

TEANJ  
TIDBITS

- **MARK YOUR CALENDAR!!!** Plans have been set for the **TEANJ 17th Annual Technology Conference and Expo**. The event will be on May 8&9, 2003 at the East Brunswick Hilton. If you are interested in presenting a workshop, visit the TEANJ website at [www.teanj.org](http://www.teanj.org) and click on the "Conference" link.
- **The FIRST ANNUAL TEANJ GOLF OUTING** was held on July 15, 2002 at Gambler Ridge Golf Club. The proceeds directly benefit the TEANJ Future Technology Educator Scholarship Fund. To make a tax-free contribution to this fund, visit [www.teanj.org](http://www.teanj.org) for more details.
- There is still a little time left to arrange to attend the **2003 ITEA Conference** being held in Nashville, Tennessee from March 13-15, 2003. The theme of this will be *Advancing Information and Knowledge through Innovation*. Information is available at the ITEA website: [www.iteawww.org](http://www.iteawww.org).
- **Assessing Technology Education Programs** was developed by TEANJ. Over 100 features of effective and non-effective technology education programs are identified in easy to read charts. Cost is \$10 for TEANJ members; \$12 for non-members. Send Money Order or Check to: TEANJ; James Novotny, Treasurer; c/o Livingston High School; 30 Robert Harp Dr.; Livingston, NJ 07039
- Start thinking about the **2003 INNOVATIVE TECHNOLOGY EDUCATORS AWARD**, sponsored by the Martinson Family Foundation. This award recognizes extraordinary contributions and performance by technology educators with an unrestricted cash award of \$10,000 to each honoree. Check out the TEANJ website for application deadlines for this award.

**2002-03: UPDATE ON STANDARDS**

As most teachers in our state were getting their rooms ready for the 2002-2003 school year, an eighth area of standards was being presented to the N.J. State Board of Education for discussion. The proposed standard is based on the *Standards for Technological Literacy: Content for the Study of Technology*, developed as part of the National Science Foundation/National Aeronautics and Space Administration funded by the *Technology for All Americans* project. The draft can be read in its entirety online.

The introduction of this draft was mentioned in a Star Ledger article dated September 5, 2002 entitled: **"In push for education standards, N.J. wonders if it has gone too far."** This article questions

adding more standards to an already demanding school day. In spite of reservations expressed about time constraints, the article goes on to describe the technology standards as *"a substantial add."* It further recognizes *"the importance of these skills in all subject areas... technology teachers and business groups have campaigned for years for the separate section"*.

The article quoted Dana Egreczky, vice president of the New Jersey Chamber of Commerce and member of the state's standards advisory panel saying: "We're thrilled with the new technology standards, but it does present a challenge. There is a finite limitation in the school day for all of the graduation requirements we have now in place."

**FIRST TEANJ GOLF OUTING SUCCESS!!!**

On July 14<sup>th</sup>, 2002, the First Annual TEANJ Scholarship golf outing was held at Gambler Ridge Golf Club in Cream Ridge, NJ. 19 members and non-member were treated to an outstanding day including 18 holes of golf on one of the nicest and mildest days of the summer and a delicious BBQ dinner. Over \$1500 was raised for the scholarship fund. With \$10,000 our goal, TEANJ has passed the 25% mark with over \$2500 collected thus far. Our web master, Glenn Smith, won the longest drive competition and Commerce Banks Dave Bishop won the Closest to the pin. About a dozen door prizes were given out,

including 2 golf bags, NIKE balls and umbrellas, shirts, tee shirts, and even a pair of "golf boxer shorts"! A special thanks to Leila Paspalas, General Manager of TGI-Friday's at Newark Airport for supplying door prize and goodie bag items.

We will be running the outing again this coming July. So, look for information in future issues of **INTERFACE**, at general membership meetings and at the conference. Let's make this an outstanding annual event. Come out and have fun with your fellow members for a good cause. It's for the future of our profession!



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# PRESIDENT'S MESSAGE

Dear Fellow Technology Educator,

As the 2002-2003 school year gets underway, I feel more confident than ever that this will be a momentous year for all of us. Many of the goals we have been striving for in New Jersey will hopefully come to fruition. During the past few months we have reached new milestones towards seeing Technology Education takes its rightful place among other core curriculum.

First I would like to take a moment to recognize the hard work and dedication of Dave Janosz, our Executive Director. No one could possibly know the timeless hours Dave contributes on our behalf. He had huge shoes to fill when Mark Wallace retired the position and has done such a wonderful job this past year. His professionalism and contacts he has made with key politicians as well as in business and industry are invaluable to all of us. It is an honor to work with him.

I would also like to thank Phil Paspalas, Past President for organizing the newly formed scholarship fund. This is such an important undertaking and with Phil at the helm, it is sure to be a success. Thanks go out to all of you that either participated in the golf outing or donated to the fund. Your support is much appreciated. If you would still like to donate, send checks to: TEANJ Scholarship Fund, P.O. Box 718, Fair Lawn, NJ 07410-0718.

Some extraordinary events relating to Technology Education in New Jersey has taken place in the legislature. We have received some very strong support. Assembly Bill A-1350 was merged with Bill A-2169 ([http://www.njleg.state.nj.us/2002/Bills/A2500/2169\\_11.HTM](http://www.njleg.state.nj.us/2002/Bills/A2500/2169_11.HTM)) sponsored by Jack Connors, Herbert Conoway, Jr., and George Geist. It would require the State Board of Education to adopt core curriculum content

standards for technology education based on the ITEA Standards for Technological Literacy. This legislation passed through the education committee on June 17<sup>th</sup> and has been forwarded to the appropriations committee for review. It will likely be voted on this fall. The bill has also been introduced in the Senate as S-1531 ([http://www.njleg.state.nj.us/2002/Bills/S2000/1531\\_11.HTM](http://www.njleg.state.nj.us/2002/Bills/S2000/1531_11.HTM)), sponsored by Shirley Turner. It will be brought to the education committee for a vote this fall. We will keep you posted on new developments through the TEANJ webpage ([www.teanj.org](http://www.teanj.org)).

The Standards Review process left us in the melting pot of the Cross Content Workplace Readiness Standards. Staying put would mean that many New Jersey students would never experience Tech Ed and ultimately not leave school technologically literate. We also requested to be included in the Science Standard 5.4, which is "The Nature and Process of Technology". It seemed a perfect fit as it included the three strands of "Science and Technology", "Nature of Technology" and "Technological Design". Other states including Massachusetts, Pennsylvania and New York have combined Science and Technology or Science and Engineering Standards. Many people spoke on behalf of the benefits of this at the June State Board of Education meeting including Jim Carnes, recently retired CEO of Sarnoff Corporation and other business and industry representatives. Regardless, in July the State Board of Education approved the new science standards that did not include Technology Education.

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# From the Desk of the Executive Director

## Director's Message

If your email address is listed in the TEANJ membership database, you receive several times per year email updates from me. Perhaps you've noticed that I always include a hopefully meaningful quote in my email signature (I admit I got the idea from Mark Wallace).

I generally change the signature at the beginning of each school year, but was asked by Mark to do it during the summer because he was getting tired of the Dewey quote. Thanks to Mark's prompting, I've decided to include three new quotes from familiar people. Each of the three quotes was inspired by a recent summer road trip through the Midwest United States. Each of the three holds a message that is particularly meaningful to our profession.

**"Nothing is particularly hard if you divide it into small jobs." -**

**Henry Ford**

We need more people in the association to become more active in it. On occasion, one of us writes a letter to the Department of Education or contacts a legislator asking for his or her support, but our efforts are sporadic at best. YOU owe it to YOURSELF as a professional, YOUR STUDENTS as their teacher, and YOUR COLLEAGUES as their partner to do something to get things rolling faster for technology education in New Jersey. What are you willing to do to help? You don't need an invitation from anyone but yourself to write a heartfelt letter or make other contact with someone who can help the

cause. You don't need to run drafts by me or anyone else, but I will be glad to provide you with names and addresses of who to contact if you do not know.

**"Get the habit of analysis - analysis will in time enable synthesis to become your habit of mind." -**

**Frank Lloyd Wright**

Our field of teaching is where these skills are stressed most often, but how many of your coworkers and administrators have witnessed it? Keep teaching your students to analyze why their bridge failed, why their airplane didn't fly, why their solution to a problem didn't work. Stress math, science and other knowledge in student's analysis of their products and systems so that they will be able to make more connections in their minds. So many of us have witnessed what exactly what Wright was talking about. No other area spends so much time looking at their mistakes, and in technology education these most valued abilities become second nature.

**"Everyone is born a genius, but the process of living de-geniuses them." -**

**R. Buckminster Fuller**

If the process of living de-geniuses them, then the processes we teach in our technology classes, RE-GENIUSES them!

Keep up the good work and have a great school year.

**Dave Janosz**  
**Executive Director**



## TEANJ 2002-03 Calendar of Events

### October

8 North Area Professional Development Workshop  
17 Representative Council Meeting

24 South Area Professional Development Workshop

### November

7-8 NJEA Convention - Atlantic City - Workshops by TEANJ  
13 Central Area Professional Development Workshop  
15 Articles and Advertising due for Interface Issue 2

### December

12 Executive Board Meeting

### January

9 Executive Board Meeting

### February

15 Articles and Advertising due for Interface Issue 3

### March

6 Executive Board Meeting  
13-15 ITEA Annual Conference  
20 South Area Professional Development Workshop  
27 North Area Professional Development Workshop

### April

3 Central Area Professional Development Workshop  
10 Executive Board Meeting

### May

8-9 TEANJ Annual Conf & Expo  
15 Articles and Advertising due for Interface Issue 4



**Please stay current with TEANJ Action Alerts by visiting [www.teanj.org](http://www.teanj.org)**

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THANKS TO OUR ADVERTISERS:  
Goodheart Wilson; DeVRY

**REMINDER:  
IMPORTANT  
MEETING DATES**

**October 8, 2002:**  
North Area  
Professional Development  
Workshop will be held at  
*Byram Intermediate  
School*

**October 17, 2002:**  
Southern Area  
Professional Development  
Workshop will be held at  
*Timber Creek Regional  
High School*

**November 13, 2002:**  
Central Area  
Professional Development  
Workshop will be held at  
*The College of New Jersey*

# PRESIDENT'S MESSAGE

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The giant leaps we have made provide positive encouragement. I ask that you take the time to educate your colleagues, administrators, parents and community about the benefits of what we do. Invite them into your classroom or lab. Begin at your open houses or back to school nights. Remember that it is your constant and determined effort that will clear away the uneducated obstacles toward us being recognized as a core curriculum.

Professional development opportunities are on the horizon. TEANJ has planned fall professional development workshops for the north, central and southern areas of the state. This past August, I was fortunate enough to participate in an Exploring Design & Engineering (ED&E) workshop called "Digital DJ" at The College of New Jersey. It was the most worthwhile four days I have spent in a while. There are many more ED&E workshops scheduled and I highly recommend them. Check out the TEANJ website for a current listing of many professional development opportunities available to you.

Finally, I would like to remind all of you about the great opportunities afforded to you through TSA (Technology Student Association). Mark your calendars for the NJ-TSA Leadership Conference on November 26<sup>th</sup> at The College of NJ. All middle and high schools are invited to bring 6 officers or

representatives for an action-packed day of excitement. If you have never been involved or have not been active for a while, this is a great opportunity to do so. Again this year, there will be both a middle school and high school competitive events conference. TSA has been one of the most rewarding experiences for both myself and my students throughout my tenure as a teacher. I urge you all to get involved in this rewarding association. For more information, see their web page [www.tcnj.edu/~tsa](http://www.tcnj.edu/~tsa) or contact Henry Harms, TSA State Advisor, at 609-771-3339 or [harms@tcnj.edu](mailto:harms@tcnj.edu).

I look forward to serving you over the next year. Please do not hesitate to contact me with your ideas and concerns. TOGETHER, we can elevate Technology Education in New Jersey to its rightful place as a much needed core content area. Stay rejuvenated through professional development and have a great year!

Sincerely,

Sherry Roses  
President, TEANJ  
**"Education for Innovation"**



## TEANJ WANTS YOU!



**WRITERS, PHOTOGRAPHERS, ARTISTS:** The INTERFACE is looking for submissions of articles, photos and artwork. Feature something your district is doing in Technology Education. Write an article on any topic that would be of interest to our membership. Submit ideas or completed work to the editor, Joanne Reddan via email: [reddanjo@cedargrove.k12.nj.us](mailto:reddanjo@cedargrove.k12.nj.us).

**A NUMBER OF AVAILABLE TECHNOLOGY EDUCATION TEACHING POSITIONS ARE POSTED ON OUR WEBSITE** at <http://www.teanj.org/jobsboard/Jobs/index.htm>

# ***The World of Technology***



**SECOND EDITION**

## ***The World of Technology*** **SECOND EDITION**

This completely revised curriculum document is now available. All new activities tested in the classroom and validated through the Statewide Peer Review. Almost 150 pages of valuable material!

This NYSTEA supported initiative is now a course of study offered in many schools in New York State. Your school can offer **The World of Technology** to fulfill the third unit option in math or science for high school graduation!

Curriculum document is available for:  
\$25 to NYSTEA members  
\$45 to non members, administrators  
and school districts

Send your check payable to **NYSTEA** to:  
Barry Borakove  
76 Cherry Street  
Locust Valley, NY 11560

## 2002-2003 TSA Calendar

**Date:** Monthly  
**Event:** State Officers Meeting  
**Place:** College of New Jersey

**Date:** Oct. 11-13, 2002  
**Event:** National Leadership Conference  
**Place:** Reston, Virginia

**Date:** November 26, 2002  
**Event:** State Leadership Conference  
**Place:** College of NJ

**Date:** January 27, 2003  
**Event:** Middle School Conference  
**Place:** Howell Middle School North

**Date:** February 1, 2003  
**Event:** Deadline for Chapter Affiliation  
**Place:** College of NJ

**Date:** March 27, 2003  
**Event:** State Conference  
**Place:** College of NJ

**Date:** June 25-29, 2003  
**Event:** National TSA Conference  
**Place:** Orlando, Florida



For more information on TSA, please visit our new home page at [www.tcnj.edu/~tsa](http://www.tcnj.edu/~tsa) or national TSA at [www.tsaweb.org](http://www.tsaweb.org)  
Or contact: Henry Harms, State Advisor  
The College of New Jersey  
103 Armstrong Hall  
Ewing, NJ 08628-0718  
(W) 609/771-3339 or  
(H) 609/882-3302  
or EMAIL: [harms@tcnj.edu](mailto:harms@tcnj.edu)

# Technology Student Association TSA UPDATE - - -

## National TSA Conference

More than 40 New Jersey TSA members and their advisors from Kitatiny Regional High School, Lenape High School, High Technology High School and Newton High School attended the National TSA Conference held in Denver Colorado. National Conference Finalists included:

Architectural Model  
2<sup>nd</sup> Place TEAM Kittatinny Regional HS

CADD-3D Modeling  
3<sup>rd</sup> Place Leo Inglima (Kittatinny Regional HS)

CADD-Architectural  
5<sup>th</sup> Place Joe Zdaniewicz (Kittatinny Regional HS)

CADD-Engineering  
2<sup>nd</sup> Place Charlie Woods (Kittatinny Regional HS)

Electronic Systems  
1<sup>st</sup> Place Eric Gallimore (High Technology HS)

Promotional Communication  
1<sup>st</sup> Place TEAM Kittatinny Regional HS

Technical Research and Report Writing  
5<sup>th</sup> Place Jen Litts (Newton HS)

Technical Sketching and Application  
9<sup>th</sup> Place Mariya Khandros (High Technology HS)  
10<sup>th</sup> Place Dave Irmiter (Newton HS)

Technology Challenge  
8<sup>th</sup> Place TEAM Lenape HS

Transportation Modeling  
9<sup>th</sup> Place Ryan McCaskill (Kittatinny Regional HS)

## Middle School

Our first middle school conference was held on June 5, 2002 at Howell Middle School North. The conference was designed to introduce middle school teachers and students to TSA. Our state officers planned and coordinated the competitive events which included desktop

publishing, dragster design challenge, flight endurance, prepared speech, technology bowl, an edible vehicle race and an award assembly. Plan now to attend our next middle school conference which will be held at Howell on January 27, 2003. Contact the state TSA office to receive a complimentary Middle School Activities Guide and the Chapter Program Kit that includes everything you need to start a new TSA chapter.

## Chapter Affiliation

State and National TSA dues will remain the same for 2002-2003. However, the affiliation process has been simplified. Schools that affiliated during the 2001-2002 school year will automatically receive the new affiliation package. All original forms and state and national dues should be sent to the National TSA office. Forward a copy to the State TSA office for immediate confirmation and state affiliation. Contact Alison Goeke, TSA Assistant at 609/771-3244 or [Goeke2@tcnj.edu](mailto:Goeke2@tcnj.edu) if you have questions.

## Fall Leadership Conference

An exciting conference is being planned for chapter officers at this annual conference. Last year 90 officers attended and this year we are looking for a substantial increase.

Frank Fort of the New Mexico Department of Education will conduct the officer leadership training. Frank is an exciting motivational speaker who clearly enjoys sharing great ideas with young people. Advisors will have the opportunity to participate in a portion of the training and attend a forum to exchange ideas with other teachers.

# TECHNOLOGY HAPPENINGS AROUND THE STATE:

## PROFESSIONAL DEVELOPMENT

### ■The College of NJ Professional Development Workshop Schedule:

**October 2, 2002**-Video in the Classroom... *Time Well Spent*

**October 16, 2002**-Senior Student Design Challenge - *Especially for Students*

**November 20, 2002**-Creating High Quality Products Through Color Printing and Vinyl Cutting Applications

**December 4, 2002**- Advanced Web Design and Multimedia

**January 22, 2003**-Desktop Publishing

**February 12, 2003**- Children Designing & Engineering (CD&E)

**March 5, 2003**-Junior Student Design Challenge-*Especially for Students*

**April 9, 2003**-Exploring Design and Engineering (ED & E)

### ■The College of New Jersey 16th Annual Professional Conference

October 23, 2002/8:30 to 1:30/  
Register online at [www.tcnj.edu/~teched](http://www.tcnj.edu/~teched)

### ■Exploring Design and Engineering Fall Workshops:

**All workshops run Friday 5-9 pm and  
Saturday 9 - 5pm**

**No Cost** - All registration fees will be paid for by the grant if you are an instate middle or high school technology teacher. 12 hours of professional development will be awarded for each workshop.

For more information, contact Nicole Tracey at [tracey2@tcnj.edu](mailto:tracey2@tcnj.edu) or 609-771-3298.

Introduction to 3D Design Pro-Desktop  
**October 4-5** at Washington Township High School

**October 18-19** at Kittatinny Regional High School

**November 1-2** at Fairlawn High School

**November 15-16** at Mainland Regional High School

**December 6-7** at Freehold Township High School

Introduction to Exploring Design and Engineering

**October 25-26** at Washington Township High School

**November 22-23** at The College of New Jersey

**December 13-14** at Fairlawn High School

CAD / CAM & Rapid Prototyping

**November 22-23** at The College of New Jersey

## COMPETITIONS

### ■ Creative Design Challenge: BOTSCKETBALL

Sponsored by Panasonic Industrial Company in cooperation with the New Jersey Institute of Technology and the Liberty Science Center, the **Creative Design Challenge** is a competition for New Jersey High School students in grades 9-12. It offers scholarship money, prizes, fun and learning. Each year Panasonic announces a new and exciting challenge for the students to conquer. Registration takes place in the fall for the following year's challenge, which occurs in late March or early April. Visit <http://www.panasonic.com/industrial/creativdesign/> for more information.



THE INTERFACE IS ALWAYS  
LOOKING FOR ITEMS OF  
INTEREST  
TO PUBLISH IN THIS  
SECTION.

PLEASE SUBMIT ANY  
TECHNOLOGY EDUCATION  
EVENTS OF INTEREST THAT  
ARE HAPPENING  
THROUGHOUT THE STATE  
TO THE INTERFACE EDITOR.

## Technology Education programs New Jersey Colleges:



**KEAN  
UNIVERSITY**

1000 Morris Avenue  
Union, New Jersey 07083  
(908) 527-2000



## THE COLLEGE OF NEW JERSEY

2000 Pennington Rd.  
Ewing, NJ, 08628-0718  
(609) 771-1855

Technology Educators Association  
of New Jersey

*17th Annual  
Technology  
Conference & Expo*  
East Brunswick Hilton  
May 8-9, 2003

Look for more  
details in the next  
Interface and on  
the website.

**the INTERFACE is a  
NJEA Newsletter  
Program/'02-'03  
Participant**

**LOOK FOR US IN  
NOVEMBER AT THE  
NJEA CONVENTION AT  
ATLANTIC CITY**

# IMPACTS

## Firefighting and Fire Safety

by Harry T. Roman

PSE&G Company

New here is a ready-made technology education topic for the classroom. Look me in the eye and tell me that you have students in class who do not get excited by the sound of a fire siren or at the thought of fighting a fire. Of course there is interest, and where there is interest, there is opportunity for education. Firefighting and fire safety is a topic of great relevance and all students can instantly identify with it. So, let's talk technology education.

Like any technology, firefighting has a history. Man has been fighting fire since it was first put to use as a source of warmth and for cooking food. As fire was brought inside man's dwelling space, fire fighting and fire safety took on a whole new perspective. Technology was developed to prevent, contain, and extinguish fires before extensive damage was incurred. We don't fight fires like we did during the early colonial periods of this country; and the types of fires we encounter today are very much different than the fires of yesteryear. As our nation advanced technologically, our methods of dealing with fire changed too. What was once a volunteer activity for all able bodied men has become now a professional firefighting organization-with well defined roles for the firefighters, specialized equipment, highly mobile response capability, and time proven tactics for containing and extinguishing complex fire events. So how does one teach this in the classroom?

The key is to partition the subject into bite-sized chunks. Obviously the first thing to do is trace the history of firefighting to bring the subject into focus. Next I would recommend some basics of fire, the science behind combustion, and how to deal with the various types of fires likely to be encountered. Here, a discussion of the basic types of fire extinguishers and classes of fire (A, B, C) is important, as well as a discussion and demonstration of how smoke alarms work and where they should be placed in the home.

As students understand what causes fires to erupt, a discussion of fire safety in the home can then be undertaken. They can

work in teams to identify areas of their homes where fire hazards can exist and then develop safety rules to prevent outbreaks of fire. The student teams can take one room in the house at a time and develop their safety rules for one room and then see if they are applicable to other rooms in the house. It is important for the students to comprehend that the design of the house and whether it has an attached garage or not does affect the fire safety concerns of the home. Once the students develop their rules, they can compare them to fire safety rules which are already published in the literature or available from local town fire departments. And they can try extending them to multifamily dwellings or even commercial buildings.

For especially troublesome areas of the home, which are highly prone to fire, like the kitchen, fireplace, basement, attic, and garage, the students may be motivated to redesign certain appliances or structures to mitigate against destructive fires. They may even want to try redesigning the entire house to make it more fireproof and hence safer for human occupancy-exploring the types of building materials now in use and perhaps suggesting alternative materials. Research can be conducted to determine the major causes of fire and the consequent damage inflicted on wooden versus non wooden structures, and conclusions can be drawn from this research and reflected in improved designs.

Modern composite and synthetic building and furniture materials also present new firefighting challenges which the students can explore. Learning about building materials and house construction can be very instructive for the class. They may even be able to trace the specific problems or firefighting challenges that new building materials and techniques presented as they were introduced into new homes. In a very real sense, the architectural appeal and the building materials used in a home can influence its fire safety. Students can take pictures of their homes, bring them to class, and compare them for fire safety concerns.

Firefighting equipment has certainly changed over the years, from horsedrawn hand operated conveyances used to pump water, to today's sophisticated fire engines and ladder trucks. It's no exaggeration to

think of today's fire engine as a complex water pumping station and multi purpose apparatus-not to mention its rather significant cost.

Why not investigate how these trucks are designed and identify the scientific and technological principles that are employed in their operation. Students could contact fire engine manufacturers to learn more about the types and styles of fire trucks and support equipment available. Different trucks could be compared to see how their capabilities differ, and what size fires they might be used against. Pumping pressures, hose lengths, and water delivery rates to a fire can all be explored.

And don't forget the fire house itself. This structure has changed over the years as well. Why did they change? Was it because of larger fire trucks or were different techniques used to house the firefighting support equipment? Maybe there are both old and new fire houses in your town that can offer a basis for comparison. It sounds like a field trip might be in order for your class to investigate just how a fire house operates and gets notified of a fire. How does a town know where to locate a fire house for maximum protection of its citizens? What are the normal working hours for firemen and how do they cope with the stress of fighting fires and saving lives.

What has also changed quite a bit is how the well dressed firemen looks. The technology associated with modern firefighting has enabled the fireman to have more fire resistant clothing, two way radio communication, portable air breathing apparatus, and better water delivery systems. Have the students take a deep look at the new technologies being developed for firemen like sensors that allow the fireman to see through smoke, or beacon detection systems that allow a fireman to find a fallen comrade who may be injured.

There is tremendous student interest in firefighting. Build on that enthusiasm and make it work for you when you teach technology education. I'll bet your students will never think of firefighting the same way again.

**Be Well**





## **Longtime friend of TEANJ, Harry Roman, featured on PSE&G website**

*the following article was seen on the PSEG website section entitled  
"Volunteer Spotlight"*

### **Harry Roman enjoys giving back**

For over 30 years, PSE&G employee Harry Roman has brought science and technology to life in the classroom. He recently visited his old Newark grammar school, Abington Avenue, to teach 8th graders about NJ inventors and the power of teamwork to create ideas.

Harry has developed several presentations to help teachers understand the science behind technological advances. Many of his demonstrations are designed and constructed in his home workshop. As a technology and R&D consultant at PSE&G, and an inventor with 9 US patents, he has plenty of material to draw upon.

Harry is also active at The Newark Museum, providing seminars for teachers, serving on the Science Advisory Group, hosting Saturday family education programs, and mentoring Newark high school students in the PSE&G-sponsored Science Explorers program. "The Newark Museum is my home away from home. As a boy growing up in Newark, I spent many a rainy Saturday roaming around this wonderful treasure trove of art, culture, and science," he said.

In 1999, the Technology Educators Association of New Jersey awarded Harry their highest honor, Distinguished Technology Educator, for helping to establish technology education as a field of study in the state and nation. And the Urban League of Essex County recently asked Harry to serve on their Technology Council.

Why he has done this for so many years? Harry says, "I was blessed with incredible teachers who had a tremendous influence on my life and career. My high school science teacher was particularly important in my life. Now it's my turn to give back."

# The World Series of Mechanisms

## A TLA incorporating simple machines and mechanisms

By Sherry Roses

Two years ago, the excitement of the long awaited Subway Series between the Yanks and Mets led me to create the following TLA. The excitement and motivation of this activity can coincide with the actual World Series for extra motivation and impact. First divide the class into two teams, each representing one of the teams in the series. If possible, try to put them on the team they are rooting for to win.

Prior to the activity, the students are given lessons on simple machines, mechanisms and inventors such as Watt, Da Vinci and Reuleaux. Encourage teamwork and cooperation within the spirit of competition. It is a great motivator.

You will need to construct 2 playing fields. One for each stadium of each team in the world series. If you conduct a Google (www.google.com) image search using the name of the ballpark, you should be able to quickly find a top view. Each park is unique. Use an LCD projector to enlarge and trace the stadium shape including the baselines and pitcher's mound. Keep both parks in proportion to each other. I use two tables that are approximately 6' in diameter. When you are ready to "play the world series", be sure to glue down cups to represent the players in the outfield and infield.

Another important testing device is the "T". The ping pong "baseball" must be hit off the "T" by the designed mechanism. I used a piece of foam core board shaped like homeplate as the base. From the local Dollar store, I purchased a bag that had a plastic dart gun that shoots suction cup darts. The rubber darts are perfect if you cut off the top and invert it into the foam board. The suction cup faces up and serves as a great "T".

*One more quick tip is to have the students number their players according to official roster so as not to get any one confused. Modify suggested materials for what you have on hand. If you have the time, download and burn a copy of the "Star Spangled Banner" and "Take Me Out to the Ball Game". Announce the players and their positions. The students will love it and so will you.*

**BACKGROUND:** This time the World Series is between \_\_\_\_\_ and \_\_\_\_\_.  
**INFO** The team that wins the best of 7 series will be declared the new World Champions of Mechanisms. Each of you are players in the series and it will be up to you to contribute to your team by being the best batter you can be by designing an effective player.

**DESIGN BRIEF:** To design and construct a baseball player that can hit a baseball (ping pong ball) as far as possible to score points incorporating at least 3 of the 6 simple machines in your design.

**MATERIALS:** Consumable materials to include:

2- 3 oz. Plastic solo bathroom cups	1 – 9/16" steel staple
1 – clothespin	2 – paper clips (1 large, 1 small)
2 - brass plated 8mm round paper fasteners	2 – rubber bands
1 – steel t-pin	6 – skill sticks
3 – tongue depressors	6" Weatherstripping tape
1- Safety pin	1 – pipe cleaner
1 – 12" piece of yarn	1 – 2" X 2" piece of foam core board
hot glue	1 – piece of your choice from the scrap wood bag
Elmer's white glue	

**EQUIPMENT:** **Not to be used in the construction:**

Hot glue gun	X-Acto knife and cutting mat
Steel ruler	Baseball ping pong ball
2 stadiums connected by a subway	scissors

**DESIGN CONSTRAINTS**

1. You will be divided into 2 teams, each representing the actual teams in the World Series.
2. Each student on the team will be responsible for designing and building one player for their team.
3. You may only use the materials and equipment provided to you. You DO NOT have to use all the materials.
4. The bags provide for you to hold your materials may not be used in construction.
5. You will be required to submit 4 thumbnail sketches as well as 1 final rough sketch of your player.
6. Your player may be colored but your name and number must be identified somewhere on the player. You should use markers in the team colors, if possible.
7. Each player not utilizing at least 3 simple machines will be put on the disabled list and not eligible to play and score for your team.
8. The bat must be made from the materials given to you. It can be a part of your player or a separate entity.
9. The player cannot be moved by hand to swing the bat. You must use one of the six simple machines to operate your player (i.e. a lever, pulley etc.)
10. Your player's feet (base) must fit in the batters box. Failure to fit in the batters box will place you on the disabled list and ineligible to play for your team.
11. The ball will be hit off of a tee. If you knock the T over during a hit, it will count as a strike. Foul balls will count as a strike. You cannot be called out on foul balls. 3 strikes and you will be called out.

**TESTING:**

- Points will be earned as follows: Infield hit = 1 run, outfield hit = 2 runs, homerun off the table = 3 runs. Wherever the ball bounces first will be counted. If you are called out, you will not earn any points for your team.
- You will be called out if your ball lands in one of the 5 ounce plastic cups placed in the field to represent players.
- Each game will consist of each player hitting the ball at least once. If there are 3 outs earned after each player bats once, the game will be over. OR the game will be played until 3 outs are earned
- The seven game series will be played as follows: Games one and two will be played at \_\_\_\_\_ Stadium, Games 3, 4, and 5 will be at \_\_\_\_\_ Stadium, and if need be Games 6 and 7 back at \_\_\_\_\_ Stadium.

**MAY THE BEST TEAM WIN!**

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### **ITEA Nashville Conference Attendees to Receive Free Copy of NEW Standards**

**Reston, Virginia — June 3, 2002** — ITEA working groups are now putting the final touches on the next standards release to the profession. *Companion Standards for Technological Literacy* will include student assessment, professional development, and program standards. ITEA's Technology for All American's Project is currently making adjustments to the final draft using input received from workshops held around the country.

This new publication will contain three sets of standards that are supportive of the already released *Standards for Technological Literacy: Content for the Study of Technology*. ITEA members will receive a free copy of this publication when they attend the ITEA's 65<sup>th</sup> Annual Conference on March 13-15, 2003 in Nashville, TN. For information about ITEA's conference and standards go to [www.iteaawww.org](http://www.iteaawww.org). For information about ITEA's Technology for All Americans Project, please contact Dr. William Dugger, DTE at [standards@itea-tfaap.org](mailto:standards@itea-tfaap.org).

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