early education often focuses on thematic-based learning, such as the design of multiple learning activities based on a single literature book or author, each content area progressively gains its own slot in a student's course schedule. From then on, it can be difficult for students to see connections between and among the subject areas as the content is taught by different teachers, has no overt associations to any other subject, or both.

It comes as little surprise, then, to see preservice teachers struggle initially with the idea of connecting subjects during instruction. As an elementary (K-8) science methods instructor, my rationale for exposing preservice teachers to methods of integrating science with other subject areas, particularly mathematics, is two-fold. First, there is a heavy emphasis on reading and mathematics at the K-5 level. Much of the time devoted to instruction in the early grades is for those two subjects. Science and social studies are typically taught in an alternating fashion with less emphasis. Therefore, the process of integrating science and mathematics gives teachers a method for "making time" for science, since it becomes a part of the instruction they were already doing rather than an additional, disparate subject. Secondly, science and math are naturally connected in many ways, such as with quantitative data issues. Data that is not interpreted is meaningless, and the ability to make those interpretations is grounded in a scientist's use of the tools of mathematics. Similarly, predictions based on mathematical patterns assist scientists with gaining a broader understanding of many phenomena. Patterns abound in nature, and can be viewed from both a scientific and mathematical perspective.

As an example of an inquiry-based class exercise that focuses on math and science, the preservice teachers are challenged with the question, "How can you alter the period of a pendulum?" In order to answer this, they must design, implement, and interpret the data they obtain in the course of their investigation. Measurements of pendulum mass, string length, and time are needed, as are averages of those readings. Predictions of time changes based on differences in mass and length are made and investigated. In the end, the "scientific formula" can be shown and discussed to identify the string length as the key variable, but until then, the preservice teachers must rely on their own data and data interpretation to determine the factors that affect the pendulum. Additionally, other mathematics concepts are used during class investigations throughout the semester as appropriate. For example, the preservice teachers need to be able to apply the concepts of ratio and proportion during the study of body structure and composition and for the comparison of sizes and distances of planets.

Instructional methods for integrating the two subject areas are also discussed. Logistical constraints can prevent two teachers from working with the same group of students and addressing their two subject areas; one method of overcoming this constraint is to have the teachers synchronize their instruction such that topics introduced during science class can be

(Continued on page 10)

Patterns abound in nature, and can be viewed from both a scientific and a mathematical perspective.

THEORY & PRACTICE question for the next issue of *AMTE Connections*:

Modeling Appropriate Mathematics Instruction

In what ways are you able to model appropriate mathematics instruction in your mathematics content courses for preservice teachers? Are there structures in your institution and/or department that encourage this?

AMTE members are urged to respond to this question. Responses will be summarized and/or quoted. You may submit your response to pmark@utk.edu. Responses submitted by September 1 will be considered for inclusion.

Integrating Mathematics and Science
(Continued from page 9)

the foundation for a concept introduced in math class and vice versa. For example, data obtained from plants grown under various conditions during science class can be used when addressing statistical measures in math class. Similarly, while working with powers of ten in math class, students can apply that knowledge to conceptualizing planetary distances in science class. While this requires that at least one of the teachers gain familiarity with the curriculum of another subject area, it provides a means for overcoming a potential barrier for integrating subjects when those subjects are taught in a departmentalized fashion.

There are many examples throughout the semester that expose the preservice teachers to the reliance of scientists on mathematical understandings. With overt references to the instances where the integration of math and science is natural as well as the discussion of specific methods for implementing integrated instruction, I hope to expose the preservice teachers to the potential of integrating the two subjects whenever it will help to reinforce either discipline. ■

The AMTE Nominations Committee is seeking nominations for candidates for *Secretary* and for *2 Board Members-at-Large.*

The CITE Journal

The *CITE Journal* is an online, peer-reviewed journal, established and jointly sponsored by five professional associations (AMTE, AETS, NCSS-CUFA, CEE, and SITE). This is the only joint venture of this kind in the field of teacher education. Each professional association has sole responsibility for editorial review of articles in its discipline:

- Technology and Science Education (AETS)
- Technology and Mathematics Education (AMTE)
- Technology and Social Studies Education (NCSS-CUFA)
- Technology and English Education (CEE)
- Educational Technology: General (SITE)

Visit **http://www.citejournal.org/** for more information.

Nominations for Upcoming Elections

The AMTE Nominations Committee is seeking nominations for candidates for ***Secretary*** and for ***two Board Members-at-Large .***

Please review the job descriptions on the following page. To nominate a candidate, send the individual's name, professional affiliation and position, email address, and 1-3 sentences describing his/her qualifications for the position to the chair of the nominations committee (Diana Lambdin, lambdin@indiana.edu). Be sure to indicate whether the nomination is for secretary or for board member at large. Both nominations of colleagues and self-nominations are permitted. (Before listing any candidate on the election slate, the Nominations Committee will verify his/her willingness to serve.)

After reviewing all nominations submitted by the July 31 deadline, the Nominations Committee will formulate an election slate, taking into consideration both professional qualifications and diversity (e.g., years of experience; racial or ethnic background; professional affiliation -- from Mathematics Department or College/School of Education or other affiliation; size of institution).

Send nominations to:
Diana Lambdin (lambdin@indiana.edu).
Deadline: July 31, 2004

The members of the nominations committee:

Diana Lambdin, Chair
Indiana University – Bloomington
lambdin@indiana.edu

Kathleen Lynch
Appalachian State University
lynchrk@appstate.edu

Sue Mau
Indiana University-Purdue University, Fort Wayne
maus@ipfw.edu

Joe Merlino
Math Science Partnership of Greater Philadelphia
merlino@lasalle.edu

Sid Rachlin (ex-officio member)
East Carolina University
rachlins@mail.ecu.edu

Job Description: AMTE Secretary

Term: 3-Year Commitment

Duties: The duties of the Secretary include recording and maintaining the organization's records of meetings and the constitution. The secretary is usually the Board Liaison to the Constitution and Bylaws Committee, which reviews the constitution and by-laws, making suggestions and changes as needed. Busiest times for the Secretary are just before and just after the Board meetings, preparing the minutes for review.

Travel: 2 meetings per year

Two AMTE Board Meetings Per Year
AMTE holds two board meetings each year; one is held the day before the AMTE annual conference in January or February, and one is held at the NCTM annual meeting during the NCTM Research Presession or the NCSM meeting, usually on Monday. For each of these meetings, AMTE will pay for one night's hotel accommodations and meals for one day. Other travel expenses are not reimbursed.

Excerpt From the Constitution and Bylaws of the AMTE
Section 5: Secretary
The Secretary shall record and maintain a file of the minutes of official meetings of the Association and its Board of Directors and shall be responsible for the correspondence of the Association.

Job Description: Board Member-at-Large

Term: 3-year or 4-year Commitment
(Note: Two board members will be elected this year. The individual who gets the most votes will serve a 4-year term and the individual with the second-most votes will serve a 3-year term. This arrangement is necessary for this election only, as AMTE transitions to a 3-year term for board members. To be listed on the 2004 ballot, a candidate must be willing to serve either 3 or 4 years, if elected.)

Duties: The major duty of the Member-at-Large is to support and advise the president of AMTE. The Member-at-Large serves as a Board liaison to one or more committees or task forces. The Member-at-Large is responsible for reporting on the progress of his or her assigned committee(s) or task force(s) at Board meetings.

Travel: 2 meetings per year (each year)

Two AMTE Board Meetings
AMTE holds two board meetings each year; one is held the day before the AMTE meeting in January or February, and one is held at the NCTM annual meeting during the NCTM Research Presession or the NCSM meeting. For each of these meetings, AMTE will pay for one night's hotel accommodations and meals for one day. Other travel expenses are not reimbursed.

Excerpts From the Constitution and Bylaws of the AMTE
Section 7: Members-at-Large
The Members-at-Large shall assume those responsibilities determined by the President.

For this time of transition, those elected to the position of Board Member-at-Large must be willing to serve either 3 or 4 years.

AMTE - Dates to Remember

On-line at **amte.net**

Membership/ Renewal Forms

On-line Conference Proposals

Position Papers

Conference Information

Other Opportunities

2004

June 15	***NEW*** Deadline for AMTE Conference Proposals
July 4-11	ICME-10 - Copenhagen, Denmark
October 14-16	NCTM Regional - Baltimore
November 4-6	NCTM Regional - New Orleans
November 11-13	NCTM Regional - Minneapolis

2005

January 5-8	MAA-AMS Joint Meeting - Atlanta
January 27-29	9th Annual AMTE Conference - Dallas
April 4-6	NCSM Annual Conference - Anaheim
April 4-6	NCTM Research Presession - Anaheim
April 6-9	NCTM Annual Conference - Anaheim

Association of Mathematics Teacher Educators
Mark Klespis – AMTE Treasurer
Sam Houston State University
Department of Mathematics & Statistics
PO Box 2206
Huntsville, TX 77341-2206

NON-PROFIT ORG.
U.S. POSTAGE PAID
PERMIT NO. 481
KNOXVILLE, TN

Reminder: The date on the label indicates the month that your membership is due to expire!