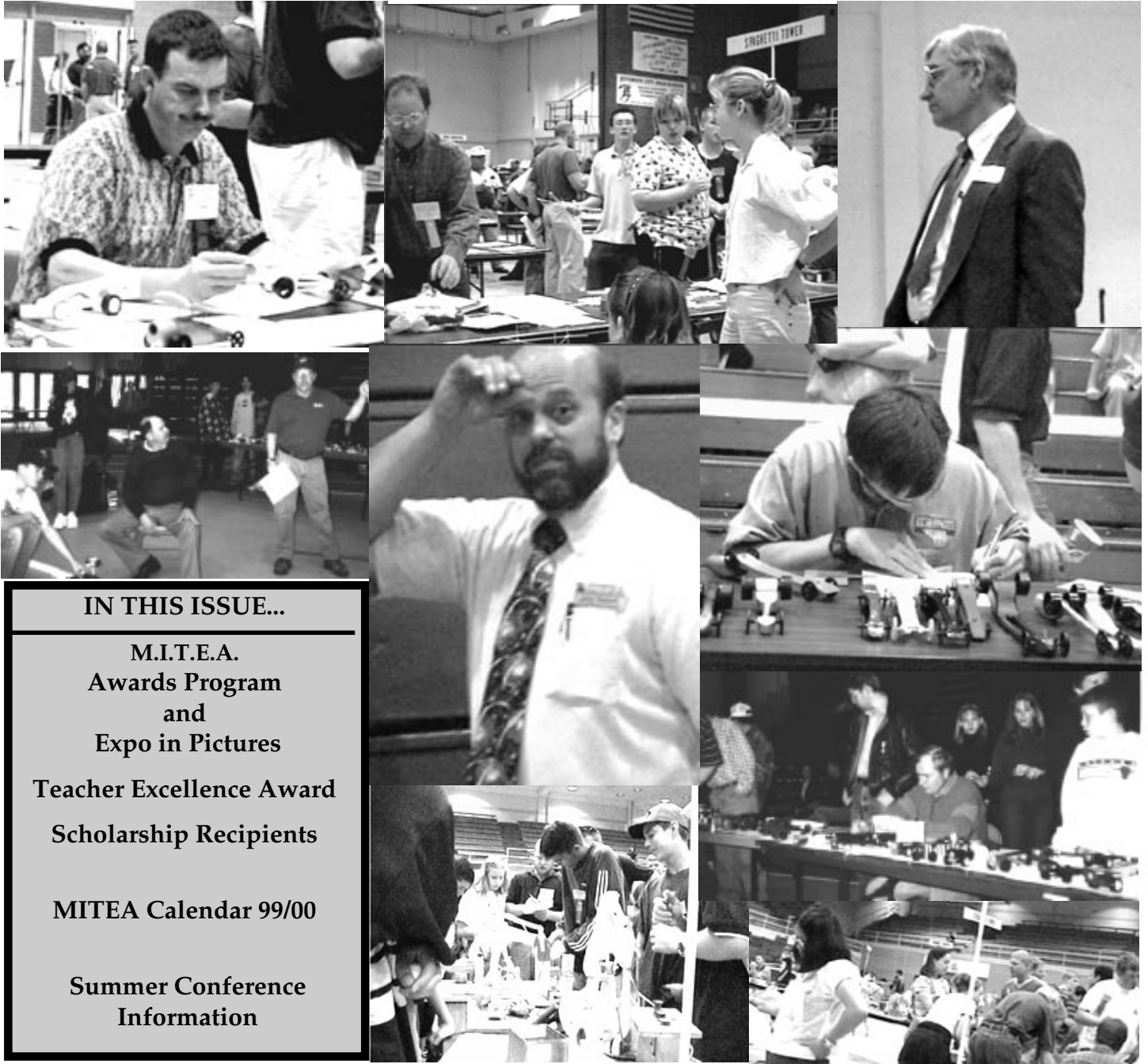




Official publication of the  
Missouri Industrial Technology Education  
Association  
Spring/Summer 1999

# State Contest and Exposition 99



## IN THIS ISSUE...

M.I.T.E.A.  
Awards Program  
and  
Expo in Pictures

Teacher Excellence Award

Scholarship Recipients

MITEA Calendar 99/00

Summer Conference  
Information

# M.I.T.E.A.

Newsletter



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*Newsletter Staff*

Cassville High School's Communications Technology and Advanced Studies in Technology classes are responsible for keyboard entry, page layout, graphic selection and preparation for mailing. As editor of this newsletter and instructor of these classes I would like to thank them for their assistance on this project.

**Fall Issue:**

**MVA Summer Conference 1999**

**An Explosive Issue you shouldn't miss**

**A reminder: Teacher must be members of M.I.T.E.A. for students to participate in the State Awards Program. So join today membership application is on the back of this issue.**

**Have a Great Year!!!!**

**Special Thanks to:**

**Dr. Art Rosser, Dean of Applied Sciences and Technology and the School of Applied Sciences and Technology for their financial assistance with the printing of this newsletter.**

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**Submissions:** This newsletter is published three times a year by the Missouri Industrial Technology Education Association. Articles, photographs, and other newsworthy and/or technical submissions should be sent to Steve McNaught, Editor ( address below). Requests for advertising space or advertising costs should be sent to Attention: Steve McNaught. The Fall Issue deadline is Aug. 15th, the Winter issue deadline is Dec. 15th, and the Summer issue deadline is April 15th.

**Subscriptions:** Subscriptions to the newsletter are included in the M.I.T.E.A. dues. A complimentary copy of the Fall issue is sent to all Missouri Industrial Technology Educators.

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**Newsletter Editor:** Steve McNaught, Cassville High School, Industrial Technology Department, 1501 North Main St. Cassville MO 65625 . or **E-Mail submissions to miteanews@cassville.k12.mo.us**

**President's point of view**

*Steve McNaught*



As I set here at my computer and consider what to say in my last letter as President of M.I.T.E.A. I want to thank all those who have been active and involved in the organization, from the members of the Executive Board to the numerous Awards Program and M.V.A. Committee members, presenters at the workshops, and workers who have been involved with organizing,

coordinating, and judging at the district and state contest. I would also like to thank the Industrial Technology teachers who have sponsored their students at the T.S.A. and M.I.T.E.A. State Contest. I know the additional time it requires and without compensation sometimes its tough to convince ourselves its worth the effort.

In my case I have been taking students to the contests for the past few years and have been coordinator of a couple of the Expo events at district and state events, and for the first time I have had a parent call to thank me for taking their son to the State Awards Program. She said it was a rewarding experience for him and that he enjoyed everything from pit stops we made at the Go Cart tracks on the way to Jefferson City to buying them all dinner

the night before the Contest. I don't know if you can classify that as making a real impression on him but I was rewarding the six students for all their hard work over the past year, And I enjoyed the trip and the group of students that I took as well.

I would hope that every I.T.E. Teacher would reward their hardest working students with a little outing to the State Awards Program each spring. They can participate in Expo events without winning at the district contest. The way it works at Cassville; throughout the year we do the Problem-Solving Expo events as activities in class and the students who score the highest in those events from each class compete with the other classes and the top scores go to the Big Show.

I hope each of you will become more involved if for nothing else do it for your students.



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1/8" x 3"	15 pcs. \$19.95	50 pcs. \$59.00
1/4" x 1/4"	25 pcs. \$8.45	100 pcs. \$29.00
1/4" x 3"	10 pcs. \$17.50	50 pcs. \$79.00

# *M.V.A. Summer Conference*

## *July 26th to the 29th 1999*

### **M.I.T.E.A. Division**

#### **Summer Conference Program**

**Creating Futures with Technology Education**

#### **Monday; July 26th**

9:30 A.M. **M.V.A. Board of Directors Meeting;**  
University Plaza

1:00 P.M. **M.I.T.E.A. Presidents' Advisory**  
Committee Meeting;  
Pear Tree Inn Conference Room

2:30 P.M. **M.I.T.E.A. Executive Board Meeting;**  
Pear Tree Inn Conference Room

4:00 to 7:00 P.M. **MVA/M.I.T.E.A. Registration;**  
University Plaza Trade Center

4:00 to 7:00 P.M. **Exhibits Open;**  
University Plaza Trade Center

7:00 P.M. **M.I.T.E.A. Dinner Adventure:**  
Circle the Wagons at the Pear Tree Inn Lobby  
"Dinner location to be released at Departure"

#### **Tuesday; July 27th**

7:00-8:30 A.M. **I.T.E. Grant Awards Program**  
FY99 **Pre-service Meeting;**  
University Plaza Trade Center

8:30-9:30 A.M. **I.T.E. Grant Awards Program**  
FY98 **Post-service Meeting;**  
University Plaza Trade Center

8:00 A.M.-3:00 P.M. **Exhibits Open;**  
University Plaza Trade Center

8:00 A.M.-5:00 P.M. **M.V.A./M.I.T.E.A.**  
**Registration Open;**  
University Plaza Trade Center

9:15-10:15 A.M. **New Professional Reception;**  
University Plaza Convention Center

10:30-12:00 Noon **Opening General Session;**  
University Plaza Convention Center

1:00-2:15 P.M. **M.I.T.E.A. General Business**  
**Meeting and Elections;**  
Steve McNaught presiding;  
University Plaza Trade Center; Lower Level

2:30-4:00 P.M. **I. T. E. Technology Festival**  
(Formally known as the Activity Exchange)  
Mike Wagner; Coordinator  
"All MVA Attendees invited."  
University Plaza Trade Center; Lower Level

6:00-9:00 P.M. **M.I.T.E.A. Recognition Dinner**  
"Willard High School Cafateria"  
(B & J's Smokehouse Barbeque)  
All M.I.T.E.A. Members and Guest invited  
\$6.50 per person Children under 12 free

#### **Wednesday July 28th**

##### **Workshops**

**All M.V.A. Attendees Invited to Attend.**

7:30-8:15 A.M. **M.I.T.E.A. Reception**  
(coffee, donuts, meet and greet)  
Kemper Hall Lobby (S.M.S.U. Campus) hosted by:  
(S.M.S.U. Dept. of Ind. Education & Technology)

8:00-12:00 Noon **M.V.A./M.I.T.E.A. Registration**  
University Plaza Trade Center

8:15-9:00 A.M. **Opening Session:** Awards  
Presentations, Recognition, and Announcements;  
Gary Duncan presiding;(101 Glass Hall; S.M.S.U.)

---

**9:00-9:45 A.M.: Opening Interest Session;**  
Technology Education-Brainstorming for the Year  
2000; Doug Miller D.E.S.E. (Glass Hall Rm 101)

---

**10:00-11:00 A.M.: 1st Breakout Session**  
**Glass Hall & Kemper Hall (S.M.U.S. Campus)**

- I. Photography Goes Digital  
Barry Hannah; Glendale High School,  
Kemper Hall; Rm 100
- II. Teaching Flight Technology in the M & P Lab;  
Using Boomerangs  
Ken Hollingsworth; Carrollton High School &  
Dan Echard; Warrensburg Middle School  
Kemper Hall; Rm 116
- III. The MasterCam and the N.C. Router;  
"Revisited" Roy Wright - Aidex Corporation  
Kemper Hall; Rm 102
- IV. "Show Me" & the Technology for All  
Americans Standards Project;  
Dr. Micheal Wright - C.M.S.U.  
Glass Hall; Rm 346
- V. Why I Need a "Technology Student  
Organization" Doug Miller; D.E.S.E.  
Glass Hall; Rm 101
- VI. Computers and Websites; Questions and  
Answers from Uncle Ed  
Dr. Ed Matthews; S.M.S.U.  
Kemper Hall; Rm 213

---

**11:15-12:15 A.M.: 2nd Breakout Session**  
**Glass Hall & Kemper Hall (S.M.U.S. Campus)**

---

- I. Photography Goes Digital  
Barry Hannah; Glendale High School,  
Kemper Hall; Rm 100
- II. Engineering, Design, and Problem Solving in  
Power & Energy /Materials & Processes "The  
Slot Car" Robert Walker; Hazelwood Jr. High  
Kemper Hall; Rm 116
- III. The Future of Technology Education  
Steve Spangler; Paxton/Patterson  
Glass Hall; Rm 108

IV. "Show Me" & the Technology for All  
Americans Standards Project;  
Dr. Micheal Wright - C.M.S.U.  
Glass Hall; Rm 346

V. Video Production goes Digital  
Paul Thompson - Electronic Video Systems  
Glass Hall; Rm 102

---

**12:15-1:30 P.M.: Lunch: Dining available on  
campus - Campus maps available**

---

**1:30.-2:15 P.M "2nd Interest Session"**  
The Capstone Project and Technology Ed.  
Teacher Recruitment: Doug Miller D.E.S.E.  
Glass Hall; Rm 101

---

**2:30-3:30 P.M. 3rd Breakout Session**

---

- I. Engineering, Design, and Problem Solving in  
Power & Energy /Materials & Processes "The  
Slot Car" Robert Walker; Hazelwood Jr. High  
Kemper Hall; Rm 116
- II. The Future of Technology Education  
Steve Spangler; Paxton/Patterson  
Glass Hall; Rm 108
- III. The MasterCam and the N.C. Router;  
"Revisited" Roy Wright - Aidex Corporation  
Kemper Hall; Rm 102
- IV. Video Production goes Digital.  
Paul Thompson - Electronic Video Systems  
Glass Hall; Rm 102
- V. Giving your Technology Education Program  
an Image Boost; Evaluating your T.E. Program;  
Improving Public Relations; M.S.I.P. and the Carl  
Perkins Act and All those Haunting Questions  
Answered. Doug Miller; D.E.S.E.  
Glass Hall; Rm 101
- VI. Computers and Websites; Questions and  
Answers from Uncle Ed  
Dr. Ed Matthews; S.M.S.U.  
Kemper Hall; Room 213

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3:30 P.M. **House of Delagates meeting**  
University Plaza Convention Center

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4:30 P.M. **M.I.T.E.A. Skins Game:**  
Deer Lake Country Club

---

8:30 P.M. All Division Social "Quality Inn"

---

**Thursday July 29th**

---

**Room 102 Kemper Hall  
"15 Minutes of Fame"  
Show and Tell; Project Idea Exchange;**

---

9:00-9:50 P.M. Session I  
Manufacturing, Construction, Materials and  
Processes

---

10:00-10:50 P.M. Session II Power/Energy/  
Transportation

---

11:00-11:50 P.M. Session III Communications,  
Problem-Solving and Technology Expo Events

---

**"15 Minutes of Fame"  
Show and Tell Idea and Activity Exchange.**  
Open to all Summer Conf. Attendees; It's  
your turn to show off "Your Stuff". Bring in that  
winning Expo entry or Problem Solving Activity  
that kids love to do, or a great projects that the

kids can't wait to try, or a great mass production  
activity that has never gotten old, we want you to  
bring it in and show it off.

If you have revised or made improvements to  
other activities that you think might help others.  
Bring in the project, and tell us its story. We'll  
give you the floor, a captive audience and "15  
Minutes of Fame". We've have had some great  
Ideas and Projects brought in over the last two  
years and if you keep showing up we'll keep  
bringing it back.

We would like to extend an invitation to all  
M.V.A. Attendees to come and participate. No  
Registration Required.

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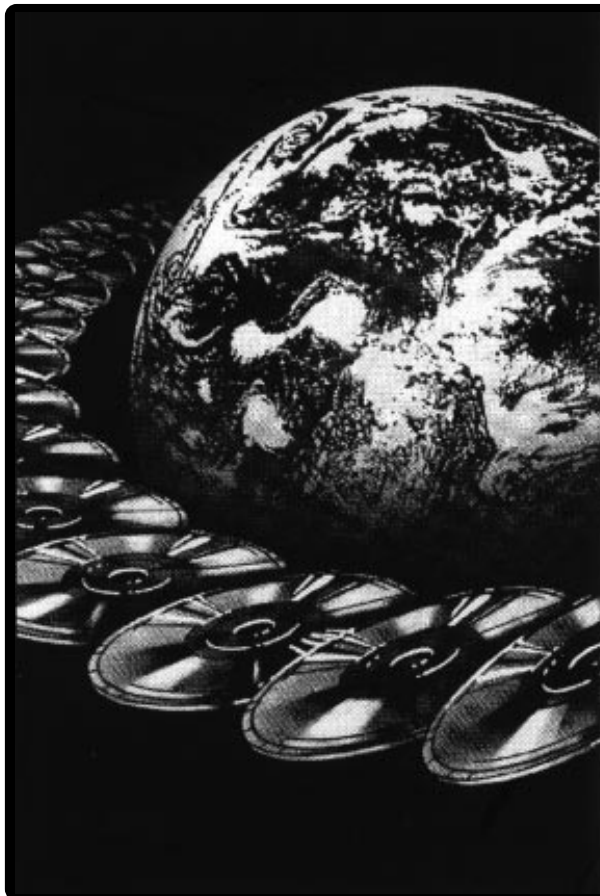
1:00 P.M. M.V.A. Board of Directors meeting:  
University Plaza Convention Center

---

**Summer Conference Concluded  
See you at C.M.S.U. Fall Conference Oct. 23rd**

---

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in determining whether a Challenge becomes  
an Opportunity or a Pitfall.**



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# Top 10 Reasons for attending Summer Conference

Each of us is the product of our experiences. We travel different routes that mold who we are and what we've become. No matter where we have been, I believe each of us have something to contribute to others' lives.

While some of the name may be foreign to you, our language is the same and our backgrounds are similar. We have all traveled highways that should merged down the path to summer conference. I feel we have put together a great M.I.T.E.A. Division program for summer conference this year and our presenters have experiences that you can learn from and help you keep your Industrial Technology Programs ahead in the race for educational success.

In this short conference M.I.T.E.A. could show you a map that could put your Technology Education Program on the road to new heights. I hope you accept the challenge and attend M.V.A. Summer Conference and M.I.T.E.A. Division Activities, it will open new channels of information for your Industrial Technology Program.

## The Top 10 Reasons for attending Summer Conference

10. Find out what's new in the Industrial Technology Education arena.
9. Visit the Trade Show and see all the new "stuff" that's out for I.T.E.
8. See old friends you haven't seen in years.
7. Visit with other I.T.E. teacher and find out what they're doing in there I.T.E. programs
6. Visit the Technology Festival (old Activity Exchange) and find out what's good or bad about the Equipment or Activity Modules people have purchased with grant money.
5. Attend the Idea and Activity Exchange, "Show off your Stuff, and be famous for 15 minutes.
4. Attend the M.I.T.E.A. Recognition Dinner and network with other Teachers.
3. Attend some great workshops and learn some new and exciting things you can use in your classes.
2. Set in on some Informative D.E.S.E. Workshops for Technology Education Teacher and find out what the trends are in Tech. Ed.

# 1. You get to Go To "Bass Pro" ! ! ! ! !

# M.I.T.E.A. Awards Program Committee

## John Petsch

MITEA Award Programs  
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AAA Busch  
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State Contest Coor.  
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## Phyllis Keith

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## Doug Miller

MO TSA Events Coor.  
D.E.S.E.  
P.O.Box 480  
Jefferson City, MO 65102  
573-751-4460  
dmiller1@

Always willing to answer questions and help in any way they can. Don't hesitate to contact them with questions. *Thank You Awards Program Committee*



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# M.I.T.E.A. Workshop Presenters Wanted

To: Industrial Technology Teachers and Curriculum Developers

From: Steve McNaught; Newsletter Editor & M.I.T.E.A. Workshop Program Chairman

Re: Workshop Presenters for 1999/2000 M.I.T.E.A. Conferences

Many teachers come to our Conferences looking for workshops that provide inspirational, motivational, and informational activities to take back to their schools and the Conference Workshops we sponsor, are one of the best place to get new ideas to add to their program. M.I.T.E.A. would like to continue that tradition, and we like to solicit you our members, and other leaders in curriculum development, to become a presenter at the M.I.T.E.A. Fall or Summer Conference Workshops. Let the rest of us see what neat, and interesting things you're doing. This is your opportunity to show us "Your Stuff" and inspire others. If you have a great activity that the kids love to do, or a great piece of curriculum, a great interdisciplinary activity that can't be beat, we want you to bring it in and show it off.

The Industrial Technology Conference Workshops are scheduled once in the Fall and again in the summer. Apply for your spot at one of these conferences today. Presentation will be chosen August and February and participants will be notified shortly after.

Workshop Presenters Registration:

Industrial Technology Workshop Presenter: \_\_\_\_\_ Summer \_\_\_\_\_ Fall \_\_\_\_\_ Both/Either

Name: \_\_\_\_\_

Home Address: \_\_\_\_\_

City: \_\_\_\_\_ St. \_\_\_\_\_ Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_

School Name: \_\_\_\_\_

School Address: \_\_\_\_\_

City: \_\_\_\_\_ St. \_\_\_\_\_ Zip: \_\_\_\_\_

School Phone: \_\_\_\_\_

Topic: (circle one) Manufacturing, Construction, Materials & Processing, Communication, Energy, Power, and Transportation, Curriculum Integrated, Elementary Technology Education or Other.

Title: \_\_\_\_\_

Description:

\_\_\_\_\_

\_\_\_\_\_

Please return A.S.A.P. to: Steve McNaught  
Workshop Program Chairman  
Cassville High School  
1501 N.Main St.  
Cassville Mo 65625

# Call For Technology Festival Participants

To: Industrial Technology Teachers

From: Michael Wagner; Activity Exchange Chair

Re: **I. T. E. Technology Festival** at 1999 MITEA/MVA Summer Conference  
(Formally known as the Activity Exchange)

Many teachers look at the **Technology Festival**, at the MVA Summer Conference, as one of the best place to get ideas to add to their program. Our plan is to continue that tradition by soliciting you, and other leaders in curriculum development, to become a presenter at the M.I.T.E.A.

**Technology Festival**. and let the rest of us see what neat interesting things you are doing. Bring in your Technology Activities, great project that the kids love to do, or great mass production project that has never gotten old and show them off.

The **Technology Festival** is scheduled after the general business meeting on Tuesday in the lower level of the University Plaza Trade Center. Please fill out the reservation form to reserve a space for your display.

We're trying something different at the Technology Festival this Year; were calling it Organized Chaos or Mini Classes, in a controlled enviroment.

A horn will blow and attendances will have 5 minutes to select a presentation to view and listen to. A second Horn will blow and presenters will begin their 15 minute and 5 minute question and answer time. At the end of the 20 minute presentation another horn will sound and attendees will move to their next selected presentation.

## PRESENTER RESERVATION FORM:

Industrial Technology Activity Exchange

Name: \_\_\_\_\_

Home Address: \_\_\_\_\_

City: \_\_\_\_\_ St. \_\_\_ Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_

School Name: \_\_\_\_\_

School Address: \_\_\_\_\_

City: \_\_\_\_\_ St. \_\_\_ Zip: \_\_\_\_\_

School Phone: \_\_\_\_\_

Topic: (circle one) Manufacturing, Construction, Materials & Processing, Communication, Energy, Power, and Transportation, Integrated Curriculum, or Other

Title: \_\_\_\_\_

Description: \_\_\_\_\_

Please return A.S.A.P. to: Michael Wagner  
3512 S Ferguson  
Springfield, MO. 65807

# 1999 M.I.T.E.A. SCHOLARSHIP RECIPIENTS

The Missouri Industrial Technology Association is proud to announce the winners of the 1999 Scholarship Competition. This year's recipients are:

**Jonathan J. Cross**

**Cassville High School- \$1,000**

Jonathan plans to major in Industrial Technology Education. His application indicates that he plans to attend Pittsburg State University. His scholarship was **funded by the Future Technology Teacher Education Scholarship Fund of M.I.T.E.A.**

**James M. Miller**

**Benton High School- \$350**

James will be studying Architectural Engineering. His application indicates that he plans to attend Kansas State University. His scholarship was **funded by the Missouri Farmer's Association.**

**Nicholas E. McKay**

**Benton High School-\$350**

Nicholas wants to major in architecture. His plans are to attend University of Kansas. His scholarship was **funded by AIDEX, Corp. and Liberty Hardwoods.**

**Ronnie L. Williams**

**Winona High School-\$250**

Ronnie wants to major in architecture. His plans are to attend Drury College in Springfield, Missouri. His scholarship was funded by Paxton- The Wood Source.

On behalf of the Missouri Industrial Technology Education Association I wish to congratulate our winners and wish them much success in pursuing their college career choices.

I would like to also thank all who contributed to the scholarship fund. Each of you has contributed to making dreams come true for one of these students. Your dedication and contribution to our future is greatly appreciated.

We would like to thank the Scholarship Contributors listed below. Other moneys for the Future Technology Teacher Education Scholarship Fund comes from the sale of ad space in the M.I.T.E.A. Newsletter. We would also like to thank those who purchase ad space in the newsletter.

Mr. Gary Rockis  
AIDEX, Corp.  
1802 N. Division St.  
Morris, IL 60450

Mr. Ed Armbruster  
Paxton-The Wood Source  
6311 St. John Ave.  
P.O. Box 6714  
Kansas City, MO 64126

Mr. Larry Chambers  
Liberty Hardwoods, Inc.  
P.O. Box 266278  
Kansas City, MO 64126

Ms. Lois Meredith  
Missouri Farmer's Association Foundation  
201 Ray Young Dr.  
Columbia, MO 65201

Joseph Panhorst  
Scholarship Chairman



# D.E.S.E.'s Corner; Technology Education:

by Doug Miller:

- \* MVA Conference Information
- \* Missouri TSA
- \* Preparing for an MSIP
- \* Teacher Recruitment
- \* Building a Positive Image for your TE Program
- \* Thoughts for Consideration
- \* My Supportive Activities as your Supervisor 1998-99
- \* Resources

## M.V.A. Summer Conference

There are a number of exciting things happening for Technology Education in Missouri, and you will want to attend MVA Summer Conference and MITEA Division Activities to learn how to plug into what is happening. You will be informed of new developments for Missouri TE Programs and gain a network of friends and associates who have the same professional goals for students. I challenge you to make it a priority to attend this summer. Make your reservations early. We are anticipating a considerable increase in the number of TE teachers participating this summer, so join the excitement. All MVA/MITEA forms were mailed last month, so if you have any questions don't hesitate to call me at (573) 751-7764.

## MISSOURI TSA INFORMATION

Missouri TSA had a very successful 1998-99 year of events. We started the year with our first annual Fall Leadership Conference in a partnership with Missouri VICA (Vocational Industrial Clubs of America). The following schools participated in the first Leadership Conference: Camdenton High School, Fordland High School, Lockwood High School, North Callaway High School, Parkway South High School, Perryville High School, and Tarkio High School. Thank you, Missouri VICA for such a great partnership.

The Missouri TSA Executive Board and State Officer Team participated in two very successful planning meetings to guide Missouri TSA into the future. The Leadership Team has initiated proceedings for our Articles of Incorporation of

Missouri TSA and has been strongly supported by the Missouri Department of Elementary and Secondary Education (DESE). Missouri TSA will be the latest VSO (Vocational Student Organization) to join the VSO team at DESE. There is new energy and enthusiasm for TSA in Missouri demonstrated by DESE, school administrators, communities and students.

The next great event to take place was the Missouri TSA State Leadership and Career Development Conference in Jefferson City, Missouri, April 9-10, 1999. There were 106 registered participants with nine (9) schools participating in the event. A new state officer team was elected for the 1999-2000 year of events and has already embraced the future with vigor and vitality. Our newly elected Missouri TSA State President, Matt Schilling of Perryville High School said it best, "TSA is helping to make my dreams a reality." In a few years many students will be singing the praises of TSA and Technology Education programs of Missouri. You will want to join in now and be a part of something exciting and right for the future.

Reminder: Complete your Chapter Affiliation forms early in the fall and return to the National office with your national and state dues. There is a priority membership deadline to National TSA by October 29, 1999. There are special rewards for meeting the priority deadline but it is not mandatory. You can locate the form at (<http://www.tsawww.org/www/member/member.htm>). Only those students who have been listed and their dues paid are eligible to compete in the state and national conferences. In addition, voting delegates for the state and national conferences are determined by the number of members affiliated.

If you are interested, please contact me by mailto:dmiller1@mail.dese.state.mo.us. For a description of the events for High School see (<http://www.tsawww.org/www/competition/high.htm>); for a description of the events for Middle School/Junior High School, see (<http://www.tsawww.org/www/competition/middle.htm>). You can order curriculum guides from the National TSA office or from their

website <http://www.tsawww.org/publications/tsapub.htm> .

For a calendar of Missouri TSA activities and other important information, see the enclosed calendar or view our Missouri TSA Webpage at: <http://www.dese.state.mo.us/divvoted/industrialied/TechEd/TSAindex.htm>

### **PREPARING FOR AN MSIP REVIEW**

There is a document that I would like to recommend as a resource for your Technology Education Program safety education evaluation and planning.

You can obtain a copy from ITEA Publications. "Safety System Design for Technology Education", William DeLuca and W. James Haynie. This manual aids classroom teachers in developing and carrying out a safety program in the technology education classroom. The guide uses the system approach: Safety in the classroom is dependent on the interaction of varied elements. The different elements examined include the environment, human factors, tools and equipment, processes, materials, and outside influences. The manual includes sample releases and other forms that teachers can duplicate for classroom use. 96 pages, 1989 #P062 - Members \$5; Nonmembers \$10

### **TEACHER RECRUITMENT**

One of the areas most needing attention by technology educators is recruitment. This topic is somewhat elusive as we have little if any training in our preparation for solid recruitment techniques. Despite the lack of training, several recruitment strategies are offered below that any technology educator can perform.

Students seek opportunities for recognition. It is strongly encouraged that a technology education awards assembly be held near the end of each school year. This assembly should rival the best sport/athletic assembly that your district sponsors. Such a recognition event will attract students to the function and bring recognition to the technology education program field. Corporate sponsorship of the event should be sought.

Successful athletic programs do not happen by chance. Many hours are invested recruiting students and visiting with parents to secure the most promising athletes. Share with your students' parents what a bright future there is in

the technology education career field. Encourage the parents to support their children in taking more technology education courses and inform them how valuable these courses would be.

One of the best, easiest, and most effective methods of recruiting students for your technology education program is to have existing students do the recruiting. Such could be the case with the Technology Student Association (TSA). TSA offers a plethora of opportunities for students to develop leadership and have fun with technology education. Students will promote and recruit for you through word of mouth. To experience first-hand the excitement and contagious enthusiasm of TSA, attend a state or national TSA competition.

Whether you have an official TSA chapter or a loosely organized group of technology education students, there are many ways for those students to recruit for your program:

- \* have students prepare a packet of technology education materials for counselors
- \* have students prepare a public radio announcement for your local cable TV station or radio station promoting technology education.
- \* promote technology education through community service projects
- \* have high school technology students host eighth grade orientation for incoming freshman and their parents
- \* have technology education represented at all science/engineering contest events

(Copied from the ITEA Publication, ROAD MAPS: Perspectives for Excellence in Technology Education Programs, pages 9-10, 1998)

### **BUILDING A POSITIVE IMAGE FOR YOUR PROGRAM**

Technology education competes with a host of school subjects deemed equally important and necessary for success and in the workplace. What is essential to our growth and prominence is promotion of the role, purpose, and value of technology education, and its place in every student's education. Marketing technology education is necessary to keep constituencies informed, garner support for program funding, and strengthen our position in general education.

Selling technology education involves identifying key publics and developing appropriate strategies to engage them. Board of

education members, leaders of business roundtables, chambers of commerce, industry councils, members of education and other professional organizations, and government officials need to be informed of the importance, the value, and the short- and long-term impacts of technology education. They provide additional voices that can support and speak for technology education programs. Further, professional relationships with business-industry-community partners develop with mutual benefits.

Creating a circle of influence to include prominent individuals and organizations outside our field expands the potential of our programs and provides numerous educational opportunities. Expanding our circles increases program visibility, provides validity to successful programs, and establishes a strong support system for implementing new technology education curricula and initiatives. Facilitation by the association, sharing information with business and industry groups, joining educational task forces, presenting to governmental committees, and linking with local initiatives proved ways to increase visibility and strengthen the position of technology education.

Associations need to develop a detailed action plan for marketing technology education programs to communicate the vision, mission, and goals, and to build mutually beneficial relationships. Extending the reach of technology education beyond the local program involves visible support from many interested groups who are well informed and committed to serving technology education. Associations can lay the groundwork for creating the support systems that ultimately benefit technology education programs, teachers, and students, as well as the key publics involved. (Copied from the ITEA Publication, ROAD MAPS: Perspectives for Excellence in Technology Education Programs, page 42, 1998)

#### MY SUPPORTIVE ACTIVITIES AS YOUR SUPERVISOR 1998-99

1. Attended the MVA/MITEA Conference in Springfield, Missouri, July 1998:

Facilitated workshops for: "Why TSA is important to your program", "Technology Education Teachers 2000", and Missouri TE question and answer session.

2. Attended the Fall MITEA Fall Conference in Warrensburg, Missouri, November, 1998:

Facilitated workshops for: "How to put TSA into your TE Program", and a general session for "Brainstorming of Issues that Impact Technology Education".

3. Developed a new communication tool for all Missouri TE teachers known as the "TE Update" which is distributed as important information comes available. It is distributed electronically via email. If you want to be included in that email directory, send me an email request to be added to the TE Update by: <mailto:dmiller1@mail.dese.state.mo.us>

4. I have visited 39 schools, 4 of which were \* day or full day consultation visits.

5. Facilitated two (2) TE GAP council meetings.

6. Supervised the 28 participating TE Grant Award Program recipients for FY 1999.

7. Facilitated three (3) Technology Education Critical Needs Advisory Council meetings

8. Served on two (2) MSIP Review Teams

9. Participated as a team member on DESE committees for: Teacher recruitment and retention, website development, State Plan development for the Perkins III Act, and Missouri VICA State activities.

10. Developed a DESE TE website to aid as a resource and future communications tool for all Missouri TE teachers.

11. Facilitated a newly reorganized Missouri TSA complete with State Conferences for Leadership and Competitive Events.

12. Registered a total of 14 new TSA chapters in Missouri during the 1998-99 event year.

13. Attended the ITEA Conference in Indianapolis, Indiana, March 26-30, 1999.

#### WEBSITE RESOURCES

o ITEA <http://www.iteawww.org/>

o MITEA <http://www.farmington.k12.mo.us/mitea/>

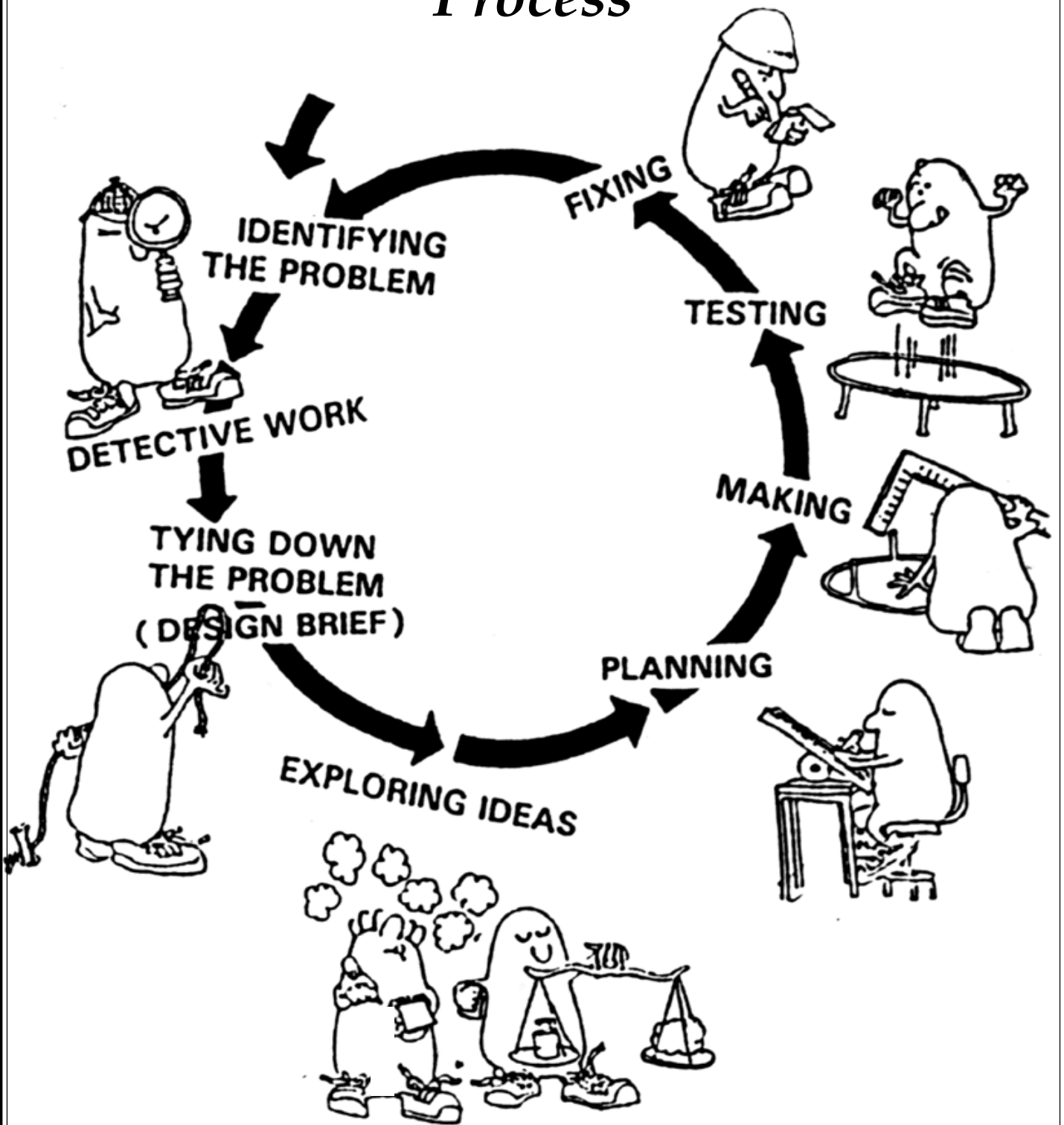
o ACTE <http://www.avaonline.org/>

o TSA <http://www.tsawww.org/>

o Missouri TSA

<http://www.dese.state.mo.us/divvoted/industrial/TechEd/TSAindex.htm>

# The Problem-Solving and Design Process



# *A Practical Design Process*

Following is an overview of a Design Process that can be followed in almost any industrial technological design activity. While the process has been divided into a number of discrete steps or phases for clarity, in reality you will be "jumping" between steps as your ideas take shape and you develop your solution to the problem chosen.

All designers keep a careful record of their ideas and progress as they work. There are a number of reasons for this:

- \* designers often work on several projects simultaneously;
- \* designers may be required to put aside a project for several months or even years and need to pick up after that time where they left off;
- \* designers realize that ideas generated for one project may be applicable to others;
- \* designers may have the opportunity to patent or copyright their work;
- \* designers need to protect their ideas in case of intellectual property or liability conflicts

Therefore, keeping a record of one's work is critical for the designer. This documentation is a record of the thinking, creativity and problem-solving you have done in the pursuit of the problem solution.

In each stage of the Design Process below, a suggested documentation strategy is given to guide your work;

## **Identify The Problem**

A problem arises from a need or want. Several lecturers have mentioned Maslow's hierarchy of needs, which begin with the basic physiological needs of air, water, food, shelter, etc. When these most basic needs are satisfied, higher level needs, such as safety and security needs, social needs (and others) can be addressed.

A problem is dissonance between what is and what should be, or what someone thinks should be. All problems are not appropriately solved with technology but all technology arises from a perceived problem.

For example, let's say that you were given a design brief to develop a device that would allow an individual with little or no use of his/her legs to move around the school by him/herself.

What is the problem that we are attempting to solve? "**Be careful**". If you do not back up far enough you will only entertain a very narrow range of solutions. If you said that the problem is to design a wheelchair, then the only acceptable solution is a wheelchair. But if you take a close look at the nature of the problem, you may come up with something like "some people, through injury, illness or birth, often cannot adequately function in a world built for more mobile people." Then many other solutions become possible, such as electrical stimulation of muscles. New inventions and innovations often occur when someone defines the real problem that lies behind already existing products.

**Documentation:** Make a cover for your portfolio which includes name, course and other graphics which seem appropriate. This page should feature a problem statement that sets the context of the chosen problem. Briefly discuss the situation that has given rise to the need/opportunity for a technological solution.

In addition, the portfolio should include documentation for the Design Brief and Specification, Investigation, Possible Solutions, Final Solution, Developmental Work, Testing and Evaluation.

## **Design Brief and Specifications**

A design brief clearly states what (1) the designer will do (in this case, you), and (2) what the successful solution will do. The design brief is a charge to do something. Some examples of design briefs.

**Documentation:** Students should re-write the design brief of the chosen problem on the appropriate portfolio sheet. You do not need to change it unless you and your instructor have agreed on a different course of action than that described in the existing design brief.

**Specifications:** Should clarify, set limits, and help direct the design effort. Following the seminar discussion where questions will be raised about the problem, students should develop a set of limitations for their design. These

specifications should evolve and reflect the information gathered in the next step (investigation/research). Specifications may include safety considerations (no exposed hazardous edges, etc.), conformity to guidelines developed by related organizations, sensitivity to aesthetics and appearance, and others.

### **Investigation/Research**

Develop a list of questions that should be raised and addressed. Some starting points are:

- \* What are the capabilities and limitations of individuals in the intended audience?
- \* What devices currently exist that address this problem or a similar or related problem?

For example, if the question of what are the capabilities and limitations of the intended audience is asked, then answers may be found by interviewing appropriate individuals. If this course of action is pursued, then students must first discuss the nature of the project with the individual to determine if he/she is willing to be interviewed on this topic. It is important to be honest and straightforward and, at the same time, sensitive to the person's feelings. Discuss with your instructor your intention to pursue interviews.

**Documentation:** Develop a list of questions that need to be investigated to successfully address the problem. Through discussion, reading, interviews, etc., answers to these question should be written in the portfolio.

### **Development of Possible Solutions**

This may be the first experience for many students in which success in solving a problem does not rest on finding a right answer. In most technological activity, especially for profit technological activity, designers respond to identified needs with a number of alternative solutions. A company that commissions a design for a new product, whether in-house or through consultants, will expect (and require) a number of alternatives which may be weighed against a number of mitigating factors, such as economics, production capability, labor force, and more recently, environmental impact.

In technological activity there is no actual

right answer, only solutions which meet the original design brief with varying degrees of success (positive and negative attributes). A solution may seem excellent, but too expensive to produce; or a solution may meet all specifications but require the use of toxic materials which are difficult to dispose of. While these may be extremes, all solutions will have these trade-offs. By generating a number of alternative solutions the chances of one of those solutions being an appropriate one is increased.

**Documentation:** Students should sketch their designs with as much detail as possible. There will be a wide range of skill evident among students in their ability to sketch and draw. It is important that you attempt to communicate your ideas neatly in graphical and written forms. Photographs and photocopies may also be used. Remember: your alternative solutions should all meet the basic requirements of the design brief; the chosen solution meet it somehow "better."

### **Choose the "Best" Solution**

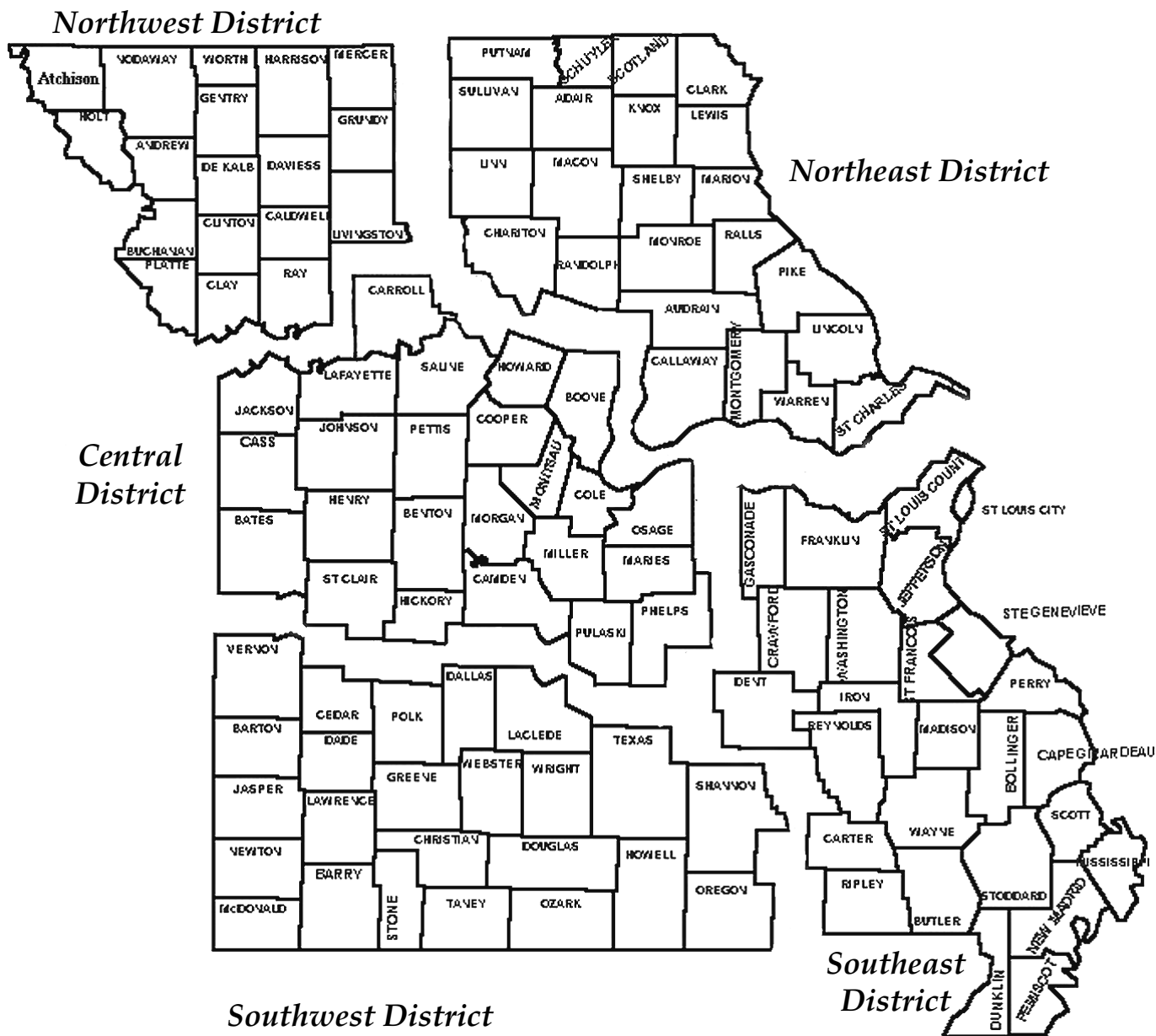
Choosing a solution from the alternatives is a matter of assessing the trade-offs of each design. Which design provides a balance of simplicity, cost to produce and distribute, pleasing esthetics, and so forth? Students should establish the criteria that they will use to assess the best design solution. Students should be able to defend their choice of direction for their developmental work.

**Documentation:** One simple (but sometimes simplistic) way of making a solution choice is to develop a matrix. You can develop an attribute chart, with the different solutions you have developed across the top, and design brief requirements listed down the left side. Rate each solution on how well it achieves each design requirement, using a scale from one to ten. You will need to indicate what each number means in a scale of your own design. The solution with the most points should be chosen as the final solution.

### **The "Best" Solution Should:**

1. Meet the criteria established in the design brief and specifications
2. Be somehow "better" than the other

# Do you Know what M.I.T.E.A. District does your school resides in ??



*Above are the breakout of the Five Rural M.I.T.E.A. Districts; What you don't see are the breakouts of the Kansas City and Kansas City Suburban and St. Louis City and St. Louis Suburban Districts. These district each have a District Rep. listed on the following page and you can always call upon the any of the Executive Board Members for assistants and Questions.*

*Thank You;  
Steve McNaught*

## 1999-2000 M.I.T.E.A. District Representatives

### SouthEast Representative Thomas Wright

Perryville Sr. High  
College at Edwards  
Perryville, MO 63775  
314-547-6527 573-547-1368

### Central Representative Ken Hollingsworth

Carrollton R-VII Jr.-Sr. High  
300 E Ninth St.  
Carrollton, MO 64633  
660-542-1276 660-493-2978

### NorthWest Representative Tom Toalson

Truman Middle School  
3227 Olive St.  
St. Joesph, MO 64507  
816-671-4400 816-324-6427  
tomtoalson@sjsd.k12.mo.us

### K.C. Representative Wade D. Ladd

301 E. Armour Blvd. Suite 200  
Kansas City, MO 64111  
816-891-6269 816-921-5303

### NorthEast Representative Rick Gwinn

Schuyler Middle School  
P.O. 248  
Queen City, MO 63561  
660-766-1083 660-766-2296  
EMW000@mail.connect.more.net

### SouthWest Representative Marshall Buffington

Willard High School  
Miller Rd PO Box 98  
Willard, MO 65781  
417-742-3524 417-742-3400

### St. Louis Sub. ITEA Rep. Bill Fitzpatrick

Fort Zumwalt West High School  
1251 Turtle Creek Dr.  
O'Fallon, MO 63366  
314-2814030 or 314-928-5678

### K.C. Sub. Representative Richard Hampton

William Chrisman High  
1223 N Noland Rd  
Independence, MO 64050  
816-521-2720 816-257-0964

### St. Louis Representative John Petsch

St. Louis City Schools  
Busch/Academic-Athletic Acad.  
5910 Clifton Ave  
St. Louis City, MO 63109  
314-352-1043 jpetsch@stlmo.com.

NOTE: If you know of anyone who is not currently on my TE Update email directory list, please send me their email address or let them know they need to contact me. I would like to encourage each of our TE teachers in Missouri to use email much more frequently. There are a number of exciting things happening in TE, and I believe that it is important that you receive the information in a timely manner. Please pass this information on to other TE teachers.

Technology Education  
Doug Miller  
Email to:  
dmiller1@mail.dese.state.mo.us  
P.O. Box 480  
Jefferson City, Missouri 65102

URL <http://www.dese.state.mo.us/divvoted/industrial/>

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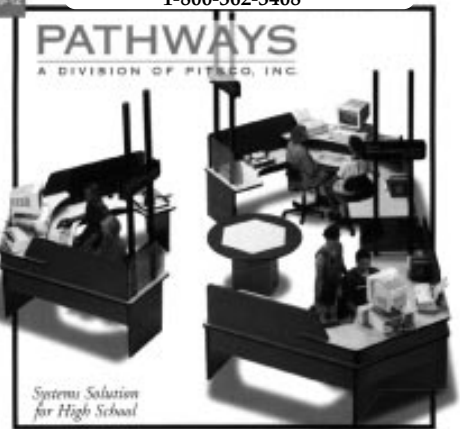
Pitsco Answerline: 1-800-358-4983



Pitsco Lego-Dacta Customer Service :  
1-800-362-3408



Synergistics Systems Customer Service:  
1-800-774-4552



Pathways Sales and Customer Service:  
1-888-728-4548

# M.I.T.E.A. Calendar of Events 1998/1999

## Post these Noteworthy Dates of Upcoming Events

Aug. 10th, 1999	MITEA News Articles Due to miteanews@cassville.k12.mo.us Steve McNaught Cassville High Schools; Newsletter Editor
Sept.	TSA / VICA Leadership Conference@Osage Beach Marina Bay
October	Missouri Vocational Association Executive Board Meeting; Jeff City
Oct. 23rd	M.I.T.E.A. \ C.M.S.U. Fall Conference; Warrensburg, MO 9:00 A.M. - 3:00 P.M. M.I.T.E.A. Executive Board Meeting: CMSU 3:30 P.M.
Nov.	MO TSA Exec. Bd. and State Officers Meet @ Jefferson City
Nov. 17th & 18th	4 State Conference; Pittsburg State University Pittsburg, KS
December 9-12	American Career and Technical Education Association Annual Convention Orlando, FL
Dec.15th	MITEA News Articles Due to miteanews@cassville.k12.mo.us Steve McNaught Cassville High Schools; Newsletter Editor
January, 2000	Missouri Vocational Association Executive Board Meeting 10:00 A.M. Jefferson City
Jan.	MO TSA Exec. Bd. and State Officers Meet @ Jefferson City
Feb.	M.I.T.E.A. Executive Board Meeting: 11:00 A.M. Jefferson City
Feb.	I.T.E. Grant Award Program Guidelines mailed to school superintendents.
March	M.V.A. Executive Board Meeting - Jefferson City
March	K.C.ITEA District Contest@ Bartles Exposition Hall, Kansas City, MO
March 15th	I.T.E. Grants due at D.E.S.E.
March	Governor's Proclamation Signing for Missouri Industrial Technology Education Association Week
April	Missouri Technology Student Association Week MO T.S.A. Leadership Conference
April 6-8, 2000	International Technology Education Association Conference 2000 Salt Lake City, UT
April 14th & 15th	<b>Suggested Date for District Contest Dates;</b> C.ITEA District Contest@C.M.S.U. N.E.ITEA District Contest@ N.W.ITEA District Contest@ Mo. Western State College S.K.C.ITEA District Contest @ Raytown South High School S.E.ITEA District Contest@ Jackson High School S.W.ITEA District Contest@ S.M.S.U. St. Louis Sub. ITEA District Contest St. Louis ITEA District Contest
April 24th to 29th	Missouri Industrial Technology Education Association Week
April 29th	M.I.T.E.A. Awards Program - Jefferson City High School
June	T.S.A. National Conference@ Tulsa, OK M.I.T.E.A. Awards Program Review Meeting; if needed
July 24th to 28th	<b>M.V.A. / M.I.T.E.A. Summer Conference</b> M.I.T.E.A. President's Advisory Committee Meeting: M.I.T.E.A. Executive Board Meeting: M.I.T.E.A. General Business Meeting and Elections:

**Future Events:**                      **I.T.E.A.**    **A.C.T.E.**  
2001 Atlanta, GA March 22nd -24th    2000 San Diego, CA Dec. 7th-10th

**M.I.T.E.A.HomePage:** <http://www.farmington.k12.mo.us/mitea/>  
I.T.E.A. WebSite: <http://www.iteawww.org>                      A.C.T.E. Web Site <http://www.acteonline.org>

**You might be a Redneck if . . . All your Golf balls come in egg cartons.....**  
**Jeff Foxworthy**

# M.I.T.E.A. Logo Shirt Order Form



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Logo Color \_\_\_\_\_

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# Tell Me, What Is Technology?

By: Kendall N. Starkweather, Ph.D., DTE

OK!! You are getting ready for the first day of class, the students will be in front of you, and it is your job to explain technology. What is it? You are near panic, for you remember that there are so many definitions of technology that you don't know which one to use. You could choose one, but which one? What do you do?

You do the natural thing; you ask the students to start a discussion. They will describe it for you. Their response is "computers"! The definition of technology has changed dramatically in the last few years in the minds of many because of the information revolution, but you know that it is NOT JUST COMPUTERS. That is educational technology or instructional technology! Computers are tools and equipment and you know that you are not just teaching about computer technology because you have a technology education class! You are teaching a school subject with curriculum and you plan to teach ABOUT technology not just WITH technology.

Next, the students say- "It is like science." True it is! This helps! Now, you must explain the difference between science and technology as they are taught in schools. You say- "Science is the study of the natural world and technology is the study of the human-made world"! That's a start, for the students then might realize that what they do as human beings makes a difference. Science is about facts, theorems, and the like while technology is about people using tools, machines, materials, processes, and more. However, you still have not explained technology or what you are trying to do when studying it.

Then, you get the idea that technology is

like water. It is dynamic and can take on any shape. It can be beautiful or ugly. It can be something that is calm or can be volatile. It gives you many advantages, but can cause disaster. It can be harnessed or run unabated. We can relate it to work or recreation. It creates various moods from happiness to sadness. It is everywhere and can be linked to anything in our lives. Our opinion relates to how it is used or affects us. But one thing is for certain about both technology and water, we cannot do without them and people will never get their fill of them!

Technology will become the next core subject in our schools for that reason alone. And, you will be well on your way to working with students to better understand, make decisions, work with, and live in a technological world! Have a great school year!



considered solutions Sketch your best solution on the documentation sheet.

### **Developmental work:**

Before actual making of the solution can take place, the chosen design idea needs to be further developed. What materials will need to be used to make the device strong enough, durable, pleasing in appearance, etc.? What exact dimensions, sizes, etc. are called for? Others?

**Documentation:** Students should attempt to develop sketches which indicate size, color, materials, etc. A final design drawing of the device should be included. (remember, in most cases you will only model your solutions and not use the actual materials you specify)

### **Making**

In most cases, design solutions will be modeled in easily obtained materials, such as paper, cardboard, foil, etc. You will need to demonstrate the function of your solution idea, but not produce a practical, durable product. For example, if motion is an integral part of the design, the model should produce that motion or a simplified motion that demonstrates the "workability" of the design.

**Documentation:** Limited documentation in this stage. Students may choose to photograph their work, but short of that, there is little documentation practical in this activity.

### **Testing**

What would be appropriate ways to assess the success of the project? In most cases there will be several strategies that could be used. You will need to identify at least one of these strategies and use it to determine how well your solution meets the criteria outlined in your design brief and specifications. For example, if you were designing a toy for a 5 year old child, you could give the toy to the child and time how long it kept his/her interest. Or you could have the toy evaluated by someone who is considered an expert in child toy development. Or better, you could do both.

While time for every project is limited, it is important to develop and use some kind of test to determine the success of your work.

**Documentation:** Describe in a few sentences how the product is to be tested and provide some strategy for displaying the test results. These results may be in the form of descriptions, checklists, testimonials, or other methods.

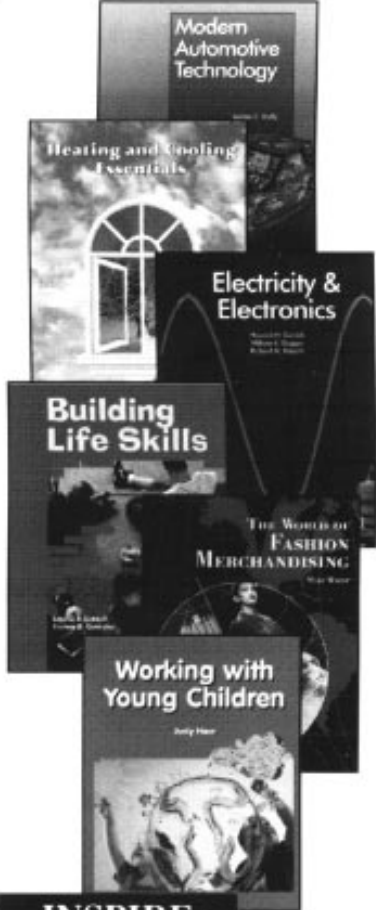
### **Evaluation**

Students should assess their work in relation to the original identified problem (the design brief) and how well they have performed in their efforts to solve it.

**Documentation:** Students should write a paragraph or two describing the results of the testing and their own judgment of how well the solution achieved the original goal. In addition, a paragraph or two describing how well they performed in solving the problem should also be a part of any project evaluation. A few short sentences indicating what they would change if they had to redesign their solution, and why, would also be appropriate. From the ITEA Technology Education Resources Page

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# *Where Oh Where?????*

Ever wonder where oh where to send your students in Missouri interested in seeking a degree in Industrial Technology Education or Technology Education, or who to contact at those locations. Well maybe the following Ads will get you headed in the right direction or give you and your students a starting place for seeking information on career opportunities in Technology Education

## *Central Missouri State University College of Applied Sciences and Technology*

Contact Person:

**Dr. Jerry Richter**  
C.M.S.U.

College of Applied  
Science and Technology  
Grinstead 108G  
Warrensburg, MO 64093  
Phone: 660-543-4307



## *Southeast Missouri State University Cape Girardeau*

Contact Person:

**Dr. Ralph Pittman**  
SEMO

Department of Industrial  
and Technology Education  
900 Normal  
Cape Girardeau, MO 63701  
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# The M.I.T.E.A. Story Revisited

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By Joe Burke

In the first issue of the newsletter, I mentioned that research had been completed on a number of areas relation to our history. In the next few issues, I would like to share those findings with you.

This article relates to the few chosen leaders that have helped greatly to shape our Association and profession over the year. Without their concerted efforts, we would not enjoy the participation and fellowship of our organization.

These people are namely the presidents of IAAM and MITEA. Here is the list of those who have served us so well and their current addresses in case you need to contact them.

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# I. T. E. A. presents 1999 Teacher Excellence Award

The Teacher Excellence Award Sponsored by International Technology Education Association and Goodheart Willcox is one of the highest honors, given to Technology Education classroom teachers and is presented in recognition of their outstanding contributions to the profession and their students. This program recognizes teachers who serve as role models for their colleagues, and who have ability to effect change in the field.

Candidates for the Teacher Excellence Award must be characterized as providing Technology Education instruction of high quality, learner centered and relevant to a study of technology.

Mandatory requirements include:

- \* The teacher must demonstrate a variety of professional evidence including exemplary teaching characteristics, sustained involvement and leadership in technology education and an understanding that technology is basic education for all students.

- \* The teacher must be nominated by an

educator.

- \* The teacher must be a current member and have held membership for the preceding year in both I.T.E.A. and its affiliated state/provincial association.

- \* The teacher must be certified to teach in Technology Education and must be a full-time Technology Education teacher.

- \* The teacher's superiors must concur that he/she is a professional worthy of being considered an outstanding educator.

The Missouri Industrial Technology Education Association nominated one Missouri Industrial Technology Education Teacher for the Teacher Excellence Award, and

in March at the 61st Annual I. T. E. A. Conference in Indianapolis Nate Moore from William Chrisman High School received the 1999 I.T.E.A. Teacher Excellence Award for his outstanding contribution to the Industrial Technology Education teaching profession.



*Congratulation Nate Moore*

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# Ever Visit the M.I.T.E.A. HomePage??

The screenshot shows a Netscape browser window displaying the MITEA Home Page. The browser's address bar shows the URL <http://www.farmington.k12.mo.us/mitea/>. The page features a navigation menu on the left with buttons for various sections like 'Main', 'President's Welcome', 'MITEA Mission', 'Purpose & Goals', 'MITEA History', 'Conferences', 'Calendar', 'Documents', 'Newsletter', 'Membership', 'Executive Board', 'E-Mail Addresses', 'Affiliation', 'Photos', 'Software Download', 'Awards Program', 'WWW Links', 'MITEA Guestbook', 'MITEA Listserve', 'Website Administrator', and 'Website Resources'. The main content area includes the MITEA logo (Missouri Industrial Technology Education Association), a welcome message, and contact information for Steve Murray, Awards Program Chair and Website Administrator, located at Farmington High School, One Black Knight Drive, Farmington, MO 63640. The contact details include a phone number (573-701-1310 ext. 135) and an email address (steve@knights.farmington.k12.mo.us). A visitor counter at the bottom left shows 'You are visitor # 002146'.

It's at <http://www.farmington.k12.mo.us/mitea>  
I guarantee there's more information there than you can see or  
cover in one stop so if you have a questions about M.I.T.E.A.  
**that's the place to look.**

**Steve Murray**: M.I.T.E.A. WebMaster  
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**You might be a Redneck if.....The Hood of your truck is higher than the roof of your house.**

**Jeff Foxworthy**

