A Silver State of Mind:

TSA Celebrates 25 Years Of Technology Opportunities for Students

It is time to celebrate. The Technology Student Association is now 25 years young. Twenty-five down, and many more to go.

Celebrating for this year and part of next, TSA just kicked off its 25th anniversary celebration, not forgetting its earliest years as the American Industrial Arts Student Association. Just as technology so quickly transforms, so has TSA evolved in its challenging technology education choices. And we have only just begun.

"TSA's 25th anniversary is about celebrating and it's about moving ahead into the next 25 years," said Rosanne T. White, Ed.D., National TSA's executive director. "TSA believes that when our members are provided the resources, direction and opportunities they need, they can accomplish great things. We are proud to commemorate our first quarter century of educating students to be qualified prospective employees in a technological society. "

The newly launched 25th Anniversary Fund has been created to allow financially challenged schools with interested students start up a new TSA chapter. Donations ranging from $25 and higher will comprise the fund. Donors will receive one anniversary recognition pin for every $25 donation and will be acknowledged for the contribution at the 2003 or 2004 National TSA Conference. Eligible schools may apply for the funding by submitting a grant application that will be posted on the TSA website.

Orlando: Come On Down!

On behalf of Florida TSA and the National Conference Planning Committee, I would like to take this opportunity to personally invite all of you to attend what promises to be an outstanding national event: TSA's 25th National Conference in Orlando this June. National TSA along with the conference planning team are working hard to make sure this 25th Anniversary event is one to be long remembered.

Along with the numerous attractions available in Orlando, the conference site offers outstanding accommodations, a beautiful conference facility, and plenty of local options for food and fun. Bring your chapter, advisors, and family to enjoy National TSA's Silver Anniversary.

Mellissa Morrow
Florida TSA State Advisor

Happy 25th Anniversary

Would You Like To Be A TSA National Officer? Here's Your Chance!

The 2003/2004 national officer candidate applications are now available. Qualified members must contact Dr. Rosanne White, Executive Director, TSA, to request the application.
Contact Dr. White at rwhite@tsaweb.org or call 703/860-9000.
The deadline for filing the completed application at the national office is May 1, 2003.

In This Issue...

Launching The 25th National TSA Conference:
'TSA, Unveiling the Potential in YOU!'
Florida TSA Says the Sky's the Limit in Orlando

TSA Members: You should be making your "list" and checking it twice. The holidays and winter break are history now, so what list should you make, you ask? Your "TSA List" for your upcoming trip to Orlando from June 25—29. Be a part of the best national conference ever as TSA celebrates its 25th Anniversary at the National TSA Conference at the Rosen Centre Hotel.

We'll be "Unveiling The Potential In YOU!" as you enter technology education competitions that you prepared for all school year. Although Orlando is best known throughout the world for its theme parks, Florida continues to be a diverse destination, which offers tourism opportunities such as museums, Kennedy Space Center, great restaurants, tropical settings, and more.

If time allows, maybe your parent or chaperone will let you visit the home of Mickey, Minnie, Donald, and Daisy.

Be on the lookout for your TSA Conference Information Booklet, which will be sent to your chapter advisor soon. Here is the conference's tentative schedule:

Tuesday, June 24
TSA, Inc. Board of Directors Meeting
National TSA Officers Meet

Wednesday, June 25
Conference Registration
Officer Candidates Meeting
Display Event Check-in
Advisors Orientation Meeting
TSA Mixer

**For more information, click on
www.tsaweb.org**

Thursday, June 26
Opening General Session
Special Interest Sessions
Competitive Events
TSA Alumni/Senior Reception

Friday, June 27
Competitive Events
Business/Education Fair
Special Interest Sessions
Corporate Board Meeting
General Session II
VIP Reception

Saturday, June 28
General Session III/Annual Business Meeting
Special Interest Sessions
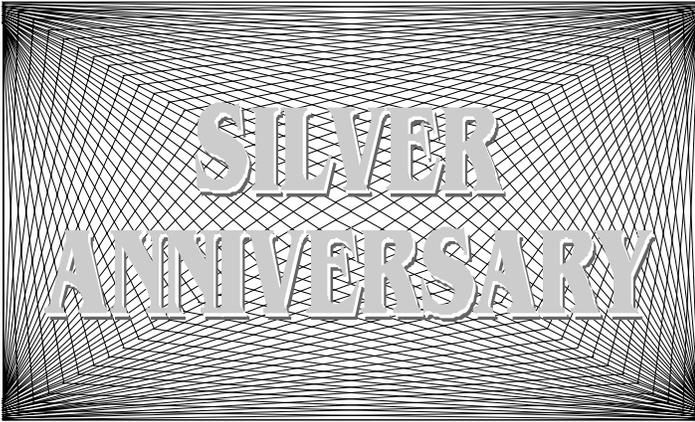Competitive Events
State Advisor Forum
25th Anniversary Dance

Sunday, June 29
General Session IV/Awards Ceremony
New Board of Directors Meeting

25th Anniversary Fund To Provide Chance For Schools To Charter

Pitsco President Harvey Dean, longtime TSA supporter, is offering a challenge grant of $10,000 if other TSA supporters can match a collective $10,000. We plan to achieve this goal! To learn more, check out the TSA website @ **www.tsaweb.org,** click on conferences and programs.

El Campo High School 10th grader Tim Dufner, TSA Advisor Ronnie Ormand's student, assembles the landing gear of his radio control plane.

El Campo High TSA Students Work On Wings
Aerial Acrobatics Make Everyone's Spirits Soar

TSA students in Ronnie Ormand's class had to share the backyard of Myatt Elementary School with another 1,000 students and adults, all of whom came to watch the Bay Area Model Airplane club members demonstrate flying techniques of their radio-controlled planes.

Ormand, a TSA advisor at El Campo High School in El Campo, Texas, didn't save the aerial acrobatics, zipping and dipping of the planes just for his Energy, Power and Transportation students. His entire school district and the community were invited to share the fun of fancy flight.

"This gives [the students] a chance to learn about the aerodynamics and principles of flight, " Ormand, a TSA advisor for 19 years, commented to a reporter covering the event for the *El Campo Leader-News*. "They are going to be building these things from the bottom up."

Pilot John Garr took a break from flying to explain that radio-controlled planes are not only toys. The principles of aerodynamics, small engine construction, woodwork, electronics are just some of the educational dimensions of learning to build and fly RC planes. Radio-controlled planes also serve as surveillance equipment for the military, Garr explained.

Chapter News

Illinois -- TSA Students Attend Tech Show

Newark Community High School's TSA Chapter sent 11 students to the 75th International Manufacturing Technology Show at McCormick Place in Chicago.

About 1,300 exhibitors displayed various products and machinery. Michael Labhart, of Newark, explained his expertise in sheet metal cutting using a high strength laser, not a blade.

Almost every piece of machinery on hand was accompanied by a personal computer. The computers took commands entered by the users on each machine and then executed those commands. The purpose of this show was to demonstrate new products, software, tools and machines to people working for companies that might need new machinery to produce products. Although students were not potential buyers, TSA student Maren Batt enjoyed learning about new tools. The Cimeore Romer intrigued Maren. The Romer is used to measure distances on products to make sure that they are suitable, such as cars or skateboards.

Delaware -- A Week At The Shore

Delaware TSA students had plenty of time to recover -- with plenty of enthusiasm -- from our altitude sickness from attending the national conference last June in Denver. Later in the summer, TSA state officers spent a week at the shore and had a chance to interact, work and learn. Activities such as a scavenger hunt, etiquette lessons, and various others taught skills that included teamwork, public behavior, and personal organization.

At the National TSA Leadership Conference, which took place in Oct. 2002 in Reston, VA, Delaware sent more representatives than any other state. State officers and officer-hopefuls joined the 15 other states for the training weekend. This prepared us for our statewide fall training, which attracted people from many Delaware schools. It was successful, and we hope our spring State Conference will run as smoothly.

--Shawn Nicholson, State Reporter

Pennsylvania -- TSA Membership At Record High

Canon McMillan High School has never had as many TSA members as it does this year. We have 43 members, and Mr. Nickovich, our advisor, plans to make sure every member participates in at least two events. Many members are new, but there are still a lot of TSA veterans. The Chapter Officers are: President Ryan Jerico, senior; Vice President Sara Wilbrink, junior; Treasurer Alex Moore, junior; Sergeant at Arms Maryanne Dellasalla, sophomore; and Secretary Jenna Derrico, sophomore. The Cannon McMillan Chapter is also proud of the three State Officers who are also their Chapter Officers: Sara Wilbrink, State Reporter; Ryan Jerico, State Parliamentarian; and Alex Moore, State Treasurer. Canon McMillan attends Regionals on Friday, Feb. 21, and can't wait to get out there and compete.

--Sara Wilbrink, State Reporter

New TSA High School Technology Competitive Events
Spark Imagination, Create Challenge

by Sid Rader, *DTE (Distinguished Technology Educator, designated by the International Technology Education Association; Curriculum Resource Committee member, TSA Advisor*

All of TSA's new and revised events are designed to increase opportunities for students to pursue their interests and develop their technological literacy. Indeed, this new edition of *High School Technology Activities, The Official TSA Competitive Events Guide* offers straightforward and exciting activities that will capture your imagination and challenge you to do your best.

The Big Picture

The 2002-2004 edition of *TSA High School Technology Activities* includes five new events that help develop technological literacy through math, science, and technology. These exciting events cover the following areas:

- agriculture and biotechnology
- computer animation of engineering or architectural subjects
- engineering design
- medical technologies
- membership recruitment (marketing)

The Details

Advances in technology have had tremendous impact in agriculture and biotechnology. Agriculture is easy, but just what is biotechnology? As defined in the Standards for Technological Literacy, biotechnology is "any technique that uses living organisms (or parts of organisms) to make products, improve plants or animals, or to develop microorganisms for specific uses." Agricultural and related biotechnologies are being applied to solve difficult problems such as world hunger through increasing crop yields and developing disease-resistant plants. Critical areas such as the wise use of our planet's resources and the safe use of genetic engineering are being advanced through appropriate applications of technology. The new high school **Agriculture and Biotechnology Design** event allows you to explore technology's impact in the farmer's field, under the microscope, or in an artificial ecosystem. As a participant in this event, you choose a contemporary agriculture or biotechnology problem on which to conduct research, document your efforts, and create a display. If you'd like, a model or prototype of your solution may be included in the display.

If you're into CAD, you'll be pleased to know that TSA's computer-aided design events took a big step forward with the addition of a whole new animation component. The previous two-dimensional and three-dimensional categories have been grouped in **Computer-Aided Design, 2D/3D,** in which participants develop computer-generated graphics in one of two categories, Architectural 2D or Engineering 3D. In **Computer-Aided Design, Animation**, you'll be asked to develop animated representations of engineering or architectural subjects. Both of these intense, on-site events showcase your skill in taking a design project from start to finish.

Engineering Design, which replaces the TSA/NEDC event, requires you to work as part of a design team on a solution that incorporates the application of scientific and mathematical principles, that demonstrates application in areas of technology, and that assesses the impact of the solution on society and the environment. Your team can choose its own topic. Anything from everyday challenges we all face to challenges faced by special populations is fair game. Through use of a model/prototype, display, and design notebook, your team explains how it has solved the problem and how the solution impacts society and the environment. When you make it to the finalist stage, your team demonstrates the problem and solution in a timed presentation.

Advances in medical technology have vastly improved the length and quality of human life. Every day offers promise of new hope for those suffering debilitating illness or injury. The new **Medical Technology** event asks you to conduct research on a contemporary medical technology problem, document your work, and create a display. Again, there is plenty of flexibility in choosing a topic. Choose one that is meaningful to you or that you find especially intriguing.

Your solution can be the result of your own research or a recreation or simulation of research performed by the scientific community. Your entry may include a model or prototype as part of the display, and you can choose to work alone or as part of a team.

Knowledge and interest in TSA activities at all levels is key to the continued strength and growth of the organization. In **Membership Recruitment Challenge,** students work as a team to design and produce promotional materials such as brochures, mailers, and posters and devise a membership plan to help start new chapters. A plan is one thing; implementation is another. This event wants you to put your plan into action and *prove* it is a good one! This is the only team event in which team members do *not* have to be from the same chapter, but from the same state.

You can get the details about these and all of TSA's events in *High School Technology Activities, The Official TSA Competitive Events Guide*, available to advisors and students through National TSA for $25 per copy. You can order by phone at 703/860-9000 or online at **www.tsaweb.org**. The website offers brief descriptions of all TSA competitive events and information about other activities, too.

Check out the event themes for 2003/2004 as well as
competitive event overviews for Middle School events and
High School events by visiting
www.tsaweb.org/competitive_events

Students Enjoy Creating Professional Architectural Models Using *Chief Architect*

Chief Architect — powerful architectural modeling, rendering and design software — is being used in technology education classrooms throughout the country. Students who use *Chief Architect* appreciate how easily they can create 3D architectural models using parametric modeling in so little time. The customizable toolbars make it easy for students to select icons to draw walls, doors and windows. With the click and drag of the mouse, walls are easily created, and doors and windows are dropped into place. With more than 7,000 symbols to choose from in "The Library," students are able to customize their entire design by choosing specific textures for roofs and walls, window styles, skylights, staircases, custom countertops, door styles, cabinets and much more. Students particularly like the automatic features including roofing, framing, and especially dimensioning, which is painstaking in other architectural CAD programs. *Chief Architect* is packed with feature-rich tools that get students excited about learning architectural design and modeling.

This program appeals to students who are interested in residential design, interior design and building trades. Tech Ed Concepts, Inc. (TEC), a supporter of TSA, is the North American Academic Distributor of *Chief Architect.* TEC provides the full-commercial version of *Chief Architect* to students for a reasonable price.

Richard Amarosa, President of TEC stated, "We feel that introducing architectural engineering to young people at an early age is important for students' future career choices. Oftentimes, students are not introduced to architectural software until they arrive at the post-secondary level of education. Therefore, young people need to understand the concepts of architectural design and how it is going to benefit them in the future. *Chief Architect* was written to allow new, intermediate and advanced users to quickly and intuitively solve design issues in record time."

For information, visit TEC @ www.TECedu.com.

Editor's Note: This column is a TSA Business Partner benefit from the 2002 National TSA Conference.

At the Directions 2002 National TSA Conference in Reston, VA, last October, these students were on top of things. Left to right from bottom: Zach, Derek, Devon; middle: Sumeeta and Val; Arti (top).

Photo provided by Valerie Donelan

Photo Courtesy of Christine Wallace, Tech Ed Concepts
This house was designed using the *Chief Architect* program.

TSA's VA Beach Middle School Students Deck The Halls, Spread Good Cheer

By Stacy Parker

Virginia Beach, VA – Residents of Virginia Beach Healthcare & Rehabilitation Center were in for a treat Dec. 19 when a group of students knocked on their room doors.

"I appreciate you coming and brightening my day," said Carolyn Hastings, 89, as the youngsters gathered around her bed. "I appreciate it more than you know."

Teenagers in Virginia Beach Middle School's Technology Student Association committed after-school hours to a project they hoped would bring holiday cheer to every person living in the center at 1801 Camelot Drive.

"Most people think about children during the holidays, but there are adults here too in need of love," said Gina Allain, therapeutic recreation director.

Wearing crisp, navy blue TSA uniforms, the students greeted residents with hand-made tree ornaments.

TSA met for an hour and a half after school one day a week to create the angels, bears, trees and snowflakes. Using stencils, they traced the designs on Plexiglas. They cut the figures out with a band saw and laid them on paper. Then they spray-painted them blue, green and purple, sprinkled glitter on the surface while they were wet, and tied a ribbon through a hole at the top of the ornament.

In about three weeks, they had decorated more than 200.

"I wanted the students to understand what it's like when you get older and to give back in return," said Enrique Wiggins, TSA advisor and a technology education teacher at Virginia Beach Middle School, who organized the field trip.

The teenagers' uneasy expressions softened as they entered the resident's room. They were often greeted with smiles and appreciation. Some of the nine students lingered behind the group to chat; others talked about their grandparents who live in nursing homes.

"It makes me happy to see them happy," said Raisa Roxas, 13. Her classmate and friend, Markita Kearney, 14, agreed.

Photo by Stacy Parker

(L-R) Alea Ramsey, TSA Advisor Enrique Wiggins, Robert Golik (holding box) and Keisha Murphy along with a dozen other students offered ornaments to more than 200 center residents.

"Everyone should be happy [for the winter holiday]," she said.

Formerly Camelot Hall Nursing Home, the medical facility off First Colonial Road provides care for 214 adults ranging in age from 20 to 101. The healthcare center is suited for permanent residence, but many individuals stay for a shorter period during rehabilitation. The holidays can be a lonely time of year for some of the residents who have few visitors.

Other groups have brought holiday cheer to Virginia Beach Healthcare & Rehabilitation Center this year.

"It's a lovely thing to do," said Hastings, a former Norfolk resident who now receives care at the center. "It's wonderful when a child thinks about people in the hospital, especially the elderly."

Chapter News

Alabama -- Students Attend Leadership Conference

During Robertsdale High School TSA Chapter's first organizational meeting in August, we recruited members and determined interest for open officer positions.

During the September meeting, we elected our 2002-2003 school year officers. They are: Philip Cieloha and Joshua Rice, who will serve as Co-Presidents; Ty Jordan, Vice-President; Nick Weber, Secretary; Madalyn Hankins, Treasurer; Kyle Boyington, Reporter; and Tyler Mitchell, Sergeant-at-Arms. We also elected the following committee chairpersons: Ben Prockup, Free Enterprise Committee; Josh Estill, Membership/Finance Committee; Roger Booth, Service Committee; Michael Lucas, Public Relations; William Burgett, Recognition Committee and Josh Shoaf, Recreation Committee.

In October, we sold doughnuts every other Friday in our school parking lot to raise funds for six of our seven officers to attend the J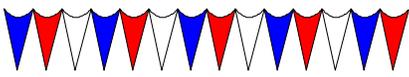oint Development Leadership Conference that took place on Nov. 16, 2002, in Montgomery, Alabama. This conference is available to prospective leaders from all career/technical student organizations and is designed to provide leadership development. Alabama looks to career/technical graduates for experienced leaders prepared to grow and make an impact in tomorrow's competitive world. The conference motivates students and advisors to enjoy a day of leadership development workshops focusing on career skill building, self-improvement, communication, and chapter management.

Kyle Boyington, Chapter Reporter

Kansas -- TSA Students Tour Emporia State University

Students from across Kansas participated in the TSA Fall Leadership Conference, Sept. 26, at Emporia State University. The morning session included activities led by state officers and Steve Waddell for TSA members. Advisors had their own meeting. The student's afternoon session included a tour of Emporia State University and an overview of new competitive events.

--Kansas TSA Catalyst

Chapter News

Oklahoma -- Students Talk On Radio About TSA

Kicking off a new year, the Woodward Middle School Chapter has been busy to make this year the best that it can be. We have launched several fundraisers that will help us with upcoming events, and precious time has been spent perfecting our competitive events. One fundraiser we have even put our own sweat and elbow grease into was making birdhouses and reindeers.

Earlier this fall we attended a statewide Fall Leadership Conference. We learned so many things that will help us succeed later on. On our mission to educate our town about the knowledge and wonders of TSA, we've talked on local radio shows about the part that TSA has in our lives. Within a few years, when our TSA involvement starts to fade as another era in our lives begin, the memories and experiences that we have had along the way will last a lifetime.

--Stephanie Day, State Reporter

Florida -- Students Make Wooden Doorstops For Teachers

At our last meeting, we the TSA Chapter of Madeira Beach Middle School of Pinellas County, came up with some fundraising ideas. Our first idea is to make wooden doorstops. We are going to have the TSA members make doorstops out of wood for each classroom. After making the wooden doorstops we are going to paint them and put the room number on them before we give them to teachers. When we give the wooden doorstops to the teachers in January or February we are going to ask them to make a donation to TSA.

— April Farley, Chapter Reporter, Madeira Beach Middle School of Pinellas County

Submit your chapter's news and photos for the Spring *School Scene* 2003 edition to *jlandsman@tsaweb.org* by March 1.

TSA MEMBERSHIP AFFILIATION POLICIES

(As determined by the TSA, Inc. Board of Directors)

1. There is a recommended minimum of ten (10) members per chapter.
2. Membership is not processed until all dues (national and state) are paid in full. State dues received at the national TSA office will not be remitted until all dues are paid in full.
3. All membership dues must accompany the TSA affiliation form when it is submitted. An affiliation form received without dues is not processed and neither the chapter nor its members are in good standing until all dues are paid. TSA membership dues are nonrefundable and nontransferable.
4. TSA operates under a unified dues policy, whereby all members must affiliate and pay applicable dues at the **local, state,** and **national** level. Individual dues at all levels (high school, middle school and elementary) consist of local chapter dues (determined by the chapter), state dues (determined by the state delegation), and national dues (determined by TSA, Inc.)
5. Membership is processed on National TSA membership affiliation forms only. State affiliation forms that differ from the National TSA affiliation form may be deemed unacceptable.
6. Chapter membership type (individual or CAP) must be the same at both the state and national levels.
7. A chapter may upgrade its membership from individual to CAP membership by paying the monetary difference to equal the CAP membership fee.
8. A chapter that has paid individual membership fees in excess of the CAP fee may change to CAP status. All new members are classified as additional members.
9. A student may hold membership in only one local chapter and only one state TSA delegation.
10. Any chapter reporting National TSA membership that does not have a state TSA delegation is placed in the chapter-at-large category. All chapters in the chapter-at-large category have rights and privileges of any other National TSA chapter, with the exception of state delegation officer representation.
11. Members of chapters in the chapter-at-large category are considered members in good standing when all applicable chapter and National TSA dues are paid in full.
12. TSA membership must be affiliated through a local state-registered education district. "Home-schooled" students may become members through an agreement with an affiliated chapter.
13. A written notification of transfer must be sent to the national TSA office if a student has paid individual membership dues and transfers to another chapter/school.
14. Advisors of TSA chapters must be registered state-certified educators working in existing school facilities. It is recommended that a technology education teacher serve as a TSA chapter advisor. However, in cases where there is no such interested teacher, a state-certified educator may be appointed by the school's principal. The appointed advisor has the same rights and privileges of any advisor as long as s/he maintains the chapter in good standing.
15. A chapter level (middle school or high school) is selected by the advisor on the affiliation form each year. An advisor must notify National TSA in writing if there is a change in chapter level status or may elect to affiliate a second level chapter later in the school year. If a chapter level is not indicated on the affiliation form, National TSA assigns chapter level based on the grades of the students represented.
16. A school may affiliate more than one chapter provided that:
    a. The chapters represent different levels, i.e., a middle school level and a high school level may physically exist at one school, but not two middle school levels;
    b. separate membership affiliation forms are submitted to the national TSA office;
    c. separate registration forms for the national conference are submitted to the national TSA office.
17. State advisors/coordinators must send all original chapter affiliation forms for any direct and/or indirect membership affiliations to the National TSA office within 45 days of receiving them at a state department of education and/or state delegation TSA office.
18. Any chapter affiliation form (direct or indirect) received at the National TSA office must be personally completed by the chapter advisor (or an appointed officer.) The chapter advisor's own signature must appear on the submitted original form sent to the National TSA office.

Three Kinds of National TSA Dress Code Explained, Required At TSA Events

Chapter and state advisors, and parents and chaperones, are responsible for seeing that all TSA student members wear official TSA attire, professional TSA attire, or business casual TSA attire as occasions may require. These three kinds of TSA attire are considered appropriate dress for related conference activities and public appearances. Since adults —advisors, parents, guests— serve as role models at TSA conferences and activities, they are expected to dress appropriately for all TSA-related events. Students must adhere to the TSA dress code requirements as follows:

During general sessions at the national conference, student members must wear official TSA attire, professional TSA attire, or business casual TSA attire. Adults must dress appropriately.

TSA contestants must refer to the *TSA Curricular Resource Guides* for specific attire required for each competition and in the competitive events attire section in the general rules.

Official TSA Attire (most formal)
Blazer: navy blue with official TSA patch
Ties: scarlet red imprinted with official TSA logo (for males and females)
Shirt or blouse: white, button-up with turned down collar
Pants or skirt: light gray
Dark socks: males only (black or dark blue)
Shoes: black dress shoes
(unacceptable: athletic shoes, combat or work boots)
Sandals: females only may wear black open toe shoes or sandals

Professional TSA Attire (less formal)
Shirt: males or females, button-up with turned down collar (unacceptable: tee-shirt, polo or golf shirt)
Blouses: females only
Ties: males required, females optional
Dress pants (unacceptable: jeans, baggy pants, exterior pocket pants)
Dresses/skirts: females only (length even with tips of one's fingers)
Dark socks: males only (black or dark blue)
Shoes: dress shoes or boots
(unacceptable: athletic shoes, combat or work boots)
Sandals: females only may wear open toe shoes or sandals

Business Casual TSA Attire (least formal)
Same as professional TSA attire, however a tie is not required, and the shirt or blouse may be a polo or golf shirt. (Unacceptable: tee-shirt or shorts).

Technology Trivia

1.) What year was the T.V. invented?
a.) 1840   b.) 1945   c.) 1845   d. 1940
2.) What should you do right after you write a document on a computer?
a.) spell check   b.) go to print   c.) show someone   d.) save it
3.) In which decade was the first electronic digital computer built?
a.) 1840s   b.) 1940s   c.) 1560s   d.) 1970s
4.) When was the first book published?
a.) 1700s b.) 1800s. c.) 1500s d.) 1600s
5.) How many pounds of paper, is the average amount used per person, per year?
a.) 1,055 lbs.   b.) 660 lbs.   c.)107 lbs.   d.) 10 lbs.   e.) 540 lbs.

Answer Key
1. The T.V. was invented in 1940.
2. After — as well as during the time you write a document on a computer, you should save the file.
3. The first electronic digital computer was built in the 1940s.
4. The first book was published in the 1600s.
5. The average person uses at least 660 lbs of paper per year.