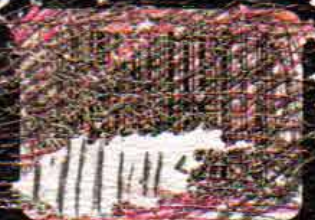
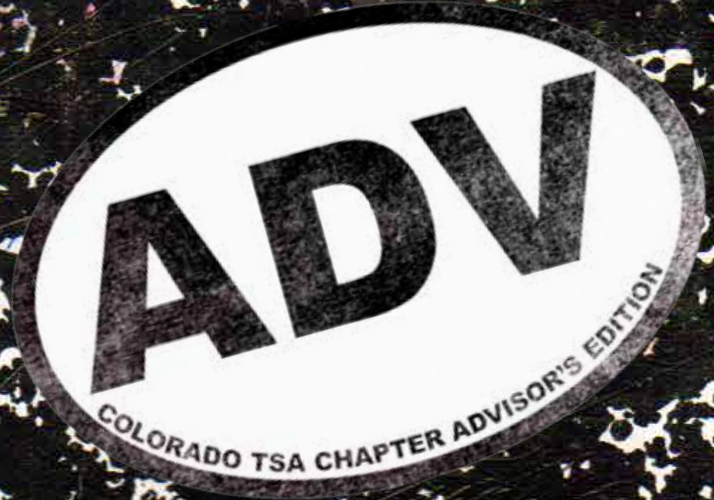


REVISED
AUG. 2014



CALL TO CONFERENCE +
STATE COMPETITIVE
EVENTS GUIDE

2014-2015





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State Competitive
Events Guide
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COLORADO TECHNOLOGY STUDENT ASSOCIATION
9101 EAST LOWRY BOULEVARD, DENVER, CO 80230 // 720-858-2794

Letter from the
State
Advisor

Dear Chapter Advisors:

Mark your calendars now for **February 19-21, 2015** for the 2015 Colorado TSA State Leadership Exposition. This year, the conference will be held at the Denver Marriott Tech Center in Denver, CO.

There's a lot in store for this, the 29th year of Colorado TSA! Our organization continues to grow at a fast pace and that has reviewing and evaluating how we can do things better at the state conference and how we can accommodate future growth. As a result, you will see several significant changes this year including changes in the schedule and judging orientations! The COTSA State Officer team is also reaching out directly to your students to make personal connections with each of our chapters. All advisors are being asked to provide the name and contact emails of their chapter president. Please help them help you and your students!

Please make note of all the deadlines listed in this Call to Conference. **There is no flexibility with any posted deadlines and there are no exceptions! Failure to meet stated deadlines may prevent your chapter from participating in this year's conference!!** Please use the information in this document to keep track of your TSA chapter's progress toward the deadlines throughout the year; we have provided you a chart showing the important dates and deadlines.



ADVISORS!!! Included in this document are the forms required by the state association and the hotel for participation in the state conference. Please have all conference attendees complete these forms and return them to you. **Once you have collected all the forms for your chapter, you will need to submit all the forms IN PDF FORM to me at the state office. DO NOT SEND PAPER COPIES to the state office!** We are attempting to streamline the paperwork process and reduce delays in getting paperwork in on time.

NOTE: If your paperwork and/or payment are not received by the deadlines stated in this document, YOUR CHAPTER WILL NOT BE ALLOWED TO PARTICIPATE IN THE CONFERENCE! We understand that it takes time to process checks and get forms back, so please PLAN AHEAD!!!

We have created several versions of this Call to Conference/Competitive Events Guide – each one contains the information needed to prepare for a successful state conference. For STATE-ONLY events, the rules have been reviewed and revised. The rules and rubrics for state-only events are included in this guide.

Regardless of what level (middle or high school) you are, advisors and students should REVIEW AND CAREFULLY READ ALL THE EVENT GUIDELINES AND SPECIFICATIONS THOROUGHLY! Do not assume the rules are the same as last year! Minor tweaks and revisions happen throughout the year as well as during the bi-annual revisions. Updates and clarifications to national competitive event rules are made throughout the year and are posted online at the national TSA website at <http://www.tsaweb.org/Updates-and-Clarification>. Please visit this website often to stay on top of all updates and clarifications. You don't want a disqualification because of outdated rulebooks. They include:

- The ADVISOR EDITION -- the most comprehensive document, containing all the official conference forms (including hotel reservation forms, medical release, code of conduct forms, etc.), chapter deadline information, competitive event rules for the *state-only* events (which have been reviewed and revised as needed) as well as the conference schedule, links to the update page, and the student documentation style guide.
- The STUDENT EDITION – this edition contains everything STUDENTS need for the state conference including competitive event rules for the *state-only* events (which have been reviewed and revised as needed) as well as the conference schedule, links to the update page, and the documentation style guide.

STATE ADVISOR LETTER
PAGE TWO

- The PARENT EDITION – this edition contains information on the conference PARENTS need to know, including where and when to pick up students from the conference and the forms they will need to complete for COTSA.

That brings us to another important issue: Parent attendance at the state conference. Colorado TSA understands the importance and value parents have to our members. We appreciate their encouragement, enthusiasm and support. However, during the 2014 conference there were several instances where we had parents and family members who became unruly and refused to comply with conference rules and regulations. Some even resorted to using profanity and threatening physical violence to TSA alumni and staff as well as hotel staff. Additionally, we had so many parents and family members in attendance that the area we had reserved for them was quickly overwhelmed and they spilled into adjoining spaces including the lobby (preventing guests from checking into/out of the hotel), The Lift Restaurant (preventing it from operating properly), and into the decorative planters in the atrium (destroying the landscaping).

With our growing numbers, it is understandable that we would also have a growing number of parents who wish to cheer on their students as they earn their medals. However, that number of parents just showing up has now exceeded the capacity our hotel can handle and we can no longer accommodate them. **Therefore, this year, we are restricting access to all TSA events to officially registered and badged conference participants ONLY. We will not provide additional seating in the atrium for parents and family, nor will we provide a video feed to the atrium area. Just like any professional conference, any individual who is not an officially registered participant in the conference and does not have an official TSA 2015 Conference registration badge WILL NOT be admitted to any TSA event at the conference hotel.**

We understand that people do come to pick up their students after the awards ceremony to help chapters save money on transportation costs, and that is acceptable. However, we cannot have large numbers of parents and family members clog the lobby, restaurant or atrium areas of the hotel waiting on their students. If parents and family members come to pick up your TSA members, they will have to wait outside the hotel in the hotel parking lot (they will have to pay for parking and put their car in a parking space). Waiting in loading zones or fire lanes will not be allowed. To minimize congestion in the parking lot, you should plan on having your parents arrive as close to 2:00 p.m. as possible.

We regret having to take this measure, but we are guests in the Marriott's house and we need to be respectful of their facilities as well as comply with local fire codes and laws. In the long run, this will make our conference a much more safe and pleasant place to be.

I also encourage you and your students to participate with COTSA on social media. Please join us on Facebook and Twitter to get all the latest news and updates (Twitter: Colorado TSA; Facebook: Colorado Technology Student Association; and Instagram: colorado_tsa) and share pictures and stories! Plus, visit our web page for updates at: www.ctsoadvisor.com/cotsa/.

I wish you the best of luck this year and look forward to working with all of you. If you have any questions or comments, please feel free to contact me at (720) 858-2794 or via email at: tony.raymond@cccs.edu.

Best regards,



Tony Raymond
COTSA State Advisor

About COTSA

The 29th Annual Colorado TSA State Leadership Exposition is brought to you courtesy of:



COLORADO COMMUNITY COLLEGE SYSTEM

The Colorado Technology Student Association's State Leadership Exposition is open to all Middle/Junior High and High School Technology Student Association chapters in the state. The mission of the Colorado Technology Student Association is to develop leadership and personal growth in a technological world. In order to help our members achieve this goal; we offer recognition in both technology and leadership arenas. We believe participating in a carefully designed competition, students learn how to compete by striving to be the best.

In this book, you will find several diverse events that have been specifically developed for students in grades 6-12 (and in some cases even for elementary students) by experienced technology education teachers.

Colorado TSA State Advisory Committee

Lori Bollendonk, Judging Coordinator
Michael Brakey, COTSA Alumni
Jeff Branson, SparkFun

Paul Clinton, Teacher, Cherokee Trail HS
Dr. Michael DeMiranda, Colorado State University
Dr. Sarah Heath, ACTE President
Mimi Leonard, CTE Director, Littleton Public Schools
David McMullen, Teacher, Arapahoe HS
Jay Moore, CTE Director, Cherry Creek Schools
Michelle Moore, Grandview High School
Ben Nesbitt, Program Director, Skilled Trades, CCCS
Jill Parker, Teacher, Elizabeth MS
Dr. Myka Raymond, State Officer Advisor, Laredo MS
Tony Raymond, COTSA State Advisor, CCCS
Lexi Schilling, COTSA Alumni
Konnie Terry, KSE Imprints

We hope you find this Guidebook as a useful tool in motivating and educating your students.

For more information, please contact:

Tony Raymond - State Advisor

Phone: 720-858-2794

Email: tony.raymond@cccs.edu

Dr. Myka Raymond - State Officer Advisor

Phone: 720-886-5112

Email: myka.raymond@gmail.com

The State Leadership Exposition will be held February 19-21, 2015 at the Marriott Denver Tech Center, 4900 South Syracuse, Denver, CO 80237. The theme for the State Conference this year will be: "Designing Your Dreams." Please Note: This theme is the same as the TSA National Conference.



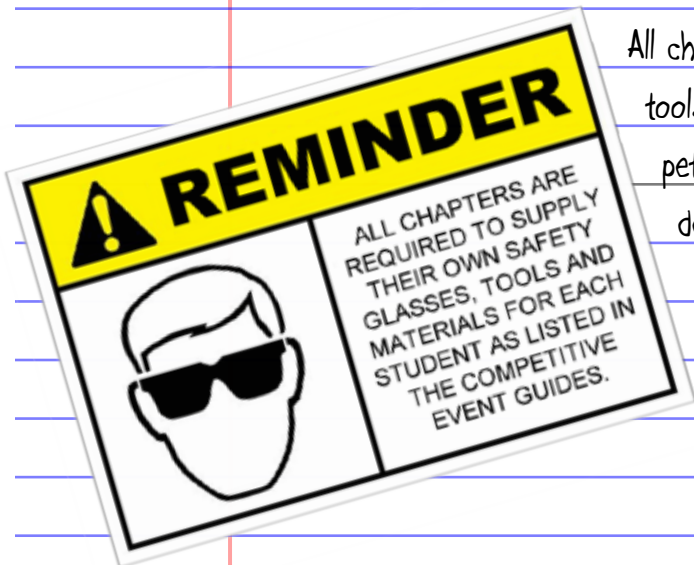
For all competitive event themes for the national conference, please go to: www.tsaweb.org/Themes-and-Problems.

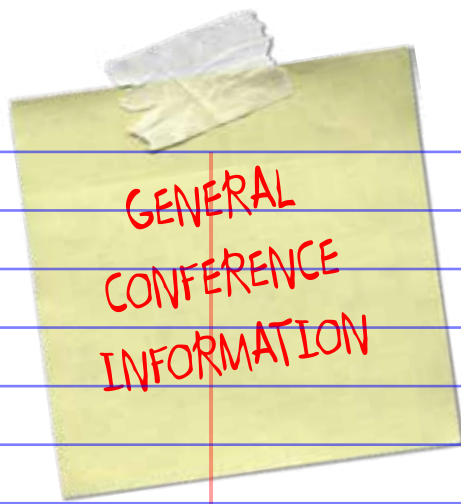
You can access the COTSA website at www.ctsoadvisor.com/cotsa. Please use this source to access any needed information or forms. The website is updated frequently and contains news and updates!

If a student is interested in running for state office, they will need to apply online at: bit.ly/1qlaBIT. The form can also be accessed on the COTSA news page at www.ctsoadvisor.com/cotsa/index.html.

Please be mindful that recommendation forms required from adults must be sent from the adults' own email accounts. Recommendations not sent from the proper emails will be rejected and the application will not be accepted. You can also find the link to the application on the state website, www.cotsa.ccs.edu or www.ctsoadvisor.com/cotsa/.

All chapters are required to supply their own safety glasses, tools and materials for each student as listed in the competitive event guides. Check with contest descriptions for details.





NATIONAL CHAPTER AFFILIATION

The first step to becoming an official TSA chapter is to affiliate with the National TSA organization. Go to: www.registermychapter.com/tsa/nat/AffHelp.aspx. Affiliation must be completed by **January 1, 2015** so your chapter can participate in the Colorado State

Technology Leadership Exposition. Chapters that are not registered (with all documentation completed and both state and national dues paid) with National TSA will not be allowed to compete at the state conference. *Chapters need to affiliate with National TSA in order to receive the official TSA Competitive Events Guide for either middle or high school.*

STATE LEADERSHIP EXPOSITION EVENT REGISTRATION

In order to register for the Colorado TSA State Leadership Exposition, AN ADVISOR must affiliate the chapter with National TSA. To affiliate with National TSA, go to: www.registermychapter.com/tsa/nat/AffHelp.aspx and follow the on-screen instructions.

Once you have received confirmation that your chapter has officially affiliated with National TSA, you may register for the state conference. Registration for the conference MUST also be completed online. There will be NO ON SITE REGISTRATION.

The online registration is quick and easy, and it allows an advisor to edit a chapter's competitions at the click of a mouse. All conference registration and changes must be completed by midnight on **January 16, 2015**. THERE WILL BE NO EXCEPTIONS!!

To begin the registration process for the state conference, go to: www.registermychapter.com/tsa/co/Main.asp, and click on CONFERENCE REGISTRATION. All registration materials, including online registration, printed housing lists, liability forms, MUST be completed and turned in along with payment to the state office or hotel PRIOR to the deadlines published in this guide! No forms or payments will be accepted at the conference. **NO EXCEPTIONS WILL BE ALLOWED!**



PLEASE NOTE: If a chapter has not paid the conference registration fee by the published deadline, they will NOT be permitted to participate in the conference.

Payment can be made by check, money order, or credit card. No purchase orders will be accepted. Once online registration is completed, the computer system will allow chapter advisors to print out a copy of the registration invoice. Advisors won't get another copy.

FEES:

- Early Bird Registration (registration completed prior to January 9, 2015): \$85
- Late Registration (registration after January 9, but before January 16): \$90

ALL ATTENDEES, including students, teachers, advisors, parents and chaperones who are actively taking part in the conference activities are required to pay the registration fee. Only officially registered and badged conference participants will be allowed in to TSA conference activities. Due to the situation outlined in the State Advisor's letter on pages 4-5 of this guide, we will not provide any accommodations for guests wishing to see the awards ceremony. There will be no seating or video feed for the atrium area at the hotel on Saturday morning during the awards ceremony. Parents coming to pick up their students following the awards ceremony must wait outside the hotel in the hotel parking lot. Please note that waiting in fire lanes and loading zones will not be permitted. **NOTE: Parents of elementary buddies will need to check in to receive special credentials at Conference Headquarters on Saturday and may stay through the awards ceremony.**

CONFERENCE REGISTRATION (CONT.)

ALL PAYMENTS for conference registration must be received by **FEBRUARY 1, 2015** in order for a chapter to participate.

Registration includes admittance to all conference activities, and includes a box lunch during the competition on Friday. Please note:

When registering online, you will have the option to indicate (via the SPECIAL NEEDS window) to indicate if an attendee has a special dietary need. It is the advisor's responsibility to indicate if a special meal (e.g., gluten free, vegetarian, etc.) is required. Additionally, it's also good to confirm with the State Advisor your special needs requests. **NO ADDITIONAL SPECIAL MEALS WILL BE PREPARED OTHER THAN THOSE REQUESTED IN ADVANCE!** If you wish to purchase extra meal tickets for Friday, they can be ordered during the registration process for \$35.00.

Payment Options

Payment for conference registration needs to be made prior to February 1, 2015 in order for a chapter to be allowed to participate in the conference. **No payments will be accepted on site!** Purchase orders cannot and will not be accepted as a form of payment for registration. Payment for **REGISTRATION ONLY** can be made via check or credit card. Payment for hotel rooms is handled directly with the hotel.

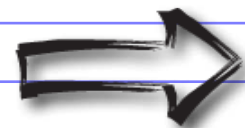
How To Pay By Check:

IF YOU ARE PAYING BY CHECK:

1. Make the check payable to COLORADO TSA.
2. Mail the check **AND** a copy of the invoice to:

Colorado TSA
9101 E. Lowry Blvd.
Denver, CO 80230

For fast, easy and secure payment, and to ensure your registration is paid for by the deadline, use the credit card option as detailed on the next page!



PAYMENT OPTIONS (CONTINUED)

How To Pay by Credit Card:

You can now pay for conference registration (NOT HOTEL ROOMS!) ONLINE by credit card!
Just follow the steps as outlined below!

Colorado TSA State Conference Registration
INVOICE

SCHOOL INFORMATION

ISSUE TO
Colorado TSA
c/o Tony Raymond
9721 S. Loamy Blvd
Denver, CO 80231
720.458.2764

Invoice Date	School #	County	Chapter ID	Region
09/02/14 10:29:25 AM	030			

Description	Quantity	Each	Total
Registration Subtotal	1	\$100.00	\$100.00
Grand Total Due			\$100.00

Print By Name / Email
ID Name / Email
2070001 Raymond, Tony (Admin)

Click to Download

TO PAY YOUR INVOICE BY CREDIT CARD USING OUR ONLINE PAYMENT SYSTEM, CLICK HERE
or by going to [http://www.payments.com/CO14](#)

Complete your Registration. Once you finish registering your TSA chapter for the state conference, click on VIEW REGISTRATION. You'll see a screen that looks like the one at the left. Print out a copy for your records. Note the amount due.

If everything looks right, you can either click on the hyperlink or go to the payment website.

Colorado TSA
"Learning to Live in a Technical World"

Tony Raymond
9721 S. Loamy Blvd
Denver, CO 80231
trey@coloradotsa.org
720.458.2764
http://www.coloradotsa.org

Pay us online

Enter amount: \$100.00 (Invoice Reference Number)

PAY NOW

On the payment website (which looks like the one at the left), enter the amount of the invoice. Click CONTINUE.

On the next screen, in the Invoice/Reference Number box, put the name of your school. Make sure the amount is correct, and select CREDIT CARD as the method of payment.

Colorado TSA
"Learning to Live in a Technical World"

Enter Payment Information

Make Payment in two steps. It's fast, simple and free.

Your Payment Information

Please enter the payment information:

Payment Amount: \$100.00

Payment Method: Credit Card Bank Account

Send payment to: 0000014 [Why can't I change this data?](#)

Email Address:

SEND PAYMENT

Scroll down and you'll see a fields to enter the credit card information. Once you have entered the information, click CONTINUE.

You'll be taken to a confirmation screen. Verify the information is correct and click on SEND PAYMENT. You should receive an email confirmation of your payment.

HOTEL RESERVATIONS

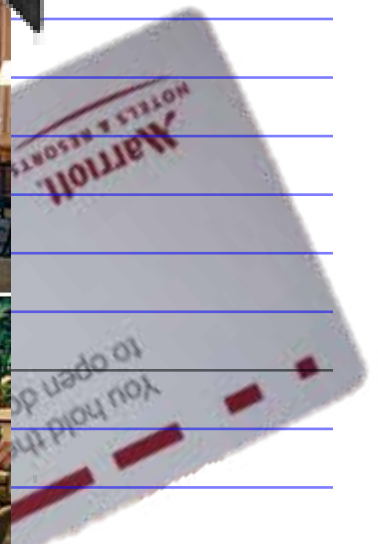
Hotel rooms will cost \$122.00 + 14.75% room tax per night. Tax exemption for state tax will only be honored if payments are made with direct school district funds and if the tax exempt form is completed and turned in. All forms can be downloaded at www.cotsa.ccs.edu or www.ctsoadvisor.com/cotsa/.

A housing payment form, a room list form and the tax exempt form must be completed. All housing forms and reservations must be received by the hotel by: **January 10, 2015**. All housing payments and forms should be sent directly to the hotel (via email or fax) to the attention of Taylor Browning and his fax number is 303-770-6112. If you have any housing questions please contact Taylor at 303-740-2590 via email at taylor.browning@marriott.com.

PLEASE NOTE: FOR SAFETY, SECURITY AND LIABILITY REASONS,
ALL EXPOSITION ATTENDEES MUST STAY AS GUESTS OF THE HOTEL.



Marriott.
DENVER TECH CENTER



**IMPORTANT
DEADLINES!!**

**PLEASE NOTE:
PAYMENT AND REGISTRATION
DEADLINES ARE NOT FLEXIBLE!**

FAILURE TO MEET THESE DEADLINES MAY RESULT IN LATE FEES OR YOUR CHAPTER BEING UNABLE TO COMPETE!

**PLEASE FOLLOW THE
DEADLINES!**

Deadline Date	Task To Be Completed	Done
January 1, 2015	Deadline to complete National affiliation process. Your chapter must be affiliated <i>BEFORE</i> you can register for the state exposition. To affiliate go to: www.tsaweb.org	
October 27, 2014 - January 16, 2015	STATE EXPOSITION REGISTRATION BEGINS! * Early Bird Registration (registration completed prior to Jan. 9, 2015): \$85 * Late Registration (registration after Jan. 9 but before Jan. 16, 2015): \$90 Go to: www.registermychapter.com/tsa/co . All substitutions, additions and changes must be completed by midnight January 16, 2015.	
January 9, 2015	Early Bird registration ends! Registration price goes up after January 9, 2015!	
January 16, 2015	REGISTRATION CLOSSES AT MIDNIGHT - NO REGISTRATIONS OR CHANGES CAN BE MADE AFTER THIS DATE!	
January 16, 2015	The following information is due to the hotel: * Housing Form with School Information * Housing Rooming list * If you are claiming tax exemption you need to include: * Sales Tax Certificate (see page 33 of this guide) * Denver Claim for Exemption Form (see page 33 of this guide) * Credit Card Affidavit (see page 33 of this guide) All hotel information should be sent to: Marriott Denver Tech Center ATTN: Taylor Browning 4900 S. Syracuse Denver, CO 80237 Email: taylor.browning@marriott.com // Fax: 303-770-6112	
February 1, 2015	All state officer applications must be completed and submitted ONLINE and must be received by Dr. Raymond, including reference letters.	
February 1, 2015	All forms and registration payments are due by this date or your chapter will not complete! Payments can be made online with a credit card or you may submit payment by check (it must be received prior to the deadline!). PAYMENT BY CHECK: Colorado TSA 9101 E. Lowry Blvd. Denver, CO 80230 ** Make Checks payable Colorado TSA PAYMENT BY CREDIT CARD: ** See credit card form on page 11	
February 19, 2015	State Exposition registration begins at 3:00 p.m.	
June 28-July 2, 2015	National TSA Conference - Gaylord Texan, Dallas, TX National Registration: www.registermychapter.com/tsa/nat/ConfDefault.aspx	

If you have any questions, please email Tony Raymond at tony.raymond@cccs.edu



COTSA STATE OFFICER INFORMATION

In addition to educating students about technology and its role in our global society, TSA strives to prepare the youth of today for the world of tomorrow by providing various leadership training and development opportunities for its members.

Colorado TSA encourages its members to take an active role in the organization by becoming a State Officer! State officers are critical elements to our association. Receiving extensive leadership training, the state officers serve as ambassadors of our organization and make frequent visits to schools promoting TSA. They are also integral to the planning, preparation and execution of the Fall and State conferences.

If you are a high school student and have attended at least one COTSA state conference (even as a middle school student), then you are eligible to run for state office!

The state officer applications and forms, plus additional information can be found online at: bit.ly/1qlaBIT.

The form can also be accessed on the COTSA news page at www.ctsoadvisor.com/cotsa/index.html.

For more information please contact Dr. Myka Raymond, COTSA State Officer Advisor at myka.raymond@gmail.com, or via phone at 720-886-5112.

← HOW TO
APPLY

JUDGING

As in previous years, all chapter advisors are asked to help judge the various events at the state conference. We endeavor to have additional business and industry people involved with each competition evaluation, but it is essential that EVERYONE helps with these positions to ensure a fair and fun competition for all students. All advisors will be contacted regarding their judging duties at the exposition. If you have judged before and would like to continue judging a particular event, please email Dr. Myka Raymond, the Conference Coordinator at myka.raymond@gmail.com or Tony Raymond, Colorado TSA State Advisor at tony.raymond@cccs.edu. If you have not judged or coordinated an event before, please consider which events you would feel comfortable judging and email either of the above individuals with your preferences. We would like to have all judges in place as early as possible to aid in the conference planning process.

If you know of anyone who would like to assist with judging please send their contact information to: tony.raymond@cccs.edu specifying in which events they have an interest.

This year there will be several JUDGING ORIENTATION SESSIONS periodically throughout the conference just prior to the start of contests to ensure that:

- Judges have read all rules and are familiar with them.
- Judges are clear on expectations for judging the event and scoring.
- All judges can have their questions answered BEFORE there is an issue.
- Provide instructions on how to properly complete score sheets.
- Provide instructions on when scores are due in conference headquarters.
- Judges are connected to an Event Coordinator in case questions arise during competition.
- Even if you have been a judge in an event before, you will need to attend a Judging Orientation Session!

ALUMNI

If you know of any former students who are interested in staying involved with Colorado TSA, please have them contact our alumni coordinator by going to www.cotsa.ccs.edu or www.ctsoadvisor.com/cotsa/ and clicking on the ALUMNI link. Colorado TSA Alumni can also join our Facebook group by going to: www.facebook.com/pages/Colorado-Technology-Student-Association-Alumni/280880062723

Also, you are encouraged to have all of your graduating seniors contact the alumni coordinator early on in the year so they can stay in touch even after graduation.



Website and Social Media



Colorado TSA maintains an active web presence through its web page and social media, including pages on Facebook as well as Twitter. Everyone is welcome to join our online ranks!



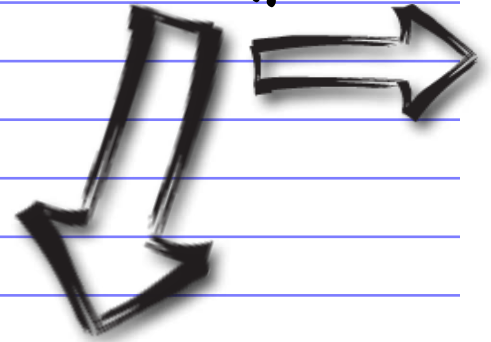
Do you have photos of your chapter doing community service, working on projects, or participating in meetings or just having fun? If so, send them to Tony Raymond, COTSA State Advisor, for posting on the Facebook and web pages! We'd love to see what your chapter is up to, and it's a great way for you to network with your fellow TSA members. Send your photos to: tony.raymond@cccs.edu. Please include name(s), location(s), and date(s) for each photo.

And, last, but not least, for news, updates, forms, and association-related information, you can check out our website at www.cotsa.cccs.edu, or www.ctsoadvisor.com/cotsa.





WE SHOULD DO THIS!!!!



AWARDS + RECOGNITION

There are a number of opportunities for students and advisors to be recognized through TSA, and we strongly encourage both students and advisors to take advantage of these great programs! For application forms and complete information, please visit the national TSA website at the following addresses:

www.tsaweb.org/Student-Achievement-Awards

www.tsaweb.org/Student-Scholarships

www.tsaweb.org/Adult-Achievement-Awards

Achievement Awards (Gold/Silver/Bronze):

The TSA Achievement program (bronze, silver, and gold awards) is designed to motivate and recognize student members for high effort in a school's technology education program. The TSA Achievement program is an opportunity for every TSA member to strive and receive recognition for accomplishments and is designed to encourage excellence in the areas of leadership development, understanding technology, school/community service, and career/personal planning. This program is also planned so the highest awards represent outstanding individual performance. This noncompetitive, self-initiated program encourages students to develop appropriate attitudes and increase their knowledge and skills through involvement in technology education programs and activities.

Note for Awards:

- * Watch for deadlines!
- * Make sure you apply!
- * Could mean scholarship money!!

Chapter Excellence Award:

The Chapter Excellence Award recognizes those chapters who have developed and implemented a successful program of work including chapter involvement (at local, state, and national conferences, with the community, and other TSA chapters); financial leadership activities; leadership activities; and involvement with alumni.

Dr. Bob Hanson Distinguished Student Award:

The recipient of the Distinguished Student Award is selected on the basis of valued service to the community and to TSA. Both past and present contributions are considered. Criteria for eligibility include: Active member in good standing with TSA for a minimum of one school year; active participation in TSA at the local, state, or national level; and recognition by fellow students, teachers, or administrators of technology education programs as a student who has achieved prominence and distinction.

TSA Technology Honor Society:

The TSA Technology Honor Society recognizes TSA members who excel in academics, leadership, and service to their school and community. The TSA Technology Honor Society is an opportunity for student members to be recognized for their efforts and is designed to recognize TSA members who exemplify the high ideals of academics.

MORE!



Advisor of the Year:

Students are encouraged to submit the name of their chapter advisor to the state office for the Annual Advisor of the Year award. The honoree is recognized at the state conference and then again at the National Conference for their outstanding work with TSA.

TSA Star Recognition:

TSA provides recognition to those chapters and members who actively assist new or lapsed TSA chapters to become active members. It is through these efforts that TSA continue to grow. Has your chapter assisted a new or inactive TSA chapter (middle or high school) with the affiliation process for this year? If so, we want to know about it so that your chapter received Star recognition! Each chapter that helps a new chapter affiliate receives Star lapel pins and is listed on the national website. Pins are awarded on the following criteria:

- White Star Recognition 1 to 2 new TSA chapters
- Blue Star Recognition 3 to 5 new TSA chapters
- Red Star Recognition 6 or more new TSA chapters

MORE!



Outstanding Recognition Award:

The recipient is selected on the basis of valued service contributing to the growth of TSA. Both past and present contributions are considered (as verified by responsible parties). The criteria are as follows:

- The organization(s) that the recipient represents has supported TSA in some capacity at the local, state, or national level for a minimum of three years
- Active participation, as evidenced by attendance at the conferences, membership on committees, judging student events, etc.
- Efforts to advance TSA, as evidenced by encouraging business personnel and industrial leaders to support TSA activities

Distinguished Service Award:

The recipient is selected on the basis of valued service to TSA. Both past and present contributions are considered (as verified by responsible parties). The criteria are as follows:

- Associated with TSA in some capacity for a minimum of three years
- Active participation as evidenced by attendance at the conferences, membership on committees, judging student events, etc.
- Involvement with advancing TSA as evidenced by work in professional education groups, publications, research, etc.
- High standard of attainment as shown by establishment of new TSA chapters, program expansion or innovation, or by achievement of student members who have achieved prominence and distinction
- Recognition by fellow professionals as indicated by similar awards from local, district, state or regional groups.

MORE!



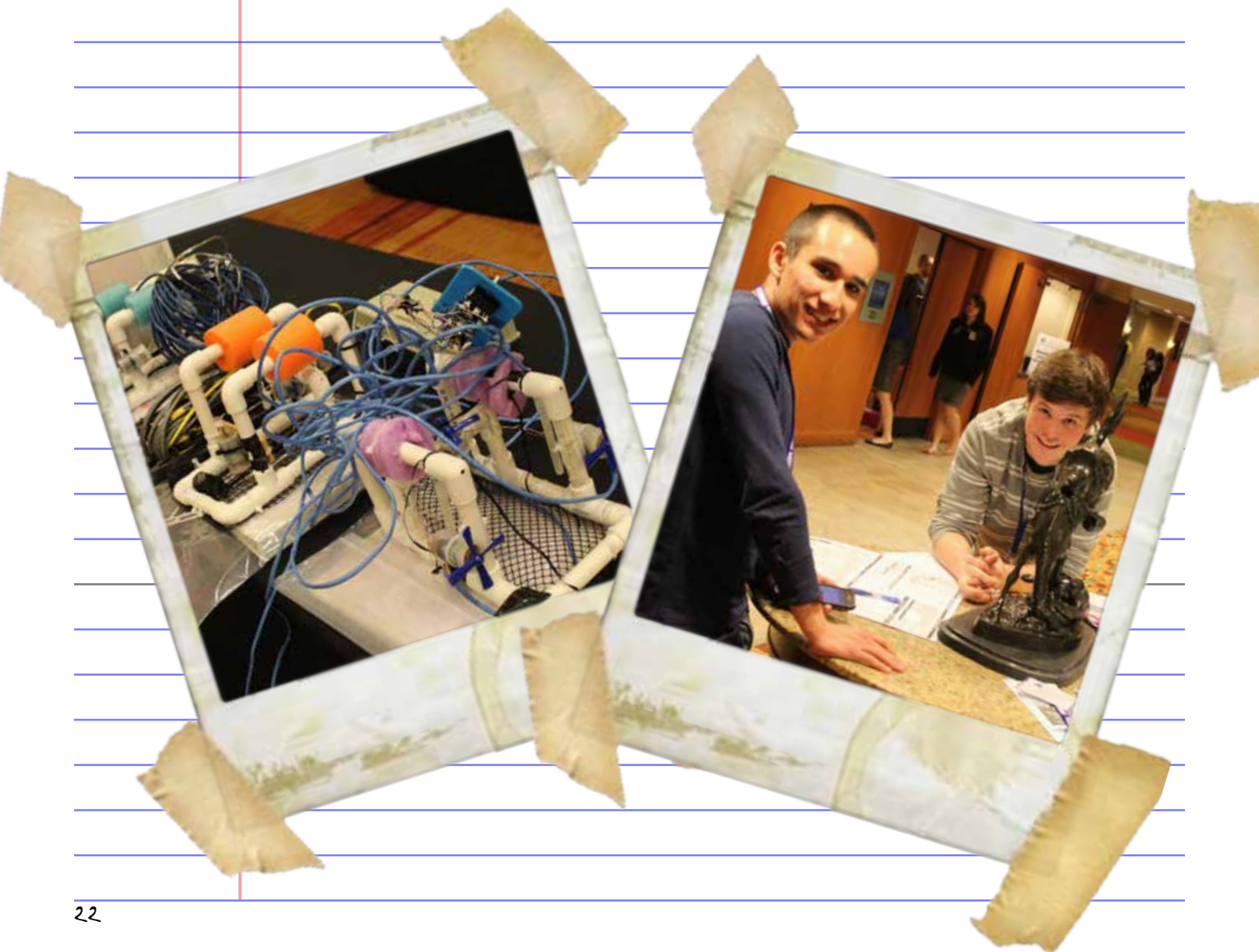
Honorary Life Award:

Recipient has supported TSA in a significant way for a minimum of five years and is a person from whom TSA may reasonably expect continued interest in its activities.

Distinguished Alumni Award:

The recipients (three per year) of this award are alumni of TSA who have demonstrated commitment and service to TSA beyond graduation. The criteria are as follows:

Graduated from high school at least three years prior after being a member in good standing with TSA for a minimum of two years Active participation since graduation, as evidenced by attendance at the conferences, membership on committees, judging student events, or other service of value to TSA



TSA "Teach Technology" Scholarship:

The purpose of the TSA Teach Technology Scholarship is to support the technology education profession by encouraging TSA students to pursue careers as K-12 technology teachers. Applicants must meet the following criteria:

- Participated in an active TSA chapter for a minimum of two (2) consecutive years.
- Served as a TSA officer at the local, state and/or national level for a minimum of one (1) academic year.
- Attended and participated in at least one (1) TSA conference at the state or national level.

William P. Elrod Memorial Scholarship:

The scholarship is awarded for outstanding service in the field of technology to a TSA student who is college, university or career and technical school bound and who is in good academic standing, OR to a TSA alumnus/a currently enrolled in an undergraduate program or a career and technical school.

Johnson + Wales University Scholarship:

Johnson + Wales University offers \$1000-full tuition National Student Organizations scholarships to TSA members. For more information and apply online at

www.jwu.edu

Goodheart-Wilcox State Advisor of the Year Award:

The recipient will have demonstrated significant support on behalf of TSA for a minimum of five years and is an individual from whom TSA may reasonably expect reliable and continued interest in its activities.

Here are the **FORMS** that need to be filled out!

On the next few pages, are several forms that need to be completed and turned in by the stated deadlines. These forms **CANNOT AND WILL NOT BE ACCEPTED ON SITE AT THE CONFERENCE!!! IF YOUR CHAPTER DOES NOT HAVE THESE FORMS TURNED IN BY THE DEADLINE, THEY WILL NOT BE ALLOWED TO COMPETE IN THE CONFERENCE.** All forms, unless stated otherwise, are due to the State Advisor **VIA EMAIL IN PDF FORMAT**, no later than **FEBRUARY 1, 2015.**

MEDICAL RELEASE FORM

This form must be completed by **EVERY** conference participant, including advisors, chaperones and observers. This information is critical in the event of an emergency and needs to be kept by the advisor at the state conference. This form does not need to be turned in to the state office. It is to be kept by the chapter advisor.

PERSONAL LIABILITY FORM

This form is to be completed by **EVERY** conference participant, including advisors, chaperones and observers. This form is to be turned in to the state advisor.

PHOTO RELEASE FORM

This form must be completed by **EVERY** conference participant, including advisors, chaperones and observers. This form grants us the rights to take pictures at the conference to promote Colorado TSA.

HOUSING FORM(S)

There are several housing forms, **ALL** of which are required to be turned in to the hotel **AS A PACKAGE** no later than **JANUARY 16, 2015.** These forms include:

- Housing form (containing your school's contact and payment information)
- Housing Rooming List (containing the names of your chapter's participants - e.g., who is rooming with whom)
- Claim for Exemption from Sales, Use or Lodgers Tax Form (which exempts you from some taxes, if applicable); and
- **AFFIDAVIT OF SALE** made to a Charitable or Religious Organization

ATTENDEE CONDUCT + PRACTICES SIGNATURE FORM

This form is to be completed by EVERY conference participant, including advisors, chaperones and observers. It is to be turned in to the state advisor.

RELAY FOR LIFE DONATION FORM

In an effort to help our national charitable partner, the American Cancer Society, Colorado TSA is providing conference attendees the opportunity to donate to this worthy cause.

If any conference participant would like to donate, they simply need to complete the form located at the bottom of the Attendee Conduct and Practices Signature Form and include a check made payable to the American Cancer Society with the form when it is turned in to the State Advisor.

FORMS CHECKLIST

Here's a handy checklist to make sure that you have ALL the forms you need to turn in:

FORMS TO

STATE ADVISOR

VIA EMAIL IN PDF FORMAT

DUE FEBRUARY 1, 2015

- Personal Liability Forms
- Photo Release Forms
- Attendee Conduct + Practices Forms
- American Cancer Society Donation Forms/Checks

FORMS TO

THE MARRIOTT DENVER TECH CENTER

DUE JANUARY 16, 2015

- Housing Form
- Housing Rooming List
- Sales Tax Certificate (See page 33)
- Denver Claim for Exemption Form (See page 33)
- Credit Card Affidavit (See page 33)



Medical Release Form

REQUIRED BY ALL STUDENTS & ADULTS
ATTENDING THE COTSA EXPOSITION
(TO BE KEPT BY EACH CHAPTER ADVISOR - PRINT CLEARLY)

Student: _____
Advisor: _____ School: _____

Medical Information

Date of Birth: _____

Known allergies (drugs or otherwise): _____

Date last tetanus shot administered: _____

Medication currently being taken: _____

Describe any history of heart condition, diabetes, and asthma, epilepsy, or rheumatic fever, etc.: _____

Physical restrictions (swimming, running, etc.) _____

Relative's name: _____ Best Contact Number: (____) _____

Physicians name: _____

Insurance Information

Medical Insurance Co.: _____

Identification / Policy No.: _____

Subscriber's Name: _____ Phone: (____) _____

Subscriber's place of employment: _____

I, _____ (parent/guardian) hereby authorize any physician member of the Department of Emergency Medicine of an accredited hospital or any member of the Medical Staff of an accredited hospital to render medical treatment, which is in his/her judgment may be deemed necessary in the care of _____ (child/student) while attending the Colorado State Technology Expo (including time traveling to and from the conference).

Parent / Guardian signature _____ Date _____

ADVISORS – PLEASE NOTE:
This form is to be kept by you, the local chapter advisor, at the conference and given to the appropriate medical authorities in a medical emergency!!



Personal Liability Form

**REQUIRED BY ALL STUDENTS & ADULTS
ATTENDING THE COTSA EXPOSITION**

ALL FORMS MUST BE RECEIVED NO LATER THAN FEBRUARY 1, 2015

Please send to: Tony Raymond, COTSA State Advisor
Colorado Community College System
9101 E Lowry Blvd.
Denver, CO 80230

Name of Participant: _____
Date of Birth: _____
School: _____
School Address: _____
Home Phone: (_____) _____ School Phone: (_____) _____

“I hereby agree to release the Colorado Technology Student Association and the Colorado Community College System, its representative, agents, servants, and employees from liability for any injury to the above named person at any time while attending the Colorado State Technology Student Association’s State Leadership Exposition, including travel to and from the conference, excepting only such injury or damage resulting from willful acts of such representatives, agents, servants, and employees.”

“I do voluntarily authorize the Colorado Technology Student Association’s Leadership Exposition’s conference chair, assistants and/or designees to administer and/or obtain routine or emergency diagnostic procedures and/or routine or emergency medical treatment for the above named person as deemed necessary in medical judgment.”

“I agree to identify and hold harmless the Technology Student Association, Inc., the Colorado Technology Student Association, the Colorado Community College System and said conference chair and/or assistants and designees for any and all claims, demands, actions, rights of action, and/or judgments by or on behalf of the above named person arising from or on account of said procedures and/or treatment rendered in good faith and according to accept medical standards.”

Adult/Parent or Guardian (if child or student) Date

Participant Date



Photo Release Form

I hereby consent to and authorize the use and reproduction by Colorado TSA, the Colorado Community College System (CCCS), or anyone authorized by Colorado TSA or CCCS, of any and all photographs/digital images/videotapes/recordings of:

Attendee's Name

from the February 19-21, 2015 Colorado State Technology Leadership Exposition at the Marriott Denver Tech Center for use by Colorado TSA and/or the Colorado Community College System (CCCS), its employees, officers and agents, and the right to copyright and/or use, reuse and/or publish, republish photographic pictures, digital images, video tapes and recordings in conjunction with the above named individual's own name.

I also give permission for these photographic/digital images/videotapes/recordings to be used in its entirety and/or edited version as deemed necessary by Colorado TSA and/or CCCS (to include usage of images on Career and Technical Student Organization (CTSO) websites, including, but not limited to Facebook).

Furthermore, permission is also given for the photographs/digital images/videotapes/recordings completed on February 19-21, 2015 to be used by Colorado TSA and/or CCCS at any time in the future without further clearance from me.

I understand that these photographs/digital images/videotapes/recordings may be used for marketing purposes (including websites) by Colorado TSA and CCCS. I have read the foregoing release, authorization and agreement, before signing below, and warrant that I fully understand the contents thereof.

I hereby grant permission for photographing, videotaping and/or recording.

Signature of Parent/Guardian* or Individual

Date

* If individual is under 18 years of age.

Address: _____

City: _____ State: _____ Zip: _____

NOTE: Any student who is subject to harassment due to the publishing of photos (either in publications or on the websites) should contact the State Advisor immediately.



Exposition Conduct & Practices

This form is required to be completed by all students attending the conference, signed by the attendee, parent, advisor and principal and must be received by the COTSA State Advisor NO LATER than February 1, 2015.

1. The term "attendee" shall mean any student or adult attending the exposition and taking part in its activities.
2. Identification badges must be worn at all times by persons in exposition attendance.
3. There shall be no defacing of public property. Any damages to the property or furnishings in the hotel rooms or buildings must be paid by the individual(s) or school(s) responsible.
4. Attendees shall keep their advisors informed of their activities and/or whereabouts at all times.
5. Attendees should be prompt and prepared for all activities.
6. Attendees should be financially prepared for all possibilities.
7. All attendees must stay at conference hotel.
8. No attendee shall remain in the sleeping room of the opposite gender unless the door is open at all times.
9. No attendee shall remain in the sleeping room of the opposite gender past curfew.
10. No exposition attendee shall possess any alcoholic beverages, narcotics or firearms, in any form at any times, under any circumstances.
11. Smoking will not be permitted.
12. No attendee shall leave the exposition hotel (except for authorized events) unless permission has been received from chapter advisors.
13. Attendees are required to attend all general sessions and activities assigned, including workshops, all general sessions, competitive events, committee meetings, etc., for which they are registered, unless engaged in some specific assignment taking place at the same time.
14. Chapter advisors will be responsible for their attendees' conduct.
15. Attendees violating any of the conduct rules will subject their entire delegation to being removed from the Exposition or disqualified from competition.
16. The Colorado State Leadership Exposition committee reserves the right to dismiss any delegate from the exposition for inappropriate actions.

Attendee:

I have read and completely understand the COTSA State Leadership Exposition Attendee Conduct Practices and Procedures Code. I do hereby agree to follow the procedures and practices described. I fully understand that this is an educational activity and will, to the best of my ability, apply myself for the purpose of learning and will uphold the finest qualities of a person representing my school.

Attendee Signature

Date

Parent/Guardian, Advisor/ Teacher, & Principal:

I approve the student named above to attend the 2015 Colorado Technology Student Association State Leadership Exposition in Denver, CO on February 19-21, 2015.

Parent/Guardian Signature

Advisor/Teacher Signature

School Principal Signature



American Cancer Society Contribution Form



During the school year, TSA chapters all across the country are encouraged to include in their Program of Work an activity that benefits the National TSA National Service Project - our work with the American Cancer Society. Chapters can engage in a number of activities, including participating in a Relay for Life event. Relay for Life is the ACS's signature event that offers chapters and schools a fun, healthy opportunity in the fight against cancer. The money raised by the individual chapters helps the vital research, education, advocacy, and patient services of the American Cancer Society.

In addition to recognizing chapters at the national conference for their overall contributions to the ACS, individuals can also help our National Service Project and contribute to the American Cancer Society directly.

If you would like to help Colorado TSA support the efforts to support the American Cancer Society by making a donation, please do so using the form below.

If you would like to make a donation, please fill out this form and include your donation with your student's registration form. Thank you for your time and commitment.

Name: _____

School: _____

Donation Amount:

\$15

\$25

\$50

\$100

Other _____



Housing Form

**THIS SHEET MUST BE RECEIVED BY THE
HOTEL BY: FRIDAY, JANUARY 16, 2015**

REMEMBER TO ATTACH PAYMENT, ROOM LISTS & TAX EXEMPT FORMS

PLEASE SEND HOUSING FORMS TO:

Denver Marriott Tech Center
4900 S. Syracuse Street
Denver, Colorado 80237
Phone 303-779-1100/ Fax (303) 770-6112
Attn: Taylor Browning

SCHOOL INFORMATION

Group Name: **Colorado TSA**

School Name: _____

Advisor's Name: _____

Advisor's Email (where room confirmations can be sent): _____

School Address: _____

City: _____ Zip: _____

Phone: (_____) _____

Date of Arrival: _____ / _____ /2015

Date of Departure: _____ / _____ /2015

Total Amount Due: _____

All rooms = \$122.00 + 14.75% room tax. Tax will be exempt if tax exempt forms are completed. All payments must be on School District Checks or School District Card.

Total amount due = _____ # rooms x \$122.00 x # _____ nights = \$ _____ Total

Total with 14.75% tax (if applicable) \$ _____

Payment: (NO POs WILL BE ACCEPTED)

Make checks payable to: Denver Marriott Tech Center
4900 S. Syracuse Street
Denver, Colorado 80237

Credit Card Information: _____

Name on Card: _____

School Credit Card #: _____

Credit Card #: _____ Exp. Date: _____

**PAYMENT MUST BE RECEIVED
BEFORE RESERVATIONS WILL BE CONFIRMED**



Housing Rooming List

DEADLINE -- THIS SHEET MUST BE RECEIVED
BY THE HOTEL BY: FRIDAY, JANUARY 16, 2015

Please list each of the students grouped according to the hotel rooms they will be in (maximum of four (4) people per room. Attach as many sheets as needed to complete your guest list.

	Grade/ Sponsor	Last Name, First Name	M/F	Special Notes
1				
2				
3				
4				
	Grade/ Sponsor	Last Name, First Name	M/F	Special Notes
1				
2				
3				
4				
	Grade/ Sponsor	Last Name, First Name	M/F	Special Notes
1				
2				
3				
4				
	Grade/ Sponsor	Last Name, First Name	M/F	Special Notes
1				
2				
3				
4				
	Grade/ Sponsor	Last Name, First Name	M/F	Special Notes
1				
2				
3				
4				

SCHOOL NAME: _____ PAGE _____ OF _____

Hotel Forms

When preparing your forms for the hotel, in addition to the Housing Form and the Housing Rooming list, the hotel will also need the following forms in order to make your stay tax exempt. The Denver Claim for Exemption Form and Credit Card Affidavit forms are on the following pages.

1. Sales Tax Certificate

CERTIFICATE OF EXEMPTION FOR COLORADO STATE SALES/USE TAX ONLY

THIS LICENSE IS NOT TRANSFERABLE

USE ACCOUNT NUMBER for all references: 98-03308-0000

LIABILITY INFORMATION: 04 017

ISSUE DATE: DEC 18 2003

NAME: E VERMIJO

CITY: COLORADO SPRINGS CO

COUNTY OF EL PASO

PD 301 2007

COLORADO SPRINGS CO 80901-2007

Michael Cole
Executive Director
Department of Revenue

2. Denver Claim for Exemption Form

CLAIM FOR EXEMPTION FROM DENVER SALES, USE, OR LODGING TAX FOR USE BY HOTELS, MOTELS, AND RESTAURANTS FOR THE FOLLOWING DESCRIBED EVENT

Organization's Name _____

Date of Event _____ (Month /)

Authorized Representative _____ Title _____

Address _____

Description of Event _____

Base of Exemption: Religious _____ Charitable _____ Governmental _____

DO NOT HAVE YOUR CUSTOMER COMPLETE THIS FORM IF EVENT IS A FUND RAISER. NO EXEMPTION IS ALLOWED FOR FUND RAISING EVENTS.

Indicate if all of the following statements are true for this event.

True False

_____ The purchase is included under and is part of the regular religious or charitable functions and activities of the organization, or is purchased as a governmental capacity.

_____ The transaction is billed directly to the organization and payment is made directly from organization funds. (Purchases of food or lodging by individuals do not qualify for the exemption even though the individual may be reimbursed by the organization or government.)

_____ The participants at the event have not and will not reimburse the organization in any way for any portion of the event such as by purchase of a ticket, payment of a registration fee, or by making a contribution toward the cost of participation. This statement must be marked "false" if event is a fundraising.

The exemption does not apply to food, beverage, or lodging where the recipient of the food, beverage, or lodging reimburses the organization in any way, such as by the purchase of a ticket, payment of a fee, or making a contribution toward the cost of participation.

ALL OF THE ABOVE MUST BE TRUE FOR THE PURCHASE TO QUALIFY FOR EXEMPTION

The undersigned declares and affirms that the above statements are true and accepts liability for the tax should the transaction not qualify for exemption.

Name _____ Title _____ Date _____

FOR HOTEL/MOTEL/RESTAURANT USE TO VERIFY EXEMPTION:
DENVER TREASURY DIVISION - TAX COMPLIANCE/AUDIT UNIT - CITY OF DENVER - 940-3449
DENVER TAX EXEMPT STATUS VERIFIED BY _____ YES NO DATE _____

NAME OF PERSONAL CITY _____

IMPORTANT: This form does not relieve the vendor of its obligations to verify that all conditions for exemption have been met. All exempt transactions are subject to audit. And the vendor may be held responsible for transactions exempted in error.

TPS 908 (1/94)

3. Credit Card Affidavit (paying by credit card only)

AFFIDAVIT OF SALE PAID BY GOVERNMENT CREDIT CARD

I affirm that this purchase qualifies for the Denver and Colorado sales tax exemption for sales to the United States government, the State of Colorado, its departments and institutions, and its political subdivisions, county and local governments, school districts and special districts, is a government purchase made only in an official governmental capacity, and will be paid directly by a government agency.

I have checked the applicable boxes below regarding information about payment for this purchase.

I accept that I remain directly liable for the sales or use tax assessment, and any applicable penalty or interest, if any purchase is found to not qualify for the exemption.

I understand that the vendor may request this affidavit for every purchase.

Personal Print or Type

Agency Name _____ (Print agency name, include state name)

Agency Name _____ (Include Tax ID Number or EIN)

Contract Number _____ Agency Phone _____

City _____ State _____ ZIP Code _____

Check All that Apply

FEDERAL GOVERNMENT PURCHASES:

Credit card used is a USA Smart Pay® card and is designated as such on the face of the card.

Credit card used is a Fleet card, outlined in green, with a picture of a road and a flag.

Credit card used is a Purchase card, outlined in red, with a picture of a road and a flag.

Credit card used is a Travel card, outlined in blue, with a picture of an airplane and a flag, and the 8th digit on the credit card is 5, 6, 7, 8, or 9.

Credit card used is an Integrated card, outlined in gold, with a picture of an eagle and a flag.

Credit card is issued to an agency within the Department of the Interior.

STATE AND LOCAL GOVERNMENT PURCHASES:

For State of Colorado cards, the agency exemption number is printed on the card. The # is 000-____.

The card states "The Official State Use Only" or "Tax Exempt."

The card is a Purchasing Card sold to designated agencies on each of the card.

FOREIGN AND DIPLOMATIC EXEMPTION CARDS:

The card is from Department issued with the name/photo of the bearer and a blue, yellow, red, green, or gold/yellow

**** No personal forms of payment****
The tax exempt organization must be paying directly for your stay to be exempt

CLAIM FOR EXEMPTION FROM DENVER SALES, USE, OR LODGER'S TAX
FOR USE BY HOTELS, MOTELS, AND RESTAURANTS
FOR THE FOLLOWING DESCRIBED EVENT

Organization's Name _____

Date of Event _____ Phone () _____

Authorized Representative _____ Title _____

Address _____

Description of Event _____

Basis of Exemption: Religious ___ Charitable ___ Governmental ___

**DO NOT HAVE YOUR CUSTOMER COMPLETE THIS FORM IF EVENT IS A FUND RAISER.
NO EXEMPTION IS ALLOWED FOR FUND RAISING EVENTS.**

Indicate if all of the following statements are True for this event:

True False

___ ___ The purchase is included under and is part of the regular religious or charitable functions and activities of the organization, or is purchased in a governmental capacity.

___ ___ The transaction is billed directly to the organization and payment is made directly from organization funds. (Purchases of food or lodging by individuals do not qualify for the exemption even though the individual may be reimbursed by the organization or government.)

___ ___ The participants at the event have not and will not reimburse the organization in any way for any portion of the event such as by purchase of a ticket, payment of a registration fee, or my making a contribution toward the cost of participation. **This statement must be marked "false" if event is a fundraiser.**

The exemption does not apply to food, beverage, or lodging where the recipient of the food, beverage, of lodging reimburses the organization in any way, such as by the purchase of a ticket, payment of a fee, or making a contribution toward the cost of participation.

ALL OF THE ABOVE MUST BE TRUE FOR THE PURCHASE TO QUALIFY FOR EXEMPTION

The undersigned declares and affirms that the above statements are true and accepts liability for the tax should the transaction not qualify for exemption.

Name _____ Title _____ Date _____

FOR HOTEL/MOTEL/RESTAURANT USE TO VERIFY EXEMPTION:
DENVER TREASURY DIVISION – TAX COMPLIANCE, AUDIT UNIT – CITY OF DENVER – 640-3489
DENVER TAX EXEMPT STATUS VERIFIED BY: _____ YES ___ NO ___ DATE _____

NAME OF PERSON AT CITY:

IMPORTANT: This form does not relieve the vendor of its obligation to verify that all conditions for exemption have been met. All exempt transactions are subject to audit. And the vendor may be held responsible for transactions exempted in error.

TPS 008 (1/94)

Instructions for Use of Affidavits

These instructions are applicable for both the Charitable or Religious Affidavit and the Governmental Affidavit.

Both of the affidavits require that the goods are sold directly to the charitable, religious or governmental agency **and payment is made directly from those organization's funds.** Please be sure this is the case before asking for completion of the appropriate affidavit. This affidavit is intended to assist the vendor in maintaining documentation that will be needed to verify whether a transaction is exempt. The sale is not exempt from taxes simply because this affidavit is completed. The responsibility for proper collection of the taxes remains with the vendor.

The ordinance provides that if the vendor and purchaser disagree on the application of the tax, **the vendor must collect the tax.** The vendor should give the purchaser a receipt showing the taxes collected. The purchaser then has 60 days to file a claim for refund directly with the City for recovery of the tax. The claim for refund form can be obtained from the Treasury web site.

The affidavits need to be completed in their entirety. Be sure information is complete, accurate and legible. Review the information being sure the Driver's License Number and customer's name are correct. Also the digits that are required from the credit cards are correct. **Only record and keep those digits from the credit card that the affidavit requires.** The signature of the customer should be the same as on the driver's license.

Charitable organizations must include a copy of the letter provided to them by the City stating they may make purchases without payment of the tax. Churches usually will not have a letter. The Church may be exempt upon accurate completion of the Charitable or Religious Affidavit.

For purchases by the federal government using a credit card please see City and County of Denver Tax Guide Topic 91 entitled "Credit Cards from Governmental Organizations". It explains which of the credit cards can be used for purchases of tangible personal property. It also explains how the numbering system can be used to identify if the federal government is paying for the purchase (not taxable) or the individual is paying for the purchase (taxable).

AFFIDAVIT OF SALE PAID BY GOVERNMENT CREDIT CARD

■ I affirm that this purchase qualifies for the Denver and Colorado sales tax exemption for sales to the United States government, the State of Colorado, its departments and institutions, and its political subdivisions (county and local governments, school districts and special districts); is a government purchase used only in an official governmental capacity; and will be paid directly by a government agency.

■ I have checked the applicable boxes below regarding information about payment for this purchase.

■ I accept that I remain directly liable for the sales or use tax assessment, and any applicable penalty or interest, if my purchase is found to not qualify for the exemption.

■ I understand that the vendor may request this affidavit for every purchase.

Please Print or Type

Customer Name		Driver License Number (include state)	
Agency Name		Colorado Tax ID Number or FEIN	
Customer Address		Agency Phone	
City	State	ZIP Code	

Check All that Apply

FEDERAL GOVERNMENT PURCHASES:

- Credit card used is a GSA Smart Pay2 card and is designated as such on the face of the card.
- Credit card used is a Fleet card, outlined in green, with a picture of a road and a flag.
- Credit card used is a Purchase card, outlined in red, with a picture of a keyboard and a flag.
- Credit card used is a Travel card, outlined in blue, with a picture of an airplane and a flag, and the 6th digit on the credit card is 0, 6, 7, 8, or 9.
- Credit card used is an Integrated card, outlined in gold, with a picture of an eagle and a flag.
- Credit card is issued to an agency within the Department of the Interior.

STATE AND LOCAL GOVERNMENT PURCHASES:

- For State of Colorado cards, the agency exemption number is printed on the card. The # is 98-_____
- The card states "For Official State Use Only" or "Tax Exempt."
- The card is a Purchasing Card and is designated as such on the card.

FOREIGN AND DIPLOMATIC EXEMPTION CARDS

- The card is State Department issued with the name/photo of the bearer and a blue, yellow, red, green, or red/green band across the bottom, and states on the face of the card what purchases qualify for exemption.
It does not matter what form of payment is used when these cards are presented.

Signature of Customer

Date

11/10

CITY AND COUNTY OF DENVER - TREASURY DIVISION

- Please check the box for the picture that matches the credit card used to make the purchase.
- Write in the first six digits and the last four digits from the credit card used to make the purchase.
- DO NOT WRITE THE COMPLETE ACCOUNT NUMBER.

FEDERAL SMART PAY CREDIT CARD PROGRAM



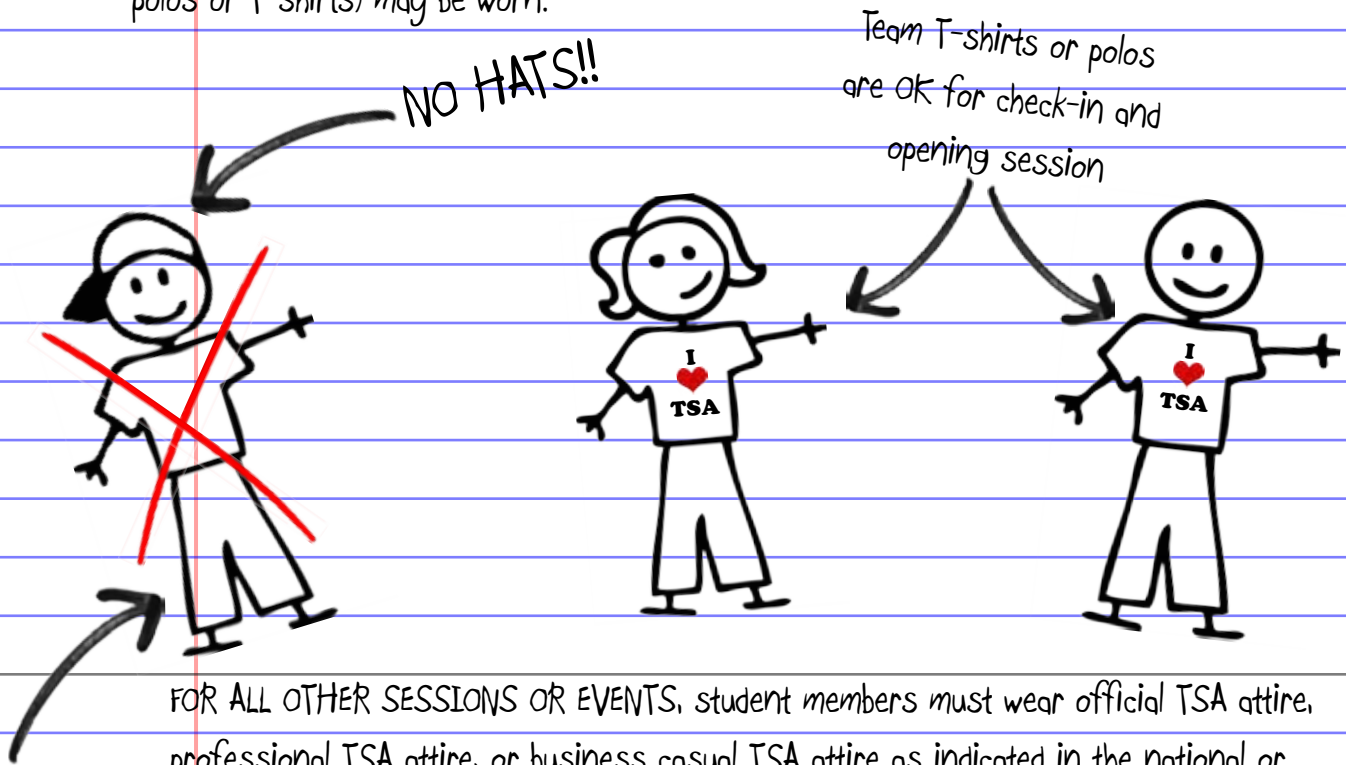
Account number _____ **XX XXXX** _____

Please attach this form to the signed Affidavit of Sale Paid by Government Credit Card

Competitive Events Attire

Chapter and state advisors, parents, and chaperones are responsible for seeing that all TSA student members wear TSA competition, general session, or casual attire as occasions may require. Official TSA attire may be purchased online via the SHOP tab on the TSA website at www.tsaweb.org. TSA competition, general session, and casual attire are considered appropriate dress for conference activities and public appearances. Since adults (advisors, parents, and guests) serve as role models at TSA conferences and activities, they are expected to dress appropriately for all TSA occasions they attend. Students must adhere to the TSA dress code requirements as listed below.

During the State Leadership Exposition, DURING EVENT CHECK-IN and FOR THE OPENING SESSION ONLY, student members are allowed to dress casually; a chapter's team shirts (e.g., polos or T-shirts) may be worn.



FOR ALL OTHER SESSIONS OR EVENTS, student members must wear official TSA attire, professional TSA attire, or business casual TSA attire as indicated in the national or state competitive events guides. Flip-flops, athletic shoes (tennis shoes, running shoes, etc.), halter tops, tank tops and shorts are not permitted for anyone after event check-in and the opening session. Hats are not to be worn at any time during the conference.

NO JEANS!!



OFFICIAL ROYAL BLUE SHIRT

All attendees **MUST** wear their name badges at all times. For Chapter Team only, at both the middle school and high school levels, competitors also must wear a navy blue blazer with an official TSA patch; males (only) must wear the official TSA logo neck tie.

Refer to the attire requirements as listed in the guides for event-specific attire. Students are always allowed to dress **MORE** formally than specified for conference activities, and students dressed **LESS** formally than specified for an event in which they are competing will be allowed to compete but will be assessed a penalty of twenty percent (20%) of the total possible points.

IMPORTANT NOTE:

The Colorado TSA Executive Committee, Advisory Board and COTSA State Advisor recognize that not every Colorado TSA member will attend the national conference; they also recognize that the purchase of the new uniform shirt for each member of an entire chapter may put undue financial burdens upon that chapter.

Therefore, Colorado TSA allows the use of white dress shirts/blouses as part of official attire **AT THE STATE LEVEL ONLY**. It is an expectation and is **REQUIRED** that students attending the **NATIONAL CONFERENCE** must purchase the new official blue uniform shirt to be in compliance with national official uniform requirements.

AT THE STATE LEVEL ONLY: If a team is competing in an event where official dress is required, all members of the team **MUST** wear the same type of shirt – either the white shirt/blouse **OR** the official royal blue shirt/blouse. Teams may not mix and match blue and white shirts in a team event.



COMPETITION ATTIRE FOR STATE:

- Shirt or blouse: official royal blue TSA dress shirt or white dress shirt ** (See Important Note at the right)
- Pants or skirt: light gray (unacceptable: jeans, baggy pants, exterior pocket pants, shorts)
- Socks: black or dark blue (males only)
- Shoes: black dress shoes (unacceptable: athletic shoes, army boots, combat, or work boots)
- Sandals: females only may wear black open-toe shoes or sandals

Required for middle school or high school level Chapter Team only, but may be worn for other competitions if preferred by contestant:

- Blazer: navy blue with official TSA patch
- Tie: scarlet red imprinted with official TSA logo (males only)



Can you build the tallest Jenga tower?

If you think you can, then don't forget to register to participate in the GIANT JENGA TOURNAMENT at the 2015 COTSA State Conference!

At stake are the Traveling Jenga Trophies which the winning middle and high schools can proudly display for a year before bringing them back to the conference when they defend their title!

* * *

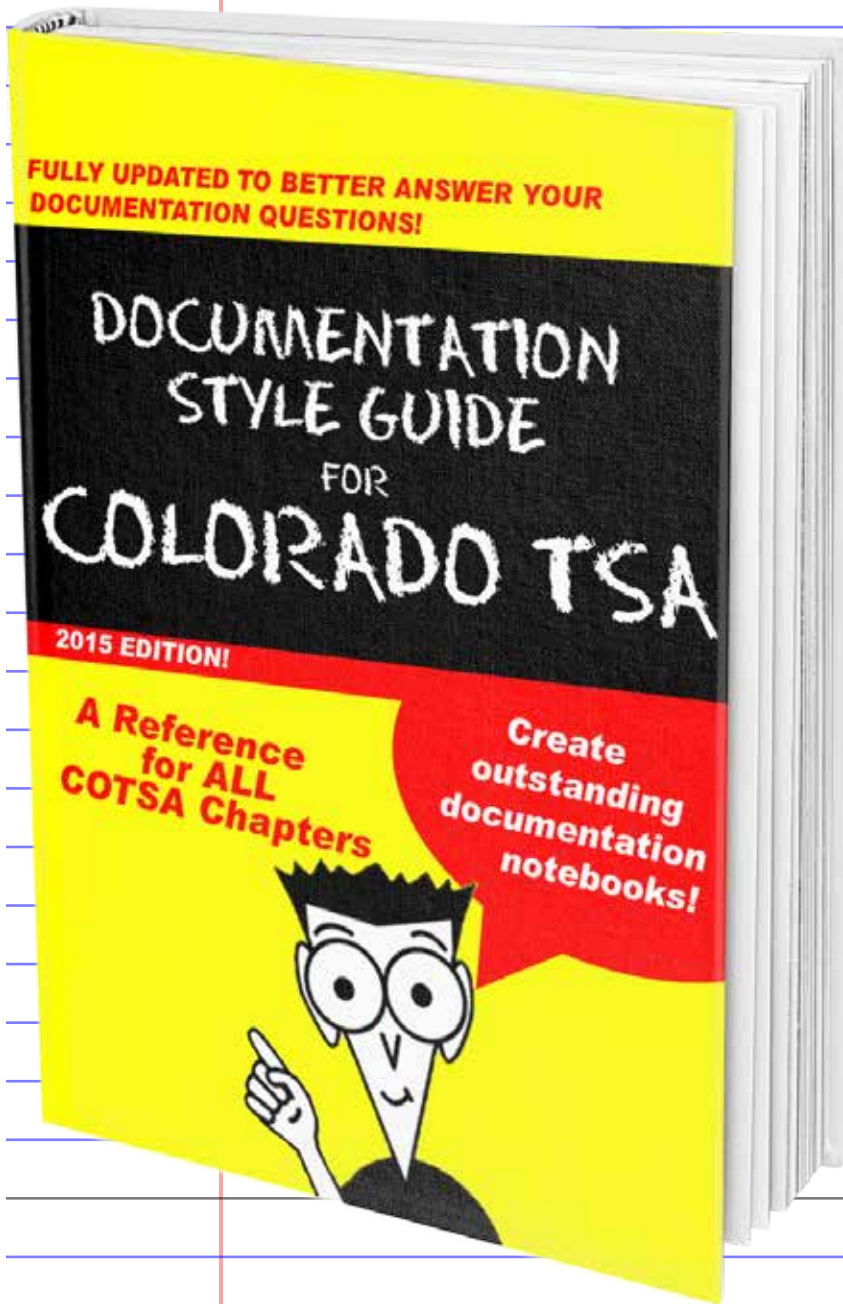
Each chapter can register up to 4 teams of 2-4 students each to play in the tournament.

To register for the GIANT JENGA TOURNAMENT, Advisors register each team just as they would for any other team event at the conference. Simply login to the COTSA State Conference website and for each student on a team, select GIANT JENGA TOURNAMENT as one of their events and indicate which team they are on!

It's that easy!

Then, during the Social Time at the conference on Friday night, report to the atrium and battle it out for GIANT JENGA bragging rights against other TSA chapters!

The winners will be announced at the Awards Ceremony and will be awarded the Traveling Jenga Trophies!



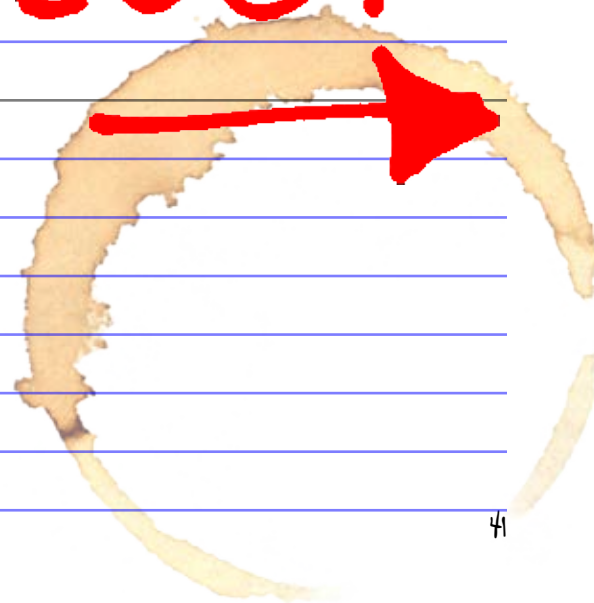
Do you need help with your documentation for your project?

LOOK HERE!

This guide has been put together to help all TSA members put together outstanding documentation notebooks for their projects.

The guide is in its entirety on the next few pages! Print these out and keep them handy as you prepare your projects for competition!

LOOK





COLORADO TSA DOCUMENTATION AND STYLE GUIDE

INTRODUCTION

In today's technological world, communication takes a variety of forms – one of which is writing. Any successful technological endeavor will have with it a set of documents that detail its inception, development and evaluation. The projects for TSA are no different!

Most competitive events require the creation of a documentation notebook. Each event that does require a notebook will require that certain specific items be included – for example, some projects may require drawings or photographs while others won't; some may require photo release forms while others may require work logs. Still, despite their differences, they do have a lot in common. It is the intent of this guide to help you create high quality documentation notebooks for your projects – regardless of the competitive event – for state and national conference submission. **PLEASE REVIEW AND FOLLOW THIS GUIDE WHEN PREPARING YOUR DOCUMENTATION NOTEBOOKS!**

Before we begin, it is critical that it is mentioned that you should follow each specific contest's rules and regulations closely! Don't rely on this guide alone to create the notebook! This guide is not designed to tell you what to include for each contest, but rather, help you format and create professional looking documentation for your project.

GENERAL GUIDELINES

When preparing any documentation notebook, the first thing you need to know is that it must be typed. Handwritten documentation is NOT acceptable. Sure, there will be items in the notebook that will be required to be handwritten or hand drawn, but those are few and far between. In general, it's a good rule of thumb to only submit documentation notebooks that have been word processed. There are a few reasons for this:

1. You have spell-check. While it's not always accurate and will not pick up on all your mistakes (like using "THEIR" instead of "THERE"), at least you have the opportunity to eliminate the bulk of spelling and grammar mistakes.
2. It's easier to read. The judges are usually "old folks" and they have a hard time reading chicken scratch. If you want to win, you'll need to make sure your documents are legible!

3. You can edit a computer document. What happens if you need to add in a chart or graph in the middle of text, or correct a spelling mistake in the critical paragraph that sums up all your work? If you have a handwritten document, that means either a complete re-write or a messy addition. Storing your document on your computer means you can go back and edit the document until it's just right to print!
4. In most cases, documentation that is hand-written, unless otherwise specified, will be assessed penalty points or disqualified. The assessment of penalty points could very well take an otherwise-stellar project out of medal contention. And after all the work you put into a project, it would be a shame to see it penalized because of handwritten documentation!

SPECIFIC GUIDELINES

Do you need documentation?

The first thing you need to figure out is if you even need a documentation notebook at all. The answer is probably yes, but there are a few events (dragster , for example) that don't require a notebook. If your project does not require a notebook, turn in only what the contest guidelines call for and nothing more...and nothing less. If you turn in more than is required, there is a good chance that all the additional material will NOT be considered by the judges; if you turn in less than is required, at best you could receive a penalty and at worst, your project could be disqualified. In any case, it's a good idea to read over the rules (ALL THE RULES) for an event before you begin and assemble whatever materials you'll need to complete the project as you go – including a notebook!

*****DO NOT wait until the last minute to assemble your notebook. Start with the notebook so you can accurately put things in as you do them (like work logs) rather than trying to re-create them later!*****

The Rules? What are the rules? Where do I find them?

The rules for all of the competitive events are located in the Competitive Events guides. There are two:

- National TSA Competitive Events Guide (there is one for the high school and one for the middle school; use the right one for your level).
- Colorado TSA State Competitive Events Guide (this one contains all the rules for both the middle and high school events that are only offered at the state level).

The competitive events are listed alphabetically in each of the books and are broken into several sections:

- **National Competitive Events Guide**
 - Overview – A brief summary of the event.
 - Purpose – This tells you the goal of the event – what you are supposed to learn/do.
 - Eligibility – This tells you how many individuals/teams from your chapter/state can compete in a contest.
 - Time Limits: This tells you how long certain portions of the contest will take.
 - Attire – This section tells you what the uniform requirements are for the contest. This is what you must wear to compete in the event at the state or national level. If you are not wearing appropriate attire, you will be assessed a rules violation or disqualified.
 - Procedure – This section tells you how the contest will work.
 - Regulation – These are the “rules” for the event. It explains in detail what you should include in your project – a display, a documentation notebook, a model, etc.
 - Evaluation – This tells you how the project will be graded. Use this with the rubric to see exactly what the judges will be looking for.
 - Notes – Specific notes for you that relate to the project.
- **COTSA State Competitive Events Guide**
 - Purpose – This tells you the goal of the event – what you are supposed to learn/do.
 - Eligibility – This tells you how many individuals/teams from your chapter can compete in a contest.
 - Specific Regulations - These are the “rules” for the event. It explains in detail what you should include in your project – a display, a documentation notebook, a model, etc.
 - Procedure – This section tells you how the contest will work.
 - Evaluation – This tells you how the project will be graded. Use this with the rubric to see exactly what the judges will be looking for.

When do you need to start the notebook?

You need to start building the notebook as you work on your project. Most contests will require you to keep a work log or include preliminary drawings you create as you work through the process. Do not wait until you are finished with the project to create your notebook! If you do, you're liable to leave out crucial information that could mean the difference between winning a medal or not.

Where do you look to see if you need a notebook?

Look at the rules for your competitive event. Find the REGULATIONS or SPECIFIC REGULATIONS section. Here you will see EXACTLY what is required for the contest, including information on the documentation notebook. At the right is an example from the High School National Competitive Events Guide showing the Regulations Section.

The Notebook:

- The notebook should be a standard three (3)-ring binder with a clear front sleeve for a cover page (as shown in the illustration below).



REGULATIONS

Architectural Assessment

Read the General Rules and Regulations in the front of this guide for information that applies to all TSA competitive events.

Available: A model is "required" for a more detailed design concept. It serves as an assessment tool for the design. The model detail can obscure important qualities, and not enough detail may generate an overly vague impression.

REGULATIONS

A documentation notebook is required and must be submitted with the display. A standard three (3)-ring binder, with a clear front sleeve for a cover page, is required. The cover page must include the event title, the conference city and state, and the year. The inside of the binder must include the following single-sided, 8 1/2" x 11" pages, in this order:

1. Title page with the event title, the conference city and state, and the year; one (1) page.
2. Table of contents; pages as needed.
3. A description of how the team interpreted the design challenge and an explanation of the logic and merits of the team's design concepts; one (1) page.
4. Demolition plan for the existing structure; maximum of two (2) pages.
5. List and describe how each of the following construction systems (any and all that apply) have been incorporated and applied to the team's custom building model, building permits, construction methods and materials, electrical wiring, plumbing, HVAC, and site requirements; maximum of six (6) pages.
6. ALEED assessment for the project, according to the USGBC standards for green building; one (1) or more pages.
7. A schedule of key materials for all exterior and interior surfaces of the architectural design (this is not a list of the model construction materials); one (1) page.
8. A reproduction copy of original hand-drawn and printed (computer-generated) copies of CAD drawings for the following required drawings (each drawing to be submitted on maximum drawing sheet of size 8-1/2" x 11") with:

- The size of the notebook depends on the amount of material you are required to submit. Do not submit a 3" thick notebook when a 1/2" notebook will do. Most of the time, a 1/2" to 1" notebook is sufficient.
- DO NOT** use pocket portfolios, spiral notebooks, composition notebooks, or stapled sheets of paper for your "notebook." They are not 3-ring binders and things cannot be securely added to them.
- USE PAGE PROTECTORS!** Place all of your documentation in page protectors inside the notebook. Doing so prevents pages from being accidentally ripped or torn out or worse yet, lost. PLUS...it gives a professional look to the notebook.
- Do not double-side the pages in the protectors.

THE DOCUMENTATION

Ok, now that you know what you should have to put your documentation into, you can dive into the meat of the project...the documentation. Your documentation has the ability to either make or break your project, so you should spend just as much time on it as you do the rest of the project, if not more!!

Remember that all the documentation in your notebook should be word processed. DO NOT include handwritten documentation unless it is specifically called for in the event guidelines. Some events may require you to submit notes and sketches – those pieces of documentation are acceptable if handwritten.. However, the remainder of the documentation must be typed on a computer and printed on an inkjet or laser printer.

The documentation should be printed on 8.5” x 11” paper unless otherwise stated by your event guidelines.

The documentation should be printed single-sided unless otherwise stated by your event guidelines.

Remember to spell-check/grammar check your document...BUT...don't rely completely on the computer. Have someone read it for typographical and grammatical errors before you print it. The computer may not pick up on the wrong usage of words such as “HEAR” and “HERE” or “THEIR” and “THERE”. The misuse of words in your documentation could cost you points and that could translate into a lost medal or trophy!

Here the specifications you should use in creating your documentation:

- **FONT SIZE:**
 - Use only 11 or 12 point type. Do not shrink your type to fit on a page; and conversely, do not increase the size of your type to fill a page.
 - Do not mix and match type sizes in your document. Keep all text the same size unless specifically instructed to do so for your competition.

- **FONT STYLE:**
 - Throughout your documentation, be consistent in the use of fonts and typefaces, both in style and in size. Don't mix and match fonts. It's visually unappealing and makes the notebook look unprofessional. *Pick ONE type face and stick with it throughout the entire documentation notebook.*
 - Use a standard type font such as Times New Roman or Arial. Yes, it may be “boring,” but if you have to do some last minute work on a computer that isn't yours, they may not have that fancy typeface you're using. You are more likely going to find Arial or Times New Roman than anything else (and that will help prevent you from reformatting the entire document!). Besides, using one of these two fonts will make your documentation easier for the judges to read.

- **Do not use Word Art!** Just because you can, doesn't mean you should. For headings, subheadings, and titles, use a bolded, bolded/italic version of the same font you used for the body text.

- **CHARACTER SPACING:**
 - Put only one (1) space after punctuation ending a sentence. Thanks to computers handling spacing for you, you only need one. And stay consistent in the use of spaces in the document.
 - Use one (1) space after a semicolon (;) comma (,) or colon (:).
 - Use one space between any state abbreviation and zip code.

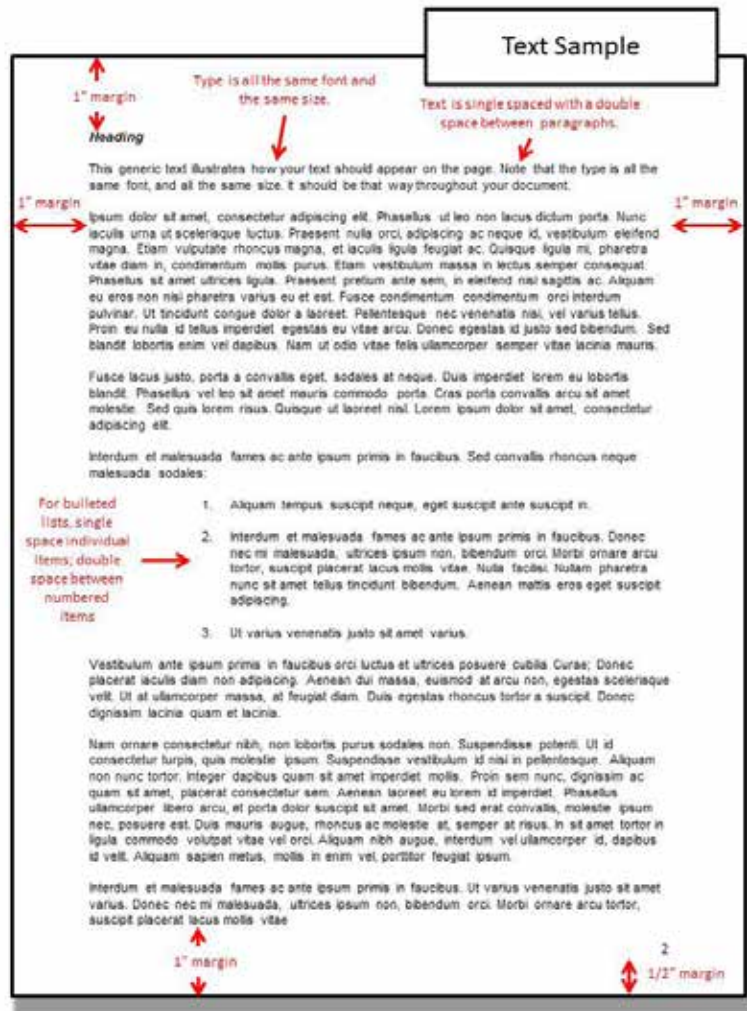
- **LINE SPACING:**
 - Unless otherwise specified in a competitive event's guidelines, all text should be single-spaced with a double-space put in between paragraphs.
 - When using bulleted lists, single space individual items; double space between numbered items just like the items in this bulleted list).

- **MARGINS:**
 - In general, unless otherwise stated in the competitive event guidelines, all margins should be 1" (one inch).
 - Do not shrink or stretch the margins. Don't increase the size of your margins to help stretch the length of your document, and don't decrease them to shorten a lengthy document. Fudging the margins makes the document look unprofessional and messy. It is far better to edit the text to fit the space instead.

- **PAGE NUMBERS:**

- Include page numbers. This will help judges easily find information in your documentation.
- Page numbers should be in the same font size and style as used throughout the documentation.
- Page numbers should be 0.5” from the bottom of the page at the right margin starting on page 2.

Below is an example of what a page of text in a documentation notebook should look like:



WHAT'S INSIDE THE NOTEBOOK

Here's what you should include in your documentation notebook, along with any specific items the event guidelines call for:

THE COVER PAGE:

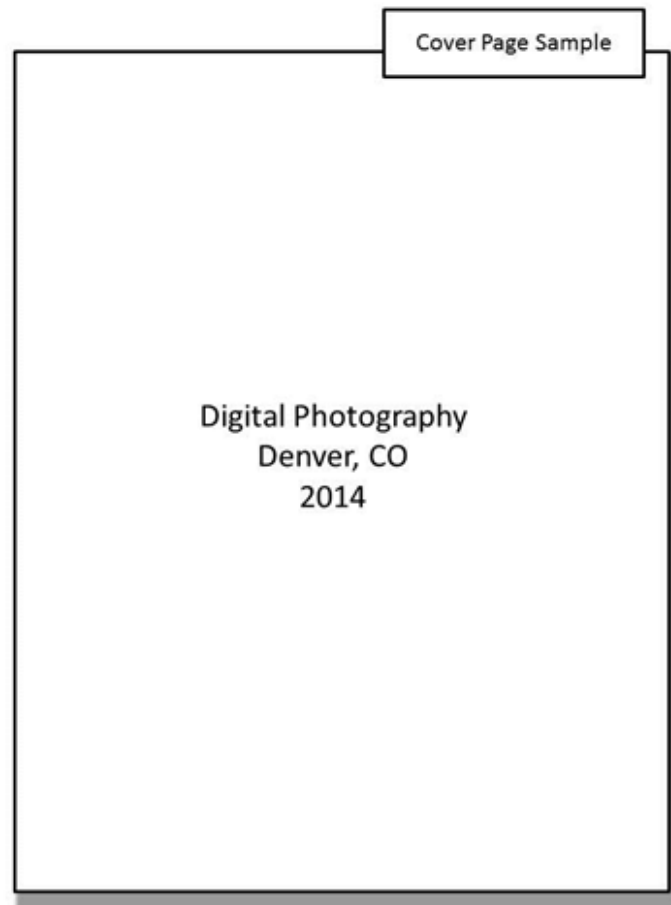
Every notebook should have a cover page inserted into the clear view front pocket. This will help a) make sure your project is placed in the right area to be judged; b) aid the judges when they are evaluating your notebook/project.

The cover should be blank, except for:

- The Event Title
- The Conference city and state (this will need to be changed if the project progresses from the state conference to the national conference)
- The Year
- DO NOT PUT YOUR NAME OR ANY OTHER IDENTIFYING INFORMATION, INCLUDING YOUR TEAM NUMBER ON YOUR COVER PAGE.

That's it – plain and simple. DO NOT include any art, graphics, sketches, logos, or other information. Yes, it may be dull and boring, but each competitive event calls for a simple cover to identify the notebook, the event to which it belongs and the team/individual contestant. That's all. Nothing more. If you do not label it correctly, it may not be placed in the proper area for judging or it may not be judged at all!

At the right is an example of what a cover page should look like:



THE TITLE PAGE:

The title page is different from the Cover Page. The title page is the start of the written documentation and appears as the FIRST page, INSIDE the notebook. The Cover Page goes OUTSIDE of the notebook on the cover of the binder.

Here are the specifications for a Title Page:

- The Title Page is one page in length and should not include any graphics (including Word art), logos, sketches or other identifying information.
- The Title Page should include:
 - The Event Title
 - The Conference City and State
 - The Year of the Conference
 - The Team/Chapter ID Number – This number should have been provided to your chapter advisor after registration for the state conference. This number will change if the project progresses from the state conference to the national conference. Do not put your name, school name, or any other identifying information other than your ID number.
- Below is an example of what a Title Page should look like:

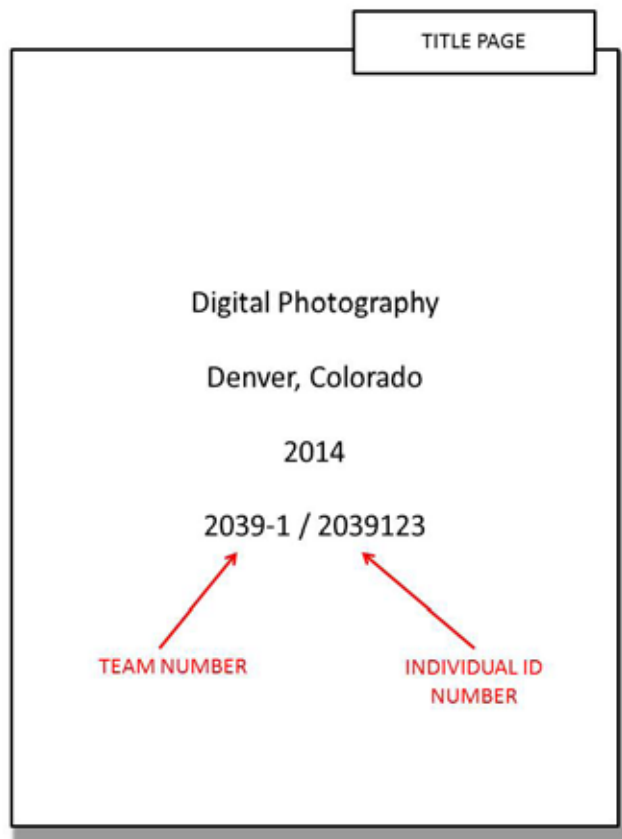


TABLE OF CONTENTS:

Most documentation notebooks will require a Table of Contents. Here are the specifications for the Table of Contents:

- The Table of Contents can be as many pages as needed.
- The Table of Contents heading should be centered at the top of the page, followed by a double-space.
- The items in the table of contents should include all the items called for in the event's guidelines and they should be in the same order as called for in the guidelines.
- The names of the items in the table of contents should be flush left.
- The page numbers should be right-aligned with leader lines as shown in the example shown below.

TABLE OF CONTENTS	
TABLE OF CONTENTS	
Introduction.....	1
Investigation	
Identification of the Problem.....	2
Design Brief.....	3
Design Specifications.....	5
Design	
Design Process.....	7
Production Plan.....	9
Solution Creation	
Tools, Materials & Processes.....	11
Work Log.....	12
Evaluation	
Evaluation of Solution.....	13
Evaluation of the Production Plan.....	15
Self Evaluation.....	17
Suggested Improvements.....	19
References.....	20

The items in the table of contents should be listed exactly as they appear in the event guidelines. They should be flush left.

There should be a dot leader to direct the reader to the page number.

The page numbers should be flush right against the margin.

All type should be the same size and the same font as the rest of the document. No artwork, logos or other graphics should be included on this page. KEEP IT SIMPLE!

TABLES:

Tables are useful in showing data and you should use them where appropriate. However, unless they are formatted neatly and consistently, the data becomes lost or unusable.

Here are the formatting guidelines for tables:

- Use bold type for titles and column headings
- Column headings should be centered over column.
- Tables using one- and two-line column headings should be aligned at the center of the cell.
- Unless specifically required by your event's guidelines, gridlines should be used.
- Include the dollar sign (\$) when showing dollar amounts in columns.
- All columns containing numbers should be right aligned or decimal aligned.
- All columns containing text should be left aligned (with the exception of column headings).
- The body of the table should be single-spaced.
- Tables should be centered on the page horizontally unless otherwise indicated.

Below is an example of how a table should look:

TABLES

Use bold type for titles and column headings. Column headings should be centered over the columns.

Tables using one- and two-line column headings should be aligned at the center of the cell.

Unless specifically required by your event's guidelines, gridlines should be used.

Example of a Table

Column Heading	Column Heading	Column Heading
Text goes here. It is flush left.	Text goes here.	\$100.00
The table is centered on the page. Note that text can take up more than one line.	Text can also go here.	\$200.00
Use gridlines for any table you create.	And so is this.	\$300.00
Make sure you align your decimal places.	And this is, too!	\$400.00

All columns containing text should be left aligned.

The body of the table should be single-spaced.

Include the dollar sign (\$) when showing dollar amounts in columns. All columns containing numbers should be right aligned or decimal aligned.

Tables should be centered on the page horizontally unless otherwise indicated.

RESUMES:

Some contests require you to turn in a resume. Here are tips to create a clear, readable resume that can be read by optical character recognition scanners some employers use. Even though you won't have your resume scanned by a machine in TSA competition, it's still a good idea to keep these pointers in mind when creating a resume:

- Use a single, non-decorative font (Arial or Times New Roman are the most common)
- Be sparing in your use of boldface, italics and underlining.
- When it comes to bullets, do not use round hollow bullets as they can be misread by scanners some employers use. They could be misread as the lowercase letter "o" or the digit zero. Instead, use round, solid bullets.
- Avoid using any shading or boxes on your resume.
- Be careful that you do not have letters that touch each other. Scanners have trouble interpreting text when characters touch or overlap.
- Do not use ampersands (&) percent signs (%) or foreign characters as the scanner may not read them properly.
- Try not to use lines or other graphic elements on your resumes. Scanners have a tough time translating them.
- Do not use a multi-column format. Scanners read text left to right and cannot distinguish between columns like the human eye can.
- Begin each line at the left margin and do not justify the right margin

At the right is one sample of how a resume could look. You do not have to use the exact format of the sample presented here; it's only there to help get you started. There are many other examples of resumes available on the Internet or through resources available through your teacher.

Sample Resume

Johanna S. Bach
123 Main Street
Anytown, US 12345
(555) 555-5555

Objective: A very impressive and convincing objective statement should be written to enrich worth of a resume. Resume objective can be two to three lines in length. Be concise and mention the name of the position you are applying for.

Employment History:
Company Name, City, State – Month/Year to Month/Year
• Bullet points of job duties go here.
• Bullet points of job duties go here.
• Bullet points of job duties go here.
Company Name, City, State – Month/Year to Month/Year
• Bullet points of job duties go here.
• Bullet points of job duties go here.
• Bullet points of job duties go here.
Company Name, City, State – Month/Year to Month/Year
• Bullet points of job duties go here.
• Bullet points of job duties go here.
• Bullet points of job duties go here.

Skills:
• Job related skills will be written here as bullets.
• Job related skills will be written here as bullets.
• Job related skills will be written here as bullets.

Education:
• Degree/Diploma, School, City, State, Year of Degree/Diploma
• Degree/Diploma, School, City, State, Year of Degree/Diploma
• Degree/Diploma, School, City, State, Year of Degree/Diploma

References:
Available Upon Request

Annotations:

- Be careful! Don't put your real or identifying information on a resume unless the contest specifically asks for it!
- Use common subject headings followed by a colon.
- For employment date ranges, be specific for each experience.
- List skills that directly relate to the job you are applying for.
- Make sure you include all relevant educational experiences, including internships.
- Prepare a list of references (at least 3 and include all contact info) ahead of time just in case the interviewer asks for them.

REFERENCES/SOURCES/WORKS CITED:

You will be required to cite where you got information you used in the creation of your projects. If you think you can just cut/copy/paste from the Internet – think again. That’s plagiarism and it will get you disqualified faster than anything! Yes, take the information...read it...digest it...analyze it...even quote it...but don’t forget to cite where you got it! (And no, www.google.com is not a reference. Google is a search engine. It’s the website Google takes you to that’s the source - and even then, it may not be the original one!)

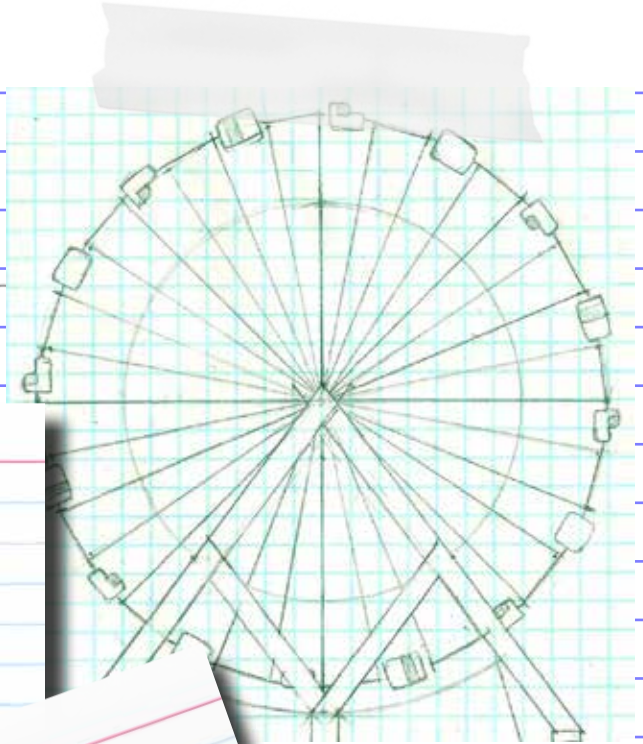
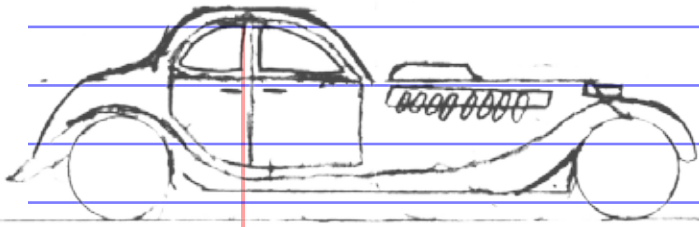
In TSA documentation, you must use MLA format (MLA stands for Modern Language Association). If you want to really get into the MLA format, you can visit this website: www.mla.org/style. However, below is a quick reference checklist for you. The checklist, provided courtesy of FBLA-PBL, shows how each of the various sources should be cited in a References section in your documentation. (FBLA-PBL Format Guide. Reston, VA. FBLA-PBL, 2014).

REFERENCES – MLA STYLE

- Sample Book Reference:
Bohlman, Herbert M., and Mary Jane Dundas. *The Legal, Ethical and International Environment of Business*. 5th ed. Cincinnati, OH: Penguin, 1987. Print.
- Sample Book Reference without Author:
The Economist, Princeton Press: Princeton, 1997. Print.
- Sample Magazine Reference:
Cohen, Stephen S., and J. Bradford DeLong. “Shaken and Stirred.” *Atlantic Monthly* Jan.-Feb. 2005: 112. Print.
- Sample Magazine Reference without Author:
“Coca-Cola Paid CEO \$32 Million U.S. in 2007.” *Toronto Star* 4 Mar. 2008: B2.
- Sample Internet Reference:
Thomason, Larisa. *HTML Tip: Why Valid Code Matters*. *Webmaster Tips Newsletter*. Dec. 2003. NetMechanic. 6 Jan. 2008 <www.netmechanic.com/news/vol6/html_no20.htm>.
- Sample Encyclopedia:
Nazi Party. *New Encyclopedia Britannica*. New York: Somerset, 1997 ed.
- Sample Interview Reference:
Chirac, Jacques. Interview by John Smith. *Time* 16 Feb. 2003. 10 Oct. 2005
www.time.com/time/europe/magazine/2003/0224/cover/interview.html

- Sample Booklet/Pamphlet Reference:
Diabetes Care: Blood Glucose Monitoring. Burnaby, BC: LifeScan Canada, 1997.
- Sample DVD Reference:
Encarta 2004 Reference Library. CD-ROM. Microsoft, 2003.
- Sample Radio/Television Reference:
“New York Museum Celebrates Life of Einstein.” By Martha Graybow. Reuters, New York.
WBFO, Buffalo. 13 Nov. 2002.
- Sample Government Pubs Reference:
United States. National Council on Disability. Carrying on the Good Fight Summary Paper
from Think Tank 2000- Advancing the Civil and Human Rights of People with Disabilities
from Diverse Cultures. Washington: GPO, 2000

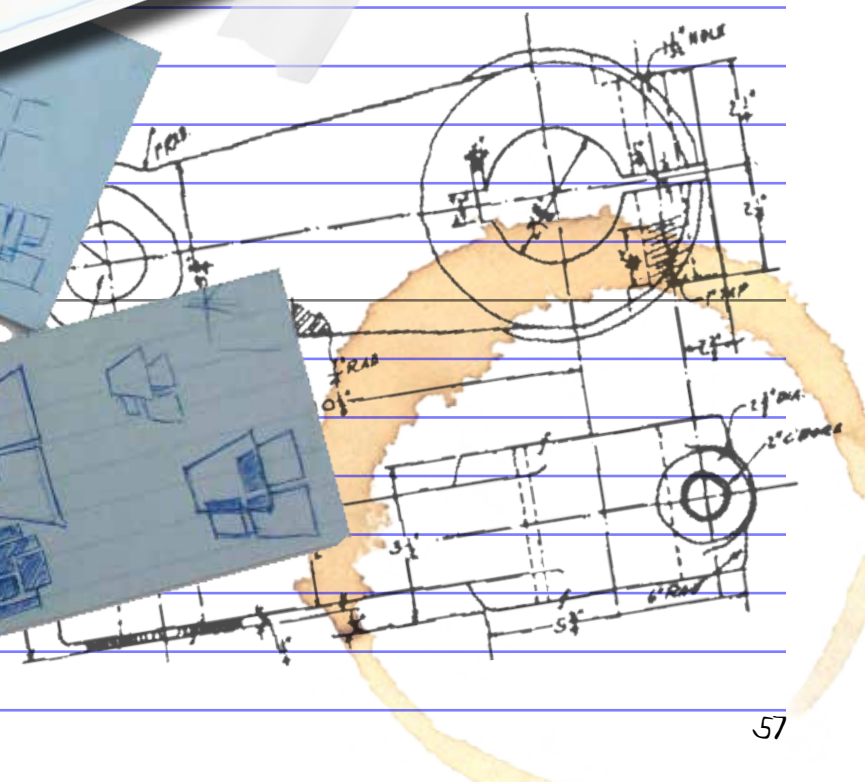
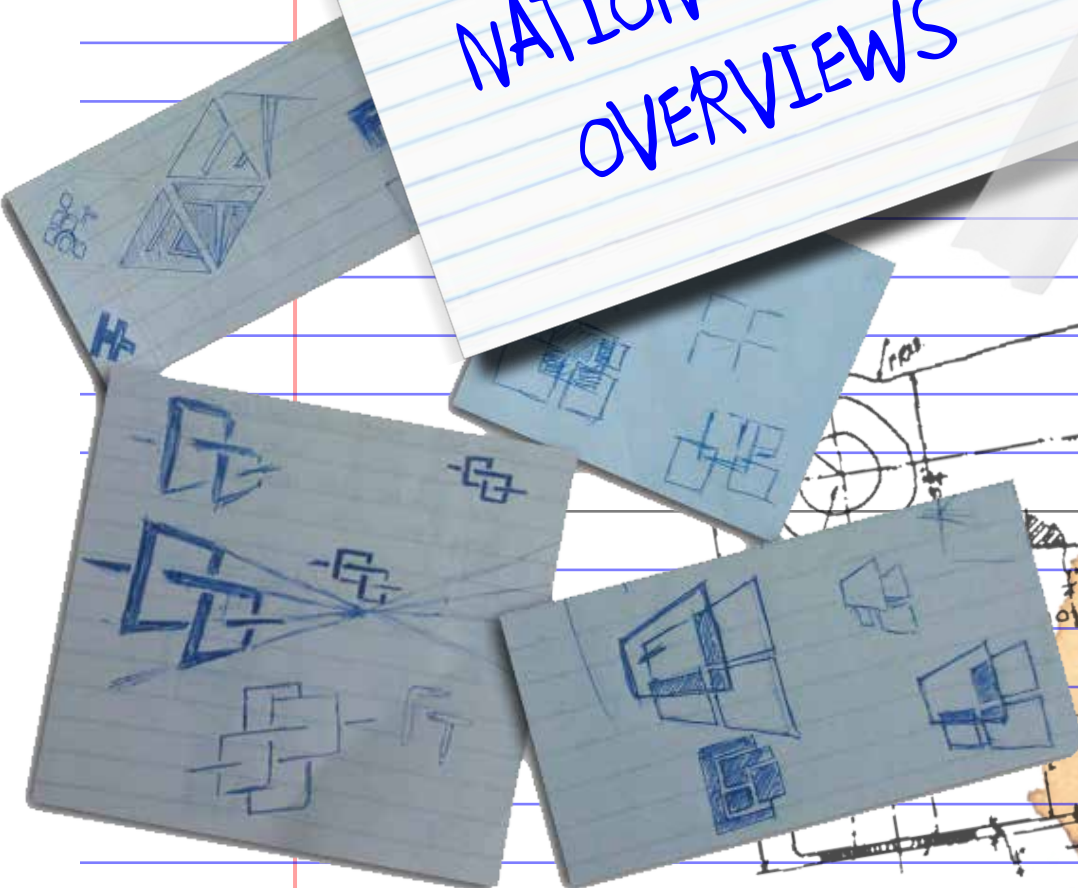
IMPORTANT NOTES:



STATE COMPETITIVE EVENTS RULES



NATIONAL EVENT OVERVIEWS



CASTLE BALLISTICS

OPEN TO MIDDLE SCHOOL AND HIGH SCHOOL CONTESTANTS

UPDATED!

I. PURPOSE

Allow students to demonstrate their ability to design and construct a ballistic device to hit a target within a 80' x 80' area. The locations and distances will be randomly picked.

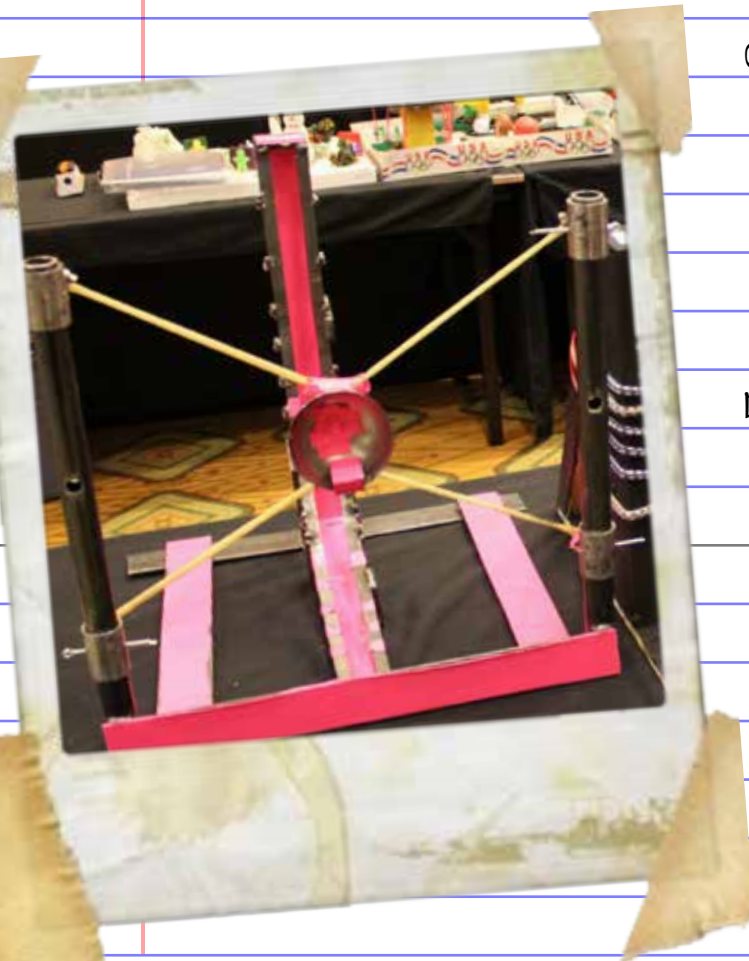
II. ELIGIBILITY FOR ENTRY

Entrants are limited to two (2) teams of three (3) per chapter. This event is open to both MIDDLE and HIGH SCHOOL students.

III. SPECIFIC REGULATIONS

- A. All entries must be turned in at the designated time. Each entrant will be responsible for obtaining time schedules at registration. The device may be either a: trebuchet, ballista, onager, slingshot, mortar, catapult, mangonel, or other device.
- B. All entries must be delivered free of needed repair and/or maintenance at time of check-in.

- C. Every entrant shall submit a complete set of sketches for the ballistic device detailing each part with basic dimensions. These sketches are to be completed on 8.5" x 11" paper. These sketches should show top view, front view, side view and isometric view.
- D. The ballistics notebook should include all of the following:
 - A firing log or calibration table must be included. Information should be included regarding calculations of initial angle of trajectory, distance, initial velocity, etc. Middle school students are not required to show formulas, but may do so for extra credit. 40 points each: table of range data, range calculations,



CASTLE BALLISTICS (CONTINUED)

initial angle calculations, maximum height of trajectory calculations, time aloft calculations, documentation of using the engineering design process (such as brainstorming idea sketches, research, decision-making matrix, etc.)

- Students must show sample calculations. They must start with the pure formula (no numbers in the formula), then the formula with numbers substituted into it, then how it was solved and the final answer with units. Students should ask their technology teachers, engineering teachers, science teachers and/or mathematics teachers for information about formulas for calculating distance, initial velocity (launch velocity), and initial angle of trajectory. Students can determine (measure) initial angle of trajectory and horizontal distance travelled themselves. They can use the following formula to determine the initial velocity with these two pieces of information.

$$V_o = \sqrt{gX / \sin \Theta} =$$

Where....

V = Velocity or speed of the hacky sack.

o = INITIAL

$\sqrt{\quad}$ = square root of

X = range (horizontal distance the hacky sack travels on the X axis)

Θ = angle above horizontal that the hacky sack leaves the ballistic device

g = gravity which is 32FPS^2 which is 32 feet per second squared.

\sin = sine is a trigonometric function. If you have not had trigonometry yet, just ask your teacher.

Solving for initial velocity: Note: This formula is valid only for equal initial and final elevation. In other words, if the elevation of the hacky-sack at time of launch is not the exact same elevation as the top of the castle, this may not work without some adjustment. The following formula can be used for determining the distance the hacky sack will travel:

$$X = V_o^2 \sin 2\Theta / g$$

CASTLE BALLISTICS (CONTINUED)

Where:

X = range (horizontal distance the hacky sack travels on the X axis)

V = Velocity or speed of the hacky sack.

v_0 = INITIAL

Θ = angle above horizontal that the hacky sack leaves the ballistic device

g = gravity which is 32 FPS^2 which is 32 feet per second squared.

SIN = sine is a trigonometric function.

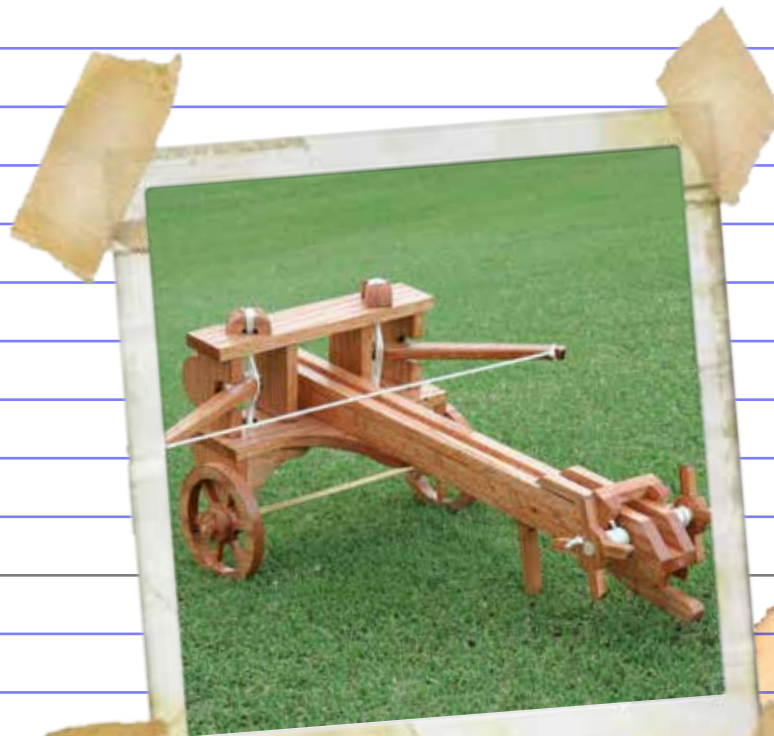
Middle school students are not required to show formulas, but may do so for extra credit.

There are also websites devoted to physics and to ballistic devices, and ballistic trajectories (projectile motion) that can help, such as these recommended websites: hyperphysics.phy-astr.gsu.edu/hbase/traj.html or www.ajdesigner.com/phpprojectilemotion/range_equation_initial_velocity.php or others. Also a search of "ballistic formula" or "kinematics formula" should give all the information necessary.

- E. Gravity and/or elastic material are to be the ONLY power sources for the ballistic device. NO EXPLOSIVES or AIR/GAS ASSISTIVE DEVICES OR MECHANISMS WILL BE PERMITTED. Any device that incorporates explosives or air/gas assistive devices will be disqualified.
- F. The device will launch a standard, off-the-shelf size hacky-sack/footbag or juggling bag (weighing less than 100 grams). No modifications may be done to the sack/footbag, unless you would like to add a string. Nothing else may be launched. Students must provide their own hacky-sacks; they must be checked in with the device and must be approved by the contest coordinator prior to launch. Any ballistic device that throws anything other than a hacky-sack will be disqualified immediately, even if it was an accident. Nothing may be attached to the hacky-sack except a string. Please make sure that nothing will break off and go flying, as this is a major safety risk for teams and spectators.

CASTLE BALLISTICS (CONTINUED)

- G. The device must not tip over during launch. No part of the device may strike another part of the device to prevent breaking and possibly launching of parts, for safety reasons.
- H. The device must be safe and free of hazards to those operating it and those nearby at all times. The judges determine what is safe, and are the final arbiters of safety.
- I. The maximum size of the device will be 12" high, 12" wide and 12" long during storage/ transportation mode. Any device that is larger than the specified dimension WILL NOT be tested. During firing mode, there may be slide outs, fold outs or other mechanisms to make the device larger.
- J. If the ballistic device does not meet the size, construction or source of power specifications, it will be disqualified or receive point deductions up to 20% of total points possible. The penalty is at the discretion of the judges.
- K. No kits are allowed. The participant(s) must create the device from scratch. It may be from plans not original to the team.



BALLISTA

CASTLE BALLISTICS (CONTINUED)

- L. During the launch, the hackey- sacks may not hit the walls, people, ceiling or anything attached to the ceiling.
- M. The ballistic device MUST have a triggering device that keeps it from launching until it is time to fire. It should take very little effort to trigger the ballistic device. Ballistic devices must use a string that extends at least three feet long from the triggering device to trigger the ballistic device. The triggering mechanism should safely hold the ballistic device ready to fire, without anyone touching the device or the string that triggers it.
- N. All participants must wear safety glasses when within the competition area.
- O. No one may help set up the device except the team members. Other people who are not on the Castle Ballistics team must stay out of the firing area. P. Design aesthetics and how well constructed the device is, are each worth 40 points.

IV. PROCEDURE

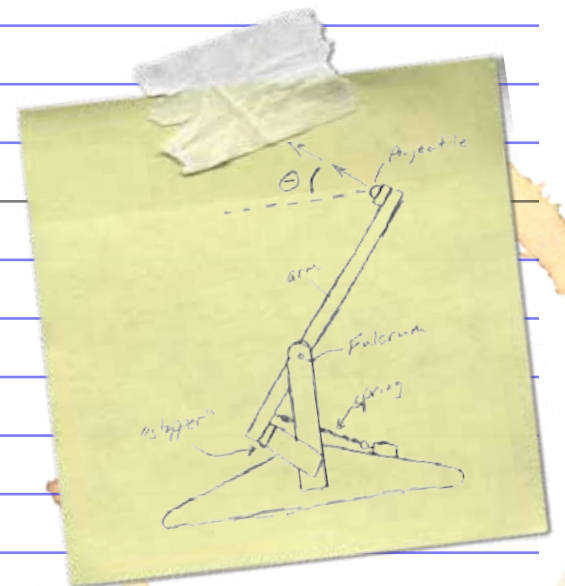
- A. Event participants must register for the event in accordance with the procedures established for the conference.
- B. Each device will be tested by itself; not against other devices.
- C. Student teams will be given 15 minutes to load, aim and launch up to three hackey- sacks/footbags at three (3) randomly placed "castles" inside the testing area. The testing area will be approximately 80' x 80'. The hackey- sack/footbag must weigh 100 grams or less. Teams will lose 10 points for every gram over 100 grams. The launch area will be within 36" of the wall or fence. All devices must be within three feet of the wall or fence when firing. The "castles" are open-topped containers approximately 16" to 24" high, 16" to 24" wide and 16" to 24" deep. The "castles" will be placed randomly in the central part of the competition area, surrounded by ballistic devices around the edge of the competition area. Only team members may be in the competition area.

CASTLE BALLISTICS (CONTINUED)

- D. Each team will be given three launches per castle. Only 3 test shots are allowed, and must be observed and supervised by a judge. Teams should rely on a measuring device, and their documentation of previous test shots and distances recorded before competition day for this competition. Teams that use lasers must take care to keep the laser dot only on the ground and on the castles. They must not wave lasers in peoples' faces for safety reasons. The initial angle of trajectory must be greater than 40 degrees from horizontal. This is to make shots less likely to go all of the way to people on the other side of the castles.
- E. Points will be awarded as follows: 10 points if the footbag/hackey-sack comes to rest within 36" of the castle without hitting it; 25 points if the footbag hits the castle; and 50 points if the footbag goes inside the castle and stays inside of the castle. The foot bag (hackey-sack) may hit the ground and/or roll before hitting the castle, and still score 25 points. Students should bring a printed copy of the rules for this event to the actual competition for reference as to procedure.
- F. A tie-breaking round will be held in the event of a tie.
- G. Teams may be disqualified for interfering with adjacent teams during competition.
- H. Ballistic devices and all documentation must be returned to the display area at the end of the competition.

V. EVALUATION

The following rubric will be used. In the event of a tie, a tie-breaking rounds will be held until a winner is determined.



CASTLE BALLISTICS

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____		Record information about the shots taken on each castle here. Add all shot scores together and put the result in the TOTAL column at the far right.									
Points are awarded as follows: <ul style="list-style-type: none"> • If the footbag/hackey-sack is within 36" of the castle: 10 pts. • If the footbag/hackey-sack hits the castle: 25 pts. • If the footbag/hackey-sack goes in the castle: 50 pts. ADD ALL 9 SHOT SCORES TOGETHER AND PUT THE TOTAL AT THE FAR RIGHT		Castle 1			Castle 2			Castle 3			TOTAL
		Shot 1	Shot 2	Shot 3	Shot 1	Shot 2	Shot 3	Shot 1	Shot 2	Shot 3	
Drawing	40 Points Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the device. It is to scale. Measurements are included.	30 Points Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the device, but may not be accurate. It's not to scale. Measurements are not included.	20 Points Drawing is on 8.5" x 11" paper reflects the design of the device, but may not be accurate. It's not to scale. Measurements are not included.	10 Points Drawing is not neat, is not on 8.5" x 11" paper, is not accurate, or is missing. It is not to scale. Measurements are not included.							
Design Specs - Overall	The device meets design specs for height, width, and length.	The device does not meet one of the specs for height, width, or length.	Device does not meet two of the specs for height, width, and length.	The device doesn't meet design specs for height, width, and length.							
Design Specs - Launch Area	Device stays within the launch area and does not tip over during launch.	N/A	N/A	Device does not stay within the launch area and/or tips over.							
Design Specs - Trigger	Has a triggering device. Very little effort required to trigger the device.	Has a triggering device. Some effort is required to trigger the device.	N/A	The device does not have a triggering device or takes substantial effort to trigger.							
Design Specs - Power Source	Gravity and/or elastic material are the ONLY power sources.	N/A	N/A	Uses other power sources than those specified.							
Design Specs - Appearance/Aesthetics	Device is neatly constructed, using a proper amount of glue, tight fitting pieces, and cuts are clean. Device is constructed from scratch.	Device is neatly constructed, but there is one need for improvement: glue usage, tight fitting pieces, and cuts are clean. Device is constructed from scratch.	Device has two needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Device may contain parts from a kit.	Device has three needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Or device is constructed from a kit.							
Table of Range Data/Calibration Table	Table shows at least 12 shots, and how to configure the device to reach each distance.	Table shows at least 10 shots, and how to configure the device to reach each distance.	Table shows at least 8 shots or how to configure the device to reach each distance.	Table shows 6 or fewer shots, and/or does not contain information on how to configure the device to reach each distance.							

TURN OVER →

CASTLE BALLISTICS

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Range Calculations	There are at least two calculations, typed with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, formula with substitutions, solving shown, and final answer with units.	There is only one calculation, formula with substitutions and final answer.	
Initial Angle Calculations	There are at least two calculations, typed with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, formula with substitutions, solving shown, and final answer with units.	There is only one calculation, formula with substitutions and final answer.	
Maximum Height of Trajectory Calculations	There are at least two calculations, typed with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, formula with substitutions, solving shown, and final answer with units.	There is only one calculation, formula with substitutions and final answer.	
Time Aloft Calculations	There are at least two calculations, typed with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, with initial pure formula, formula with substitutions, solving shown, and final answer with units.	There are at least two calculations, formula with substitutions, solving shown, and final answer with units.	There is only one calculation, formula with substitutions and final answer.	
Documentation of Use of Engineering Design Process	Shows documentation for all steps in the process, typed, in order, with photos.	Shows documentation for all steps in the process, in order, with photos.	Shows documentation for most steps in the process, in order, with photos.	Shows little or no documentation, or fewer than 3 steps in the process. May not be in order or may not include photos.	
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____					
Comments:					
TOTAL					

CRASH TEST

OPEN TO MIDDLE SCHOOL CONTESTANTS ONLY

UPDATED!
New theme!

I. PURPOSE

This event is designed to stimulate elementary students' interest in TSA by encouraging middle school TSA members to share their love and interest in technology. For this contest, one elementary student (grades 1-5 or 6 - SEE ELIGIBILITY SECTION BELOW) will work with a middle school student to design and build a "crash test car" that will be tested in multiple head-on and rear-end collisions. The survivability of the passenger, a regular raw egg, will be a determining factor in the car's success.

II. ELIGIBILITY FOR ENTRY

This event is open to Middle School TSA Chapters. Entrants are limited to TEN (10) teams of two (2) students per chapter. Each team MUST have 1 elementary student, and 1 middle school student. Students in 6th grade can be considered elementary students ONLY IF 6th grade is part of the elementary school in which they are currently enrolled. Students in sixth grade who are part of a K-8 or K-12 school would be considered middle school students. Contact the state advisor if there are any questions regarding eligibility.

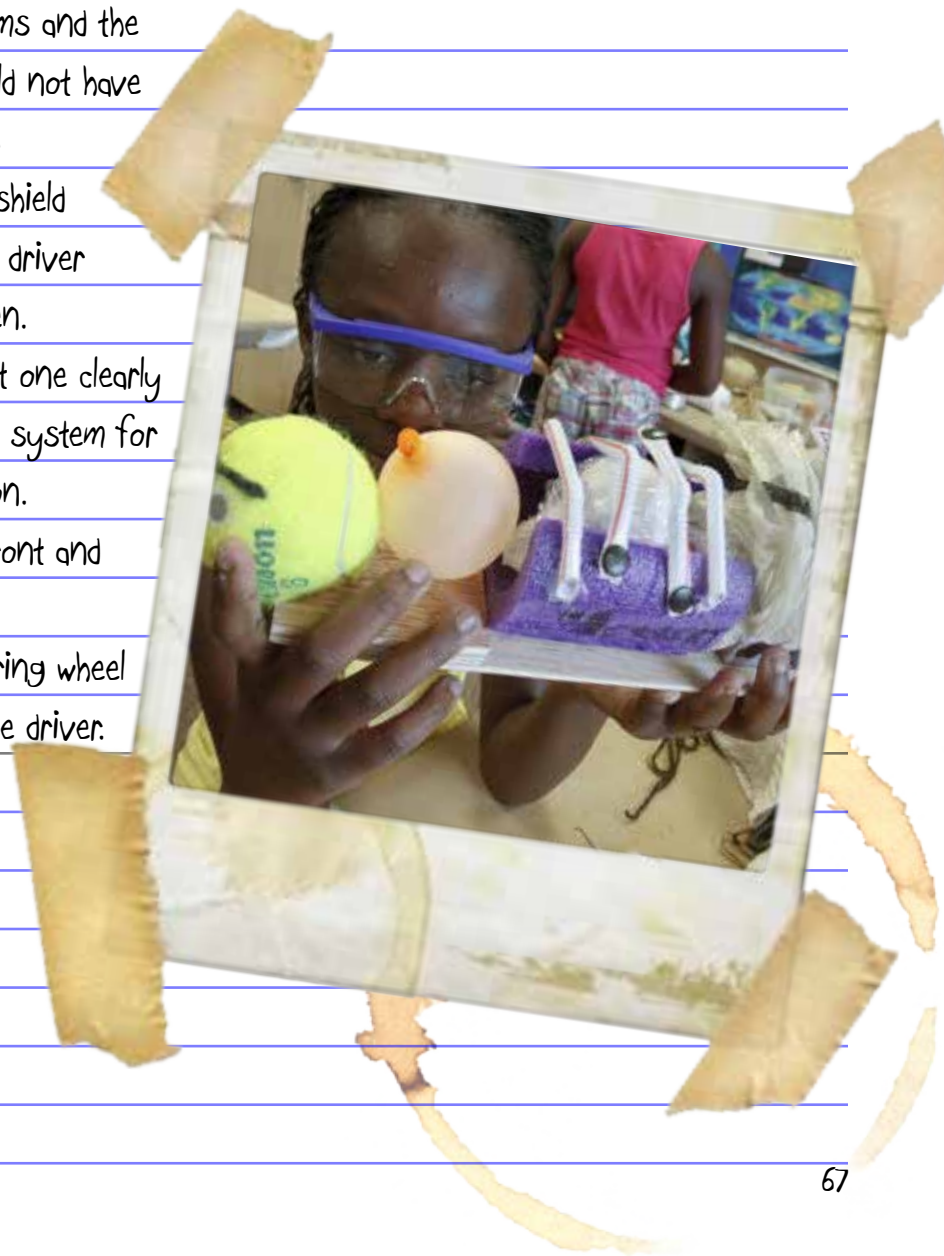
III. SPECIFIC REGULATIONS

- A. The theme for 2015 will be: A pickup Truck
- B. All entries must be designed and constructed before the conference.
- C. Vehicles must be turned into the event coordinator at the beginning of the conference to be displayed. Students may not pick up their vehicles until the end of the conference.

CRASH TEST (CONTINUED)

D. The crash test vehicle:

- Must comply with the current year's published theme.
- Must have seating capacity for at least TWO passengers (although only one egg will be used for testing purposes). Seating should be able to accommodate not only the egg, but the "body bag" (Ziploc™ snack size bag) as well.
- Cannot use pre-made containers for the passenger compartment (for example, Rubbermaid™, Tupperware™, Gladware™ or similar containers). However, portions of the passenger compartment may be pre-made (for example, a single cup from an egg carton, or a plastic steering wheel from a model car kit).
- The safety systems and the vehicle body should not have metal components
- Must have a windshield through which the driver can be clearly seen.
- Must have at least one clearly identifiable safety system for occupant protection.
- Must have both front and rear bumpers.
- Must have a steering wheel within reach of the driver.



CRASH TEST (CONTINUED)

- Must have a reusable way to get the driver in and out of the vehicle after each impact. The egg will be checked for survivability after every crash.
 - Must have a flat bottom with four 1.5" strips of Velcro (the soft side) firmly attached. This will keep the vehicle on the testing sled.
 - Should NOT have any wheels. The wheels are provided in the form of a testing sled. (See attached schematic for the testing sled specifications.)
 - Must be between 3"-4" in width
 - Must be between 7"-12" in length
 - Has no restriction on height.
- E. No commercially produced kits are allowed. The car must be primarily designed and built by the elementary student with guidance from the middle school student.
- F. The vehicle will be placed on a testing sled which will serve as the wheels for the vehicle. A schematic of the sled is provided with these regulations.
- G. The ramp is made from a standard 1" x 10" x 3/4", with 1" x 2" x 3/4" boards as side rails. The end block is a composite hardwood block 9" wide, 8" high and 6-1/2" thick. It is reinforced on the sides with 3/4" solid wood. The guard rails will assist the vehicle down the ramp, but will NOT prevent the vehicle from leaving the track. A schematic of the ramp is included with these regulations.
- H. A drawing of the vehicle done by the elementary student must accompany the vehicle. It should be as accurate to the final model as possible.
- I. The elementary student should be the primary lead in the design and construction of the vehicle.
- J. The middle school student must present a portfolio documenting the project. The portfolio should include:
- Photos of the project
 - An essay describing the project and each person's part in it
 - A time log documenting the time spent with the elementary student on the project.

CRASH TEST (CONTINUED)

IV. PROCEDURE

- A. Participants will turn in their vehicles and design briefs to the display area at the beginning of the conference.
- B. At the time of testing, each vehicle will be given a single, raw egg and a "body bag" (a single snack-sized Ziploc™ bag) to contain any potential egg innards should the shell crack during testing.
- C. The sled, with the car attached, will be rolled down the testing ramp. At the end of the ramp will be a barrier (which may or may not have protrusions) into which the car will crash.
- D. After the car has impacted the barrier, the egg must be removed to check for cracks. If the egg is broken, the crash was unsuccessful and testing will be stopped. If the egg remains unbroken, testing will continue.
- E. The starting edge of the ramp will begin at 4' from the floor. After each successful test, the starting edge of the ramp will be raised 2', until the ramp is near vertical. If the vertical test is successful, the ramp will be lowered back to the 4' level and the car will be repositioned **BACKWARDS** on the sled and the tests will be repeated. If the backwards test is successful, the ramp will be lowered back to the 4' level and the car will be repositioned forwards on the sled and the tests will be repeated with unknown "Road Obstacles."
- F. Testing of the vehicle ends with either a cracked egg or completion of 16 trials (8 forward and 8 backward).
- G. Vehicles will be returned to the display area at the end of the competition.

VI. EVALUATION

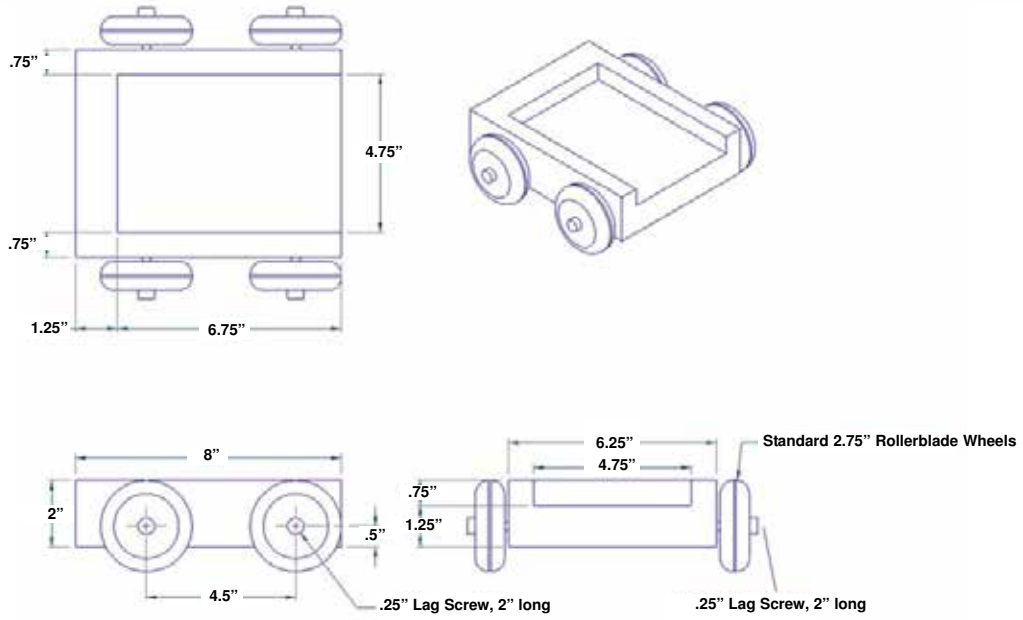
Each vehicle will receive points based on how many impacts the car is able to withstand, the accuracy of the drawing, and on the design portfolio. The following rubric (please see page 10 of this guide) will be used. In the event of a tie, ranking will be determined by the most innovative design. The Event Coordinator will make this determination.

CRASH TEST (CONTINUED)

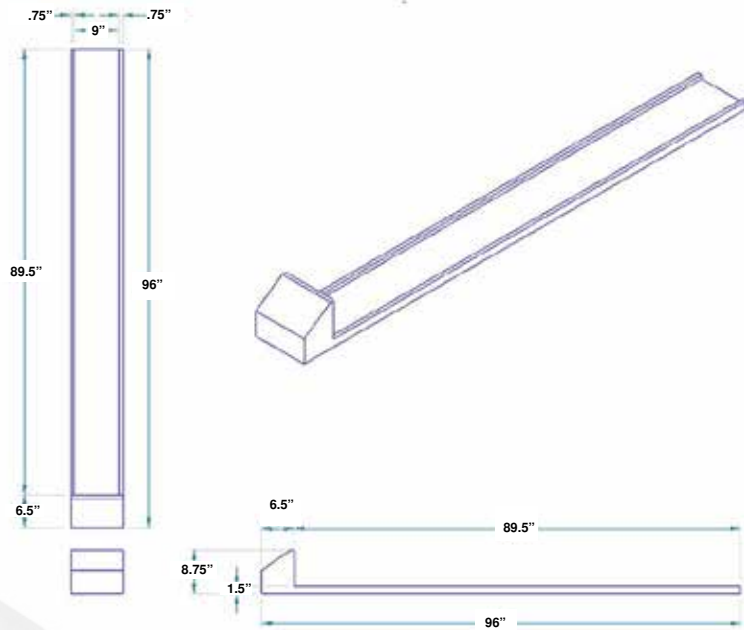
V. SCHEMATICS

Below are the specifications for the crash test sled and ramp.

SCHEMATICS - CRASH TEST SLED



SCHEMATICS - CRASH TEST SLED



CRASH TEST

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____		TOTAL POINTS				
<p>Survivability: Award points based on how high the car got BEFORE the egg cracked (e.g., if the egg cracked after a crash on Step 5, award the points for Step 4)</p> <p>FORWARD-FACING HEIGHT: 4-feet = 5 pts. 6-feet = 10 pts. Vertical Drop = 15 pts</p> <p>BACKWARD-FACING HEIGHT: 4-feet = 5 pts. 6-feet = 10 pts. Vertical Drop = 15 pts</p> <p>FORWARD-FACING HEIGHT W/OBSTACLES: 4-feet = 5 pts. 6-feet = 120 pts. Vertical Drop = 15 pts.</p>						
		10 POINTS	8 POINTS	6 POINTS	4 POINTS	
Drawing	Drawing is neatly prepared and accurately reflects the design of the car. The drawing is to scale. Measurements are included.	Drawing is neatly prepared and accurately reflects the design of the car, but is not to scale. Measurements are included.	Drawing accurately reflects the design of the car. It is not to scale; measurements are included.	Drawing is not neat, does not reflect design of the car, or is missing. Not to scale. Measurements aren't included.		
Portfolio	Portfolio is complete with documentation proving the elementary student was the primary lead in the design and construction of the vehicle. Photos of the project are included as well as an essay describing the project and each person's part in it. A time log documenting the time spent with the elementary student on the project is included.	Portfolio is missing one of the following: documentation proving the elementary student was the primary lead in the design and construction; photos, essay describing the project and each person's part in it, or a time log documenting time spent with the elementary student.	Portfolio is missing two of the following: documentation proving the elementary student was the primary lead in the design and construction; photos, essay describing the project and each person's part in it, or a time log documenting time spent with the elementary student.	Portfolio is missing three or more items or is missing.		
Design Specs - Construction	The car meets design specs for height, width and length. It fits on the test sled properly. The car has ample seating area for at least two passengers. There is an unobstructed view through the windows. Steering wheel is accessible by the driver.	The car doesn't meet one of the design specs for length, width or height, or may not fit test sled. The car has seating for at least two passengers. There may be an obstruction of the windows or controls may not be accessible by the driver.	The car does not meet two of the design specs for length, width or height, or may not fit test sled. The car has seating for one passenger. May have an obstruction of the windows or the controls may not be accessible by the driver.	The car does not meet three or more design specs for length, width or height, or does not fit the test sled. The passenger area does not provide comfortable seating. There is an obstruction of the windows and the controls are not accessible by the driver.		
Design Specs - Appearance	The car has a clear windshield, front and back bumpers, a steering wheel and more than one safety system. The car is neatly done, using a proper amount of glue, tight fitting pieces, and cuts are clean. Car is painted well. The car follows published theme.	The car is missing one of: a clear windshield, front and back bumpers or a steering wheel. There is only one safety system. Car is neatly done, but there is one need for improvement: glue usage, tight fitting pieces, or clean cuts. Car is painted or	The car is missing two to three of: a clear windshield, front and back bumpers or a steering wheel. There is only one safety system. Car has two needs for improvement: glue usage, tight fitting pieces, or clean cuts. Car is decorated but quality is lacking or may not follow published theme.	The car is missing three or more of the following: a clear windshield, front and back bumpers or a steering wheel. There is no safety system. Car has needs for improvement in three areas: glue usage, tight fitting pieces, or clean cuts. Car is not decorated.		
<p>Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event.</p> <p>Record the deduction in the space to the right. Indicate the rule violated: _____</p> <p>COMMENTS:</p>					TOTAL	

CREATIVITY CHALLENGE - HS

OPEN TO HIGH SCHOOL CONTESTANTS ONLY

I. GOAL

To stimulate elementary students' interest in TSA by encouraging high school TSA members to share their love and interest in technology.

II. PURPOSE

In this ON-SITE event, one elementary student (grades 1-5 or 6 - NOTE: SEE ELIGIBILITY SECTION BELOW) will work with a high school student in an on-site design problem. NOTE: This is a non-competitive event and does not earn points for your school toward the Chapter of the Year award. All High School and Elementary buddies will be recognized at the award ceremony.

III. ELIGIBILITY FOR ENTRY

This event is open to High School TSA Chapters. Entrants are limited to 10 teams of two students per chapter. Each team MUST have 1 elementary student, and one high school student. Students in 6th grade can be considered elementary students ONLY IF 6th grade is part of the elementary school in which they are currently enrolled. Students in sixth grade who are part of a K-8 or K-12 school are considered middle school students. Contact the state advisor if there are any questions regarding eligibility.

III. PROCEDURE/SPECIFIC REGULATIONS

- A. Participants report to the event area at the time/place listed in the conference program.
- B. The teams allowed 1 hour and 30 minutes to design and construct a solution.
- C. Each solution is tested as soon as the construction phase is completed.
- D. All work must be completed in the event area during the time specified for the event.
- E. All materials are provided. Only the materials issued to each team by the event coordinator may be used in the development of the solution.

CREATIVITY CHALLENGE - HS (CONTINUED)

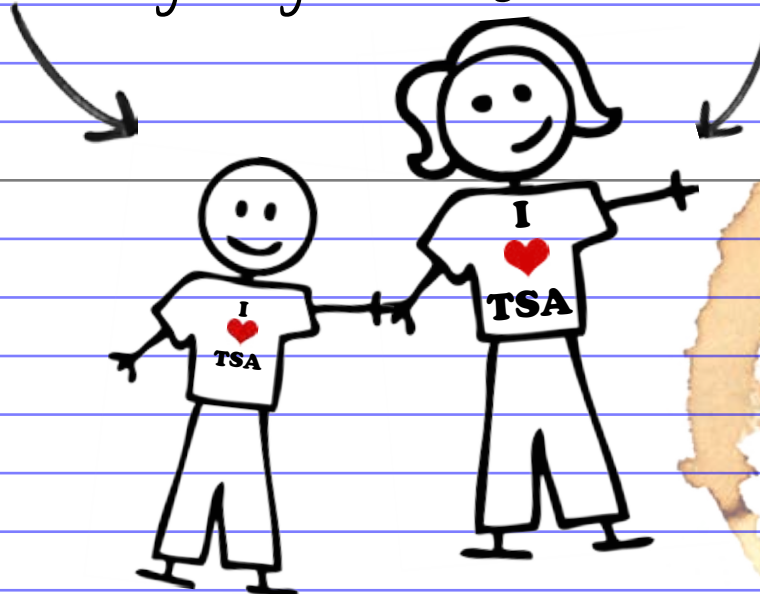
IV. EVALUATION

Each team's solution is evaluated objectively. A finite measure, such as elapsed time, horizontal or vertical distance, and/or strength, is used to determine the best solution. Solution designs will be used to break ties. Only as a last resort does the event coordinator use subjective measurement, such as originality, to evaluate solutions.



One elementary buddy + One high school buddy

= MAXIMUM
CREATIVITY
+ FUN!



CREATIVITY CHALLENGE - MS

OPEN TO MIDDLE SCHOOL CONTESTANTS ONLY

I. GOAL

To stimulate elementary students' interest in TSA by encouraging middle school TSA members to share their love and interest in technology.

II. PURPOSE

In this ON-SITE event, one elementary student (grades 1-5 or 6 - NOTE: SEE ELIGIBILITY SECTION BELOW) will work with a middle school student in an on-site design problem. NOTE: This is a non-competitive event and does not earn points for your school toward the Chapter of the Year award. All Middle School and Elementary buddies will be recognized at the award ceremony.

III. ELIGIBILITY FOR ENTRY

This event is open to Middle School TSA Chapters. Entrants are limited to 10 teams of two students per chapter. Each team MUST have 1 elementary student, and one middle school student. Students in 6th grade can be considered elementary students ONLY IF 6th grade is part of the elementary school in which they are currently enrolled. Students in sixth grade who are part of a K-8 or K-12 school would be considered middle school students. Contact the state advisor if there are any questions regarding eligibility.

III. PROCEDURE/SPECIFIC REGULATIONS

- A. Participants report to the event area at the time/place stated in the conference program.
- B. The teams allowed 1 hour and 30 minutes to design and construct a solution.
- C. Each solution is tested as soon as the construction phase is completed.
- D. All work must be completed in the event area during the time specified for the event.
- E. All materials are provided. Only the materials issued to each team by the event coordinator may be used in the development of the solution.

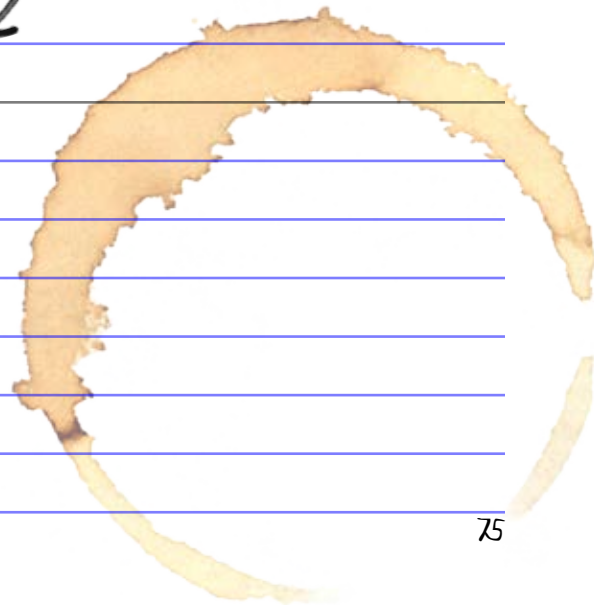
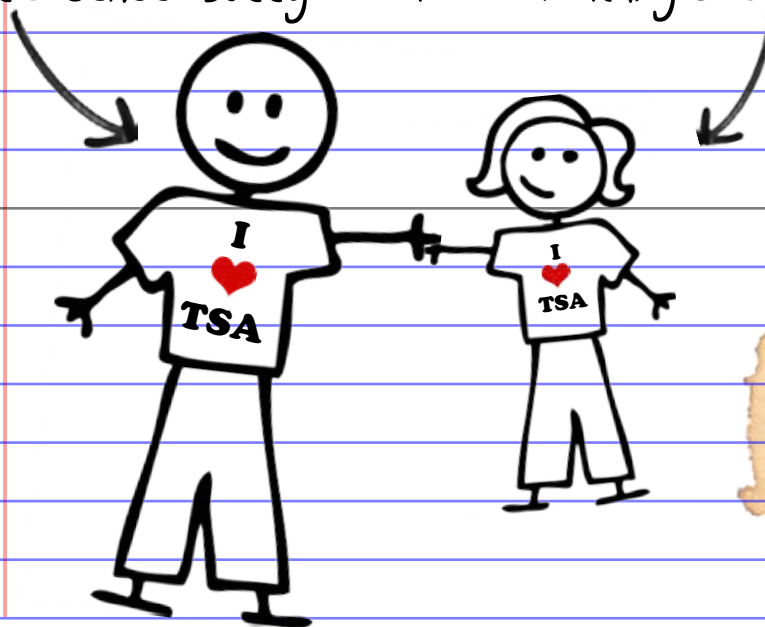
CREATIVITY CHALLENGE - MS (CONTINUED)

IV. EVALUATION

Each team's solution is evaluated objectively. A finite measure, such as elapsed time, horizontal or vertical distance, and/or strength, is used to determine the best solution. Solution designs will be used to break ties. Only as a last resort does the event coordinator use subjective measurement, such as originality, to evaluate solutions.



One middle school buddy + One elementary buddy = A WHOLE LOT OF EXCITEMENT!



FORE!

OPEN TO HIGH SCHOOL CONTESTANTS ONLY

I. GOAL

To stimulate elementary students' interest in TSA by encouraging high school TSA members to share their love and interest in technology.

II. PURPOSE

The local parks and recreation department has recently begun work on renovating the municipal golf course. Prior to the renovation, there was an 9-hole themed miniature golf course which had become dated and unattractive. As part of the renovation, the Department of Parks and Recreation has the opportunity to update the course; they want to design and build an attractive course that is appealing to all of the city's residents and have put out a call for design ideas for a new 9-hole golf course.

Your design team, consisting of one elementary student (grades 1-5 or 6 - NOTE: SEE ELIGIBILITY SECTION BELOW) and one high school student, has been hired to design and develop one hole for the proposed miniature golf course.

III. ELIGIBILITY FOR ENTRY

This event is open to High School TSA Chapters. Entrants are limited to 10 teams of two students per chapter. Each team MUST have 1 elementary student (grades 1-5 or 6), and one high school student.

Students in 6th grade can be considered elementary students ONLY IF 6th grade is part of the elementary school in which they are currently enrolled. Students in sixth grade who are part of a K-8 or K-12 school would be considered middle school students. Contact the state advisor if there are any questions regarding eligibility.

FORE! (CONTINUED)

III. SPECIFIC REGULATIONS

Your team will present, drawings of your design creation, a list of necessary materials, a constructed, playable table top model of your creation which was designed and constructed before the conference. The elementary student should be the primary lead in the design and construction of the model.

A. Golf course holes must be turned into the event coordinator at the beginning of the conference to be displayed. Students may not pick up their models until the end of the conference.

B. Portfolio

The high school student must present a portfolio documenting the project. Included in this portfolio should be:

- A list of materials (including cost)
- Photos of the project
- An short essay describing the golf course hole and each person's part in the project. Included in this essay should be an explanation of how the par of the hole was determined.
- A time log documenting the time spent with the elementary student on the project.
- A colored blueprint/schematic of the hole with all parts clearly labeled.

D. Model

- The golf course hole model must be a playable tabletop model not to exceed 24" x 24".
- The model must include a "tee" area.
- The model must include a cup 1" in diameter.
- The model must include a marble to serve as a miniature golf ball.
- The team must design and develop a "putter" or launch mechanism to hit the ball on the hole.
- In order to minimize costs, the model should be constructed primarily from recyclable materials.

FORE! (CONTINUED)

IV. PROCEDURE

- A. Participants will turn in their golf course holes and design portfolios to the display area at the designated time.
- B. Each golf course hole will be demonstrated by the design team. The team's "putter" or launch mechanism will be used to propel the golf ball through the course.
- C. Golf courses will be returned to the display area at the end of the competition.

V. EVALUATION

Each golf course hole will be evaluated using the rubric on the next page. The project will receive points based on the design folder prepared by the high school student. The following rubric will be used. In the event of a tie, ranking will be determined by the most economically-produced model. The Event Coordinator will make this determination.



FORE!

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____		15 POINTS		10 POINTS		5 POINTS		TOTAL	
CRITERIA	20 POINTS	15 POINTS	10 POINTS	5 POINTS	TOTAL				
Portfolio	<p>Portfolio is complete and easy to read and is clearly understandable. It includes:</p> <ul style="list-style-type: none"> A detailed list of materials used in the creation of the hole. Multiple photographs detailing the work of the TSA member AND the elementary student in the creation of the model. A short essay describing in detail the golf course hole and each person's part in the project. A detailed time log documenting the time spent with the elementary student. A colored blueprint/schematic of the hole will all part/features clearly labeled. 	<p>Portfolio is complete and includes:</p> <ul style="list-style-type: none"> A list of materials used in the creation of the hole. Photographs detailing the work of the TSA member AND the elementary student in the creation of the model. An essay describing in detail the golf course hole and each person's part in the project. A time log documenting the time spent with the elementary student. A blueprint/schematic of the hole will all part/features clearly labeled. 	<p>The portfolio may be missing one of the following items or the information presented is not complete:</p> <ul style="list-style-type: none"> A list of materials used in the creation of the hole. Photographs detailing the work of the TSA member AND the elementary student in the creation of the model. An essay describing in detail the hole and each person's part in the project. A time log documenting the time spent with the elementary student. A blueprint/schematic of the hole will all part/features clearly labeled. 	<p>The portfolio may be missing two or more of the following items and/or the information presented is not complete:</p> <ul style="list-style-type: none"> A list of materials used in the creation of the hole. Photographs detailing the work of the TSA member AND the elementary student in the creation of the model. An essay describing in detail the hole and each person's part in the project. A time log documenting the time spent with the elementary student. A blueprint/schematic of the hole will all part/features clearly labeled. 					
Model	<p>The model hole:</p> <ul style="list-style-type: none"> Fits within the 24" x 24" dimensions Includes a "tee" area Includes a cup 1" in diameter Includes a marble to serve as a ball. Has a student-developed putter/launch mechanism to hit the ball on the hole. Is constructed from recycled materials. <p>The hole takes full advantage of all available space. May include multiple levels or other features (e.g., tunnels or uneven topography).</p> <p>The model accurately follows the drawings. The model is complete with greens, walkways, bumpers, tees, holes, flags and obstacles. The goal is readily apparent. The hole is well constructed and neatly presented.</p>	<p>The model includes/meets all but ONE of the following:</p> <ul style="list-style-type: none"> Fits within the 24" x 24" dimensions Includes a "tee" area Includes a cup 1" in diameter Includes a marble to serve as a ball. Has a student-developed putter/launch mechanism to hit the ball on the hole. Is built from recycled materials. <p>The hole adequately uses the space provided; may include one feature such as a tunnel or uneven topography.</p>	<p>The model is missing two or three items from the following:</p> <ul style="list-style-type: none"> Fits within the 24" x 24" dimensions Includes a "tee" area Includes a cup 1" in diameter Includes a marble to serve as a ball. Has a student-developed putter/launch mechanism to hit the ball on the hole. Is constructed from recycled materials. <p>The hole may not make good use of the available space & doesn't utilize features such as tunnels or uneven topography.</p>	<p>The model is missing three or more items from the following:</p> <ul style="list-style-type: none"> Fits within the 24" x 24" dimensions Includes a "tee" area Includes a cup 1" in diameter Includes a marble to serve as a ball. Has a student-developed putter/launch mechanism to hit the ball on the hole. Is built from recycled materials. <p>The hole makes poor use of the space; design indicates simple two-dimensional design. No special features such as tunnels or uneven topography are included.</p>					
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____									
COMMENTS:								TOTAL	

UPDATED!

please read the descriptions carefully even if you've competed in this event before.

INTEGRATED AUTONOMOUS VEHICLE

OPEN TO MIDDLE SCHOOL AND HIGH SCHOOL CONTESTANTS

I. PURPOSE

The purpose of the challenge is for students to design, build, and operate an integrated autonomous vehicle. This vehicle must be able to navigate a defined course in both tele-operated (human-controlled) as well as autonomous (computer-controlled) modes. Through this challenge students will develop an understanding of the relationships between sensors and embedded controllers. Students will be required to utilize computational thinking principles to plan, control, and manipulate the motion of a vehicle.

This challenge encourages students to integrate the use of sensors and programming to develop a closed-loop feedback control system. Students will develop fluency in the vocabulary and concepts around microcontrollers and embedded computing. Students are required to document, present, and demonstrate the use of the engineering design cycle.

II. ELIGIBILITY FOR ENTRY

Eligibility is limited to two (2) teams of three (3) members per chapter. This event is open to high school and middle school students.



INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

III. VEHICLE / ROBOT

- A. **SIZE:** The vehicle shall not exceed a rectangular footprint of 10" wide x 10" long.
- B. **WEIGHT:** The gross weight of the vehicle with battery shall not exceed 20 lbs in weight.
- C. **SAFETY:** Any vehicle deemed unsafe by the judges will be removed from competition, only to return at the judge's discretion.
- D. **CONTROL SYSTEM \ MICROCONTROLLER:** Vehicles may use any commercially available robotics control systems including, but not limited to: Lego RCX/NXT/EV3, VEX, Parallax, Arduino, Raspberry pi, Beaglebone Black, or PCduino.
- E. **REMOTE \ TELE-OP CONTROL:** The vehicle shall integrate a method to manually operate and control that utilizes a non-physical interface. This system includes any publicly available radio modules in the ISM Band (Wifi, Bluetooth, XBee) or by Infrared (IR) remote.
- F. **BILL OF MATERIALS / BUDGET:** Each team shall submit a complete bill of materials/ budget for the cost of their vehicle/robot. Present retail value of all parts, hardware, material, and electronics should be included using the attached spreadsheet. This includes all robot controllers, kits, sensors, batteries, and wires. Common items or salvaged recycled goods such as cardboard, popsicle sticks, soda cans, scrap wood should be included on the Bill of Materials (BOM) but should be listed at a cost of \$0.00. Teams will be rewarded for being resourceful and cost effective.
- G. **SENSORS:** Integration of sensors is highly encouraged. There are many commercial-off-the-shelf (COTS) sensors available that are compatible with any of the control systems / microcontrollers mentioned above. All electrical wiring, including sensors, must be clearly documented in the design notebook.

INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

IV. PLAYING FIELD

- A. **FIELD DIMENSIONS:** The field will be built on a 4' x 8' sheet of $\frac{3}{4}$ " plywood sheet. The surface of the field is painted matte white. Lanes on the field are nominally 11.375" wide.
- B. **FIELD VARIANTS:** There will be three unique field variants for students to compete on. Each field has a score multiplier that reflects the relative difficulty of the challenge.
- C. **PRACTICE FIELD:** Classroom or practice fields may be constructed of plywood and 1x4" pine to match the challenge course. See drawing FIELD_DWG.pdf for specific course layouts and diagrams. This year the challenge has changed from previous years, please read the descriptions carefully if you've competed before. The teams can choose which field to run on. The fields will give the opportunity to complete runs and score highest possible score.
- D. **BEACONS:** A team may provide navigation beacons as a means to mark the course. Beacons may be infrared, visible spectrum or sonic. Sonic beacons in the audible range are subject to the judges' approval and any beacon deemed disruptive will be removed from the challenge (e.g., a continuous tone at 9 kHz). Once the beacon is placed it may not be moved until after the team placing it has completed its run.
- E. **MARKERS AND FIDUCIALS:** Teams may add flat, marking features on the course to aid in navigation. Fiducial markers shall be no larger than 4" wide x 4" long x 0.125" tall. The number of fiducial markers shall not exceed the number of intersections in the course.
- F. **TRACKING LINE:** Each course will feature a $\frac{3}{4}$ " black strip of electrical tape centered along the maze to provide contestants with the opportunity of integrating a line following algorithm. The tracking line terminates in 90 degree turns at each intersection of the maze.
- G. **FIELD PERIMETER:** Barrier walls 3-1/2" tall will line the edge of the plywood. The barrier walls are constructed from standard 2" x 4" lumber.

INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

H. FINISH ZONE: An area approximately 11.375" x 12" marked in RED shall designate the finishing area for each challenge. Completion of the race shall be determined when any point of the vehicle crosses into the FINISH ZONE.

I. PAYLOAD PEDESTAL: A payload shall be placed on a pedestal on the field. The pedestal will be a 1-1/2" SCH 40 PVC Coupler (Home Depot SKU: SKU # 29399). The bottom of the payload will rest at a height of 2.25" from the bottom of the playing field. The payload pedestal will sit just outside the starting area for the vehicle.

J. PAYLOAD DEPOSIT AREA: A 6" x 6" square box made from 1" x 2" Furring strips shall mark the location of the payload deposit. The Payload Deposit area will be centered along the TRACKING LINE in the FINISH ZONE.

V. THE CHALLENGE

A. TRIALS: Each vehicle will have the opportunity to make three (3) timed runs on a course. The maximum time allowed to complete the course is 3 minutes.

B. SCORING / TIMING: Each trial shall be scored based on the time and the difficulty of the course according to the following formula:

$$\text{Time Score} = \frac{180 \text{ seconds} - \text{Course time(s)}}{180 \text{ seconds}} \times [\text{Course Multiplier}] \times [50 \text{ pts}] + \text{Payload Bonus}$$

CourseTime shall be taken at the point when any part of the vehicle crosses over into the RED FINISH ZONE. Teams may still continue to deliver the PAYLOAD into the PAYLOAD DEPOSIT AREA so long as the total time does not exceed 3 minutes.

C. FALSE STARTS: A false start shall be defined as any movement across the starting line by a vehicle before being signaled or otherwise permitted by the judge. A FALSE START results in a 20 point score deduction.

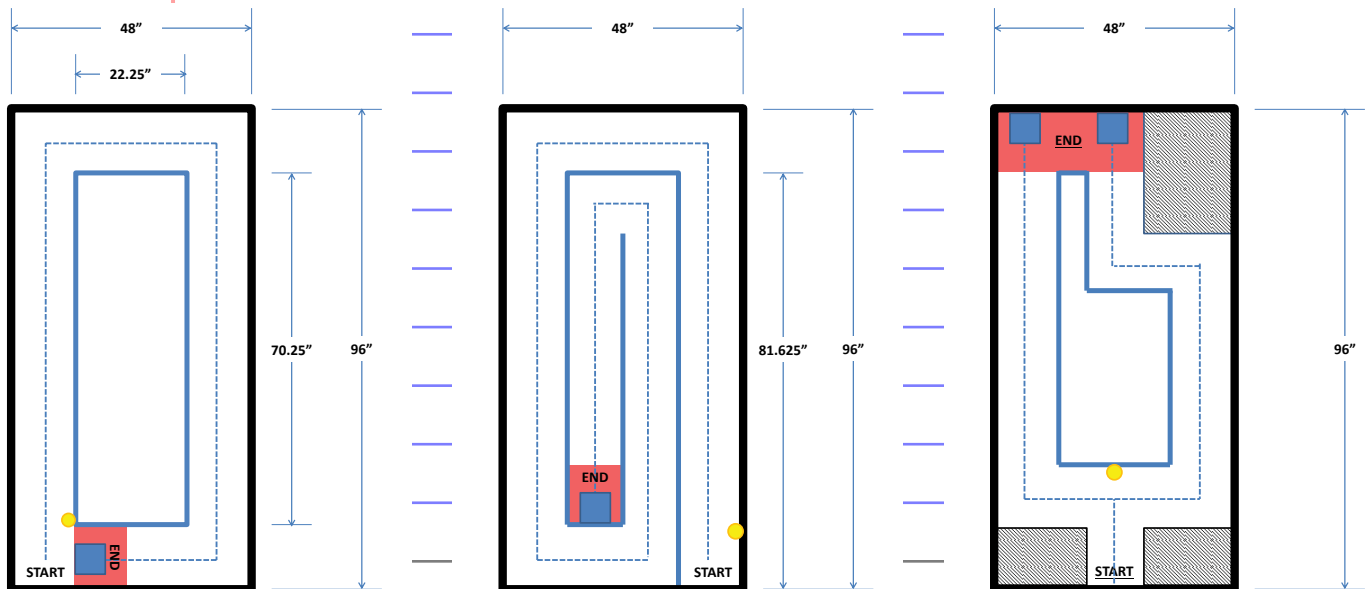
INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

- D. **FIELD PROGRESS BONUS:** For each corner passed teams will receive a +10 point bonus to their score. The entire body of the robot must fully pass through the intersection for a **FIELD PROGRESS BONUS** to be awarded.
- E. **INTEGRATED AUTONOMOUS:** One of the three (3) trials for each team shall be manually student-operated by the remote control. All other rounds shall be fully autonomous. Autonomous mode must be initiated by a single button push on their vehicle.
- F. **FIELD OPTIONS:**
- FIELD A: rectangle (right turns only). Multiplier = 1.00
- FIELD B: turns (left turns only). Multiplier = 1.25
- FIELD C: multiple turns (right and left) and a T-intersection (one route shorter than the other). Multiplier = 1.50

FIELD A

FIELD B

FIELD C



INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

- G. **PAYLOAD BONUS:** Teams will have the choice of taking a payload through the course. The payload is a standard tennis ball measuring nominally 2.63" in diameter and 2 oz. in weight. Points for manipulating and moving the payload will be awarded as follows:
- Picking up the payload: +5 points
 - Moving the payload to the end: +5 points
 - Depositing the payload successfully: +15 points
 - PAYLOAD tasks completed autonomously: 2x autonomous multiplier bonus.
- H. **CELL PHONES + OTHER TECHNOLOGY:** The use of cell phones during competition is strictly prohibited unless being used to control the vehicle. Use of cell phones by spectators is also prohibited. If a judge sees a cell phone in the contest area they will ask that it be put away; if a judge sees the cell phone a second time, the person will be asked to leave the contest area.

VI. TECHNICAL INTERVIEW / DOCUMENTATION

- A. During the interview each team will be expected to present their design and design solution to the judges. Teams should plan out and rehearse a 2 minute presentation of their vehicle. Suggested topics to include in the presentation:
- Engineering design process.
 - Brainstorming and various ideas teams investigated.
 - Data, calculations and iterations taken.
 - Key highlights and features of their vehicle / robot.
 - Reflection and evaluation of their design success.
 - Discussion of obstacles encountered.
 - Possible changes / improvements for next year.
 - Overview of material captured in their design notebook.

INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

- B. Every team shall submit a standard three ring 8.5" x 11" engineering binder which captures the design process. The notebook shall contain:
- a. A title page with the event title, state conference information, including date of the conference and the team ID number.
 - b. Minimum two (2) page typewritten description of the vehicle including the building system/components used. This description should include a brief discussion of the design problem, the engineering design process, and the final solution. Include a discussion of any data, calculations, and iterations taken during the design process.
 - c. Bill of Materials (BOM) / Budget: A complete list of all parts, materials, and components used on the vehicle. Additional bonuses will be awarded to teams that use readily available materials and low-cost solutions.
 - d. Data Tables and Calculations: Tables of original experimental data illustrating the iterations, trials and calculations should be included and properly documented with dates and times of the experiments.
 - e. Complete mechanical engineering drawings of the vehicle shall be provided.
 - i. Drawings may be done by hand or using computer-aided design (CAD).
 - ii. The drawings should include at a minimum an orthographic or isometric sketch and three section views illustrating the front, top and side profiles of the vehicle with appropriate geometric dimensioning and tolerancing.
 - f. Schematic drawings of the wiring, power system and sensors shall be provided. Use color coding and labels on your schematic where appropriate.
 - g. Pseudo-code / algorithm. Contestants should include a flow chart, diagram or illustration of their program and program flow.
 - h. Print-out of the complete source code of the program shall be included. Your program should be well documented and commented to allow judges to interpret your algorithm and program flow.

INTEGRATED AUTONOMOUS VEHICLE (CONTINUED)

- C. Teams should be prepared for a question + answer session following their short presentation. Questions will focus primarily around the engineering design process, design choice, and rationale. Students should be prepared to defend the features they planned and built into their vehicle.
- D. Code Review - Students will be asked to step through the logic of their program with judges. Judges will be looking for demonstration of understanding of the control system and algorithm implemented on the robot.

V. EVALUATION

The following rubric will be used. In the event of a tie, a tie-breaking rounds may be held until a winner is determined.

INTEGRATED AUTONOMOUS VEHICLE

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____		TOTAL		
AREA	Scoring	Comments	TOTAL	
Budget Scoring	\$0-\$100 50 points	\$100-\$200 = 40 points	\$300-\$400 20 points	> \$400 10 points
Technical Drawings, Dimensioning	A professional level of detail, all drawings are accurate. Elevation, plan and cut/callouts are ready to ship to a fabricator. 40 points	Drawing is well detailed, dimensions are accurate and thorough, callouts /cut sheets are well detailed and accurate. 30 points	Drawing is vague, dimensions are present, but not complete, or are vague or callouts/ cut sheets are vague or lacking detail. 20 points	Drawing did not represent accurately the vehicle, no cut sheets or detail callouts. Dimensions not shown or not accurate. No electrical schematic. 10 points
Technical Interview	Team is able to demonstrate advanced understanding of all areas of the vehicle and the challenge, including alternate design strategies. 20 points	Team is able to converse freely about engineering, programming, physics and mechanics of their vehicle. 15 points	Team is vague or unable to explain specific parts , and the principles behind their operation for their vehicle. 10 points	Team is unable to explain function, operation, programming, or construction of the vehicle. 5 points
Programming / Documentation	Programming shows a high level of expertise, creativity. May use unexpected data structures or a high level language, or both. 20 points	Programming is presented clearly with discussion of sensor arrays, loops, branches, or subroutines. 15 points	Programming documentation is presented , but lacks detail or is unable to be discussed by the programmer. 10 points	Little or no programming documentation. 5 points
Course Time	The course scores (3) are added together and combined with the preceding scores. The highest overall score wins. Time Score = ((180 s - _____) /180 * Course Multiplier * 50 pts. Trial 1: ((180 s - _____) /180 * Course Multiplier * 50 pts. = _____ Trial 2: ((180 s - _____) /180 * Course Multiplier * 50 pts. = _____ Trial 3: ((180 s - _____) /180 * Course Multiplier * 50 pts. = _____	Comments:		
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____				
GRAND TOTAL				

MOUSETRAP TRACTOR PULL

OPEN TO MIDDLE SCHOOL CONTESTANTS ONLY

I. PURPOSE

To allow students to demonstrate their ability to design and construct a vehicle powered only by a standard mousetrap spring, to pull as much weight as possible.

II. ELIGIBILITY FOR ENTRY

This event is open to Middle School TSA chapters. Entrants are limited to SIX (6) per school.

III. SPECIFIC REGULATIONS

- A. All entries must be designed and constructed before the conference.
- B. Vehicles must be turned into the event coordinator at the beginning of the conference to be displayed. Students may not pick up their vehicles until the end of the conference.
- C. Every entrant shall submit a complete set of sketches for the mousetrap vehicle detailing each part with basic dimensions. These sketches are to be completed on 8-1/2" x 11" paper.
- D. Although the mousetrap may be altered, a standard mousetrap spring may be the only power source for the vehicle. The mousetrap spring must accompany the vehicle the full length of the track. Only a standard mousetrap may be used. No rat traps.
- E. Vehicle Specifications:
 - The vehicle may be no longer than 16" at any time during the pull.
 - The vehicle may be no wider than 10" at any time during the pull.
 - The vehicle must have a fixed hook or eye in which a cup hook may be attached. It should be centered in the very back and 1/2" above the ground.
- F. The track will be 3 feet long. The vehicle must pull dead weight 2 feet. The surface that both the vehicle and the sled will travel on will be wood.

MOUSETRAP TRACTOR PULL (CONTINUED)

G. The 'sled' will be a wooden device in which weight can be loaded. The weight sled may not be lifted at any time during the pull.

H. No kits are allowed; the participant must create the vehicle.

IV. PROCEDURE

A. Participants will turn in their vehicle to the display area at the beginning of the conference.

B. Each vehicle will be given the opportunity to pull an appropriate starting weight. Those that successfully pull that given weight will then enter Round 2. The process will be repeated with weight being added to the sled in each round until only one vehicle remains.

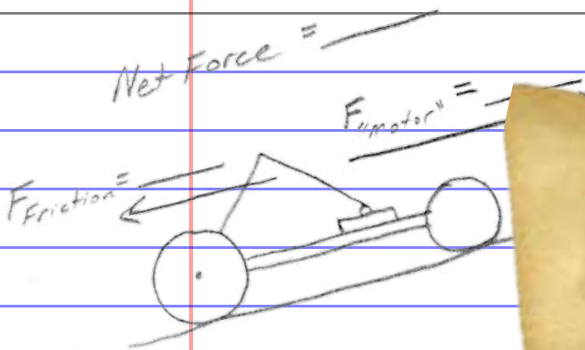
C. Participants must launch their own vehicles.

V. EVALUATION

The following rubric will be used to evaluate the vehicle.

The vehicle that pulls the most weight will determine final ranking. In the case of a tie, ranking will be determined by the most innovative design.

The Event Coordinator will make this decision.



MOUSETRAP TRACTOR PULL

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____		<i>PUT TOTAL HERE >></i>			
Pulling Trials: Record information about the trials.					
Trial 1 - Weight _____	Trial 5 - Weight _____	Trial 9 - Weight _____	Trial 13 - Weight _____	Trial 17 - Weight _____	Trial 21 - Weight _____
Trial 2 - Weight _____	Trial 6 - Weight _____	Trial 10 - Weight _____	Trial 14 - Weight _____	Trial 18 - Weight _____	Trial 22 - Weight _____
Trial 3 - Weight _____	Trial 7 - Weight _____	Trial 11 - Weight _____	Trial 15 - Weight _____	Trial 19 - Weight _____	Trial 23 - Weight _____
Trial 4 - Weight _____	Trial 8 - Weight _____	Trial 12 - Weight _____	Trial 16 - Weight _____	Trial 20 - Weight _____	Trial 24 - Weight _____
Calculate points for pulling trials: Multiply the # of the highest successful trial by 2 (e.g., Trial 16 = 16 x 2 = Total Trial Points					
CRITERIA	10 POINTS	8 POINTS	6 POINTS	4 POINTS	
Drawing	Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the vehicle. It is to scale. Measurements are included.	Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the vehicle, but is not to scale. Measurements are included.	Drawing is on 8.5" x 11" paper reflects the design of the vehicle, but may not be accurate. It's not to scale. Measurements are not included.	Drawing is not neat, is not on 8.5" x 11" paper, is not accurate, or is missing. It is not to scale. Measurements are not included.	
Design Specs - Overall	The vehicle meets design specs for height, width, and length. It has a fixed hook properly positioned at the back of the vehicle.	The vehicle does not meet one of the design specs for length, width or height, or the fixed hook is not properly positioned.	The vehicle does not meet two of the design specs for length, width or height or may not have a hook for pulling that is easily accessible.	The vehicle does not meet three or more design specs for length, width, or height or does not have a hook for pulling the sled.	
Design Specs - Mousetrap	The vehicle is powered only by a single, standard mousetrap.	N/A	N/A	The vehicle is not powered only by a single, standard mousetrap.	
Design Specs - Appearance	The vehicle is neatly constructed, using a proper amount of glue, tight fitting pieces, and cuts are clean. Vehicle is decorated/themed. Theme/decoration does not interfere with operation of vehicle.	The vehicle is neatly done, but there is one need for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is painted or decorated. Theme is not clear. Theme/decoration may occasionally interfere with operation of the vehicle.	The vehicle has two needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is decorated, but quality is lacking. Theme is not clear. Theme/decoration consistently interferes with the operation of the vehicle.	The vehicle has three needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is not decorated or themed.	
Rules Violation: Rules violations (a penalty of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____					
COMMENTS:					TOTAL

PROMOTIONAL DESIGN

OPEN TO HIGH SCHOOL CONTESTANTS ONLY*

UPDATED!

Please read the descriptions carefully even if you've competed in this event before.

OVERVIEW:

A long-standing tradition at the national TSA conference is trading state lapel pins at the mixer. In this competition, participants will design a color lapel pin that can be used to promote Colorado TSA at the next national TSA conference. Winning pin designs at the state level will be

developed into trading pins for the upcoming national TSA conference. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event (AND MIDDLE SCHOOL PROMOTIONAL DESIGN) has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "PROMOTIONAL DESIGN - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*



I. PURPOSE

Provide a means for TSA members to demonstrate their ability to communicate design and layout skills.

II. ELIGIBILITY FOR ENTRY

Entries are limited to SIX (6) per chapter. Open to HIGH school students.

III. SPECIFIC REGULATIONS

- A. The pin design is an individual event. No recognition will be given for a group effort.
- B. The entry must be started and completed during the current school year.
- C. The design may not exceed 1-1/4" by 1-1/4". (However, Larger print outs can be included to view detail-this is in addition to actual size printout not in replacement.)
- D. The design must be a color computer-generated design.

PROMOTIONAL DESIGN (CONTINUED)

E. When submitting a design, contestants should prepare a PDF document (no larger than 8.5" x 11") that contains:

- **Design:** A page showing the design in both actual size and an enlarged version to show detail. This page should also include the contestant's individual ID number. Nothing else should appear on this page. This page will be printed by the state office and displayed at the state conference.
- **Description:** A one (1) page description of the design process (including research efforts, design plans, creation process and self evaluation). This would include an explanation of the designer's inspiration. This description should also include software programs used, artwork/ graphic/ photo sources used in the production of the graphic.
- **References:** All entries must be the original work of the participant. Computer generated type fonts and public domain computer clip-art may be used. All ideas, text or images from sources other than the designer must be cited (copyrighted or not). Cited works should be in MLA format (see the Documentation Style Guide in this book for formatting examples!).
- **Letters of permission:** If copyrighted material is used, separate written permission must be included as well. Failure to follow this procedure results in disqualification. If the artwork is completely original, this must be stated in the description.

F. The PDF document is then to be submitted ELECTRONICALLY to: cotsa.submissions@gmail.com with "HS PROMOTIONAL DESIGN" as the subject line.

G. All submissions are to be received by FEBRUARY 1, 2015.

H. The actual pin size may range from $\frac{3}{4}$ " to 2" (length and width). The size and number of letters in the design should be taken into consideration; a letter on a 10" piece of paper will be reduced to $\frac{1}{10}$ " on a 1" pin. Therefore, fewer letters and greater size is recommended for a more decipherable pin.

PROMOTIONAL DESIGN (CONTINUED)

- I. The design may be presented either in portrait or landscape layout.
- J. The pin must include the official TSA logo letters, the Colorado TSA logo or the official TSA logo. The TSA emblem can be used only in accordance with trademark policies that appear on the national TSA website (www.tsaweb.org). From the homepage, click on About TSA and then Trademark Policies. The TSA logo may be used with or without the registered trademark symbol (the circle R).
- K. The pin design must also represent the state in some way - either through theme, shape, colors or subject (e.g., mountains).
- L. All entries in this event become the property of Colorado TSA and may or may not be used in future promotional materials and publications. Colorado TSA reserves the right to modify the winning designs for production purposes.
- M. Entries in the national Middle School event of the same name may be submitted at the national conference for competition and become property of TSA, Inc. and may or may not be used in future promotional materials and publications.

V. PROCEDURE

- A. Registration: Event participants must register and follow the guidelines for the event in accordance with the procedures established for the conference.
- B. ALL designs must be submitted electronically in PDF format to be considered for competition.

V. EVALUATION

- A. Middle School level and High School level winning designs will be recognized at the awards ceremony. However, winning pin designs may or may not be selected to be the pins that represent Colorado as the trading pins at national competition. A Middle School and a High School pin will be produced for trading at the national conference.
- B. Copies of previous winning pin designs shall not be used.
- C. The following rubric will be used in the evaluation of entries.

PROMOTIONAL DESIGN - HIGH SCHOOL

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

CONTESTANT ID NUMBER:				
Evaluators: Using minimal (1-4 points), adequate (5-8 points) or exemplary (9-10 points) performance levels as a guideline, record the scores earned for the event criteria in the column spaces to the far right. Multiply your score by the multiplier to get the final score. Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.				
CRITERIA	MINIMAL PERFORMANCE (1-4 PTS.)	ADEQUATE PERFORMANCE (5-8 PTS.)	EXEMPLARY PERFORMANCE (9-10 PTS.)	MULT. PTS.
Inspiration for Graphic Design	Little or no discussion of the inspiration for the graphic is included; no, or illogical, order of the design process is evident.	General overview of the design process is included, as is a basic description of the inspiration for the graphic.	An organized and logical overview of the entire design process, which details inspiration for the graphic design, is included.	X1
Design Process	Explanation does not discuss the technical development of the graphic; software packages used are not mentioned; frequent grammar and spelling errors are evident; MLA format is not used, and/or the citations are inadequate.	General overview of the technical development of the graphic (which mentions by name the primary software packages used in the design) is included; a few grammar and spelling errors are evident; MLA format is used for an adequate number of references.	Detailed and concise description of the technical development of the design (with discussion of all software packages used in the design) is included; proper grammar and spelling are evident; MLA format is used for the citations.	X1
Relevance	Brief and weak explanation of how the graphic design correlates to the challenge is included, and/or the explanation is illogical.	The challenge is discussed in the explanation, but questions arise in trying to understand the correlation between the challenge and the design.	Explanation of relevance (i.e., how the final graphic design relates to the challenge) is clear and complete.	X1
<i>Proof of permission to use copyrighted image(s) must be included. A release form must be present if photographs of individuals are used. Clip art must be documented. Failure to do any of the above results in DISQUALIFICATION. No permission is needed for the use of the TSA logo by affiliated chapters.</i>				
First Impression of Graphic	Design is messy and/or damaged; it includes three (3) or more of the following: dull/rough edges, hard to read fonts, smudges, smears on the graphic, extraneous markings.	Design has several good points, but some details detract from the overall quality; it includes two (2) or fewer of the following: dull/rough edges, hard to read fonts, smudges, smears on the graphic, extraneous markings.	Graphic is striking, elegant, and includes one (1) or none of the following: dull/rough edges, hard to read fonts, smudges, smears on the graphic, extraneous markings.	X2
Appropriateness	Graphic has no correlation to the state TSA affiliate it is intended to relate to; design does not work for the intended purpose.	Design generally works for its intended purpose, but it may be a little too big or too small in size; design correlates to the intended state TSA affiliate.	The design is a perfect size for the intended purpose; there is strong evidence for correlation of the design to the TSA affiliate.	X1
Dominance	Eyes are drawn away from what should have been focal point by some other component of the graphic.	An attempt is made to use a graphic component that will draw attention to the design's main idea, but the result is confusing.	The design's main components draw eyes to the appropriate location and/or focal point of graphic.	X1
Balance and Proportion	Design seems unbalanced; too little and/or too many graphic elements are included, and they are out of proportion.	Design is somewhat balanced but some graphic elements are too large and/or too small; the design is not proportioned.	All design elements included are balanced and equally proportioned.	X1
Incorporation of Graphic Design Principles	Design principles (alignment, consistency, contrast, unity, white space) are not incorporated into the graphic, and/or they are considered as an afterthought.	Graphic is missing two (2) or fewer design principles (alignment, consistency, contrast, unity, white space), but the overall layout is aesthetically pleasing.	Graphic is aesthetically pleasing and all design principles are incorporated into the design and layout.	X2
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____				
COMMENTS:				TOTAL

RAT TRAP DRAG RACE

OPEN TO HIGH SCHOOL CONTESTANTS ONLY

I. PURPOSE

To allow students to demonstrate their ability to design and construct a vehicle powered only by a standard rat trap spring, to travel a specified distance as fast as possible.

II. ELIGIBILITY FOR ENTRY

This event is open to High School TSA Chapters. Entrants are limited to SIX (6) per school.

III. SPECIFIC REGULATIONS

- A. All entries must be designed and constructed before the conference.
- B. Vehicles must be turned into the event coordinator at the beginning of the conference to be displayed. Students may not pick up their vehicles until the end of the conference.
- C. Although the rat trap can be altered, a standard rat trap spring may be the only power source for the vehicle.
- D. The rat trap spring must accompany the vehicle the full length of the track.
- E. Vehicle Specifications:
 - The vehicle may be no longer than 16" at any time during the race.
 - The vehicle may be no wider than 10" at any time during the race.
- F. The track will be 15' long.
- G. The surface the vehicles will travel on will be hotel-grade carpet.
- H. If the vehicle does not meet the specifications, it will have points deducted from the final score.
- I. Only a standard rat trap may be used.
- J. No kits are allowed; the participant must create the vehicle.

RAT TRAP DRAG RACE (CONTINUED)

IV. PROCEDURES

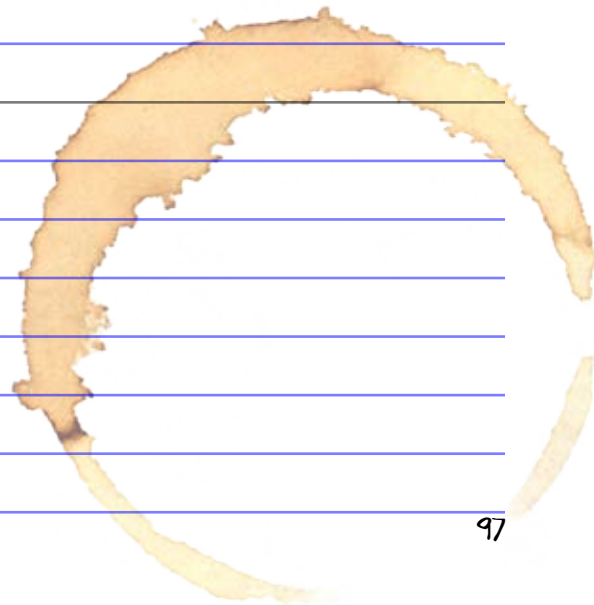
- A. Participants will turn in their vehicle to the display area at the beginning of the conference.
- B. Participants must launch their own vehicles
- C. Each vehicle will be launch once and timed. The top 16 vehicles will go to the next round.
- D. The subsequent rounds are single-elimination, head-to-head races with the winner advancing through the bracket.
- E. Vehicles will be returned to the display area at the end of the competition.

V. EVALUATION

The rubric on the following page will be used in the evaluation of this event. In the case of a tie, ranking will be determined by the most innovative design. The Event Coordinator will make this decision. In the case of a tie, ranking will be determined by the most innovative design. The Event Coordinator will make this decision.



Watch out for those rat trap springs! OUCH!!



RAT TRAP DRAG RACE - HIGH SCHOOL

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____					
Trials: Record information about the time trail and placement on initial bracket					
TIME: _____ PLACEMENT ON INITIAL BRACKET: _____					
CRITERIA	10 POINTS	8 POINTS	6 POINTS	4 POINTS	TOTAL
Drawing	Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the vehicle. It is to scale. Measurements are included.	Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the vehicle, but is not to scale. Measurements are included.	Drawing may not be on 8.5" x 11" paper and reflects the design of the vehicle, but may not be accurate. It's not to scale. Measurements are not included.	Drawing is not neat, is not on 8.5" x 11" paper, is not accurate, or is missing. It is not to scale. Measurements are not included.	
Design Specs - Overall	The vehicle meets design specs for width and length. It remains in spec during the race.	Vehicle does not meet one of the specs for width or length. It remains in spec during the race.	Vehicle does not meet two of the specs for width and length or may not remain in spec for the duration of the race.	Vehicle does not meet the design specs for width and length and is out of spec for the duration of the race.	
Design Specs - Rat Trap	The vehicle is powered only by a single standard rat trap spring.	N/A	N/A	The vehicle is not powered only by a single, standard rat trap spring.	
Design Specs - Appearance	The vehicle is neatly constructed, using a proper amount of glue, tight fitting pieces, and cuts are clean. Vehicle is decorated/themed. Theme/decoration does not interfere with the operation of the vehicle.	Vehicle is neatly done, but there is one need for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is painted or decorated. Theme is not clear. Theme/decoration may occasionally interfere with operation of vehicle.	Vehicle has two needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is decorated, but quality is lacking. Theme is not clear. Theme/decoration consistently interferes with the operation of the vehicle.	Vehicle has three needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is not decorated or themed.	
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____					
Race Final Placement					
1st Place: 50 points	4th Place: 35 points	9th-12th Place: 20 points			
2nd Place: 45 points	5th-6th Place: 30 points	13-16th Place: 10 points			
3rd Place: 40 points	7th-8th Place: 35 points				
				TOTAL	

UPDATED!

please read the rules carefully even if you've competed in this event before.

RUBBER BAND POWERED CARS

OPEN TO MIDDLE SCHOOL AND HIGH SCHOOL CONTESTANTS

I. PURPOSE

To allow students to demonstrate their ability to design and construct a vehicle powered only by a rubber band and a bladed propeller.

II ELIGIBILITY FOR ENTRY

This event is open to Middle School and High School Chapters. Entrants are limited to SIX (6) per school.

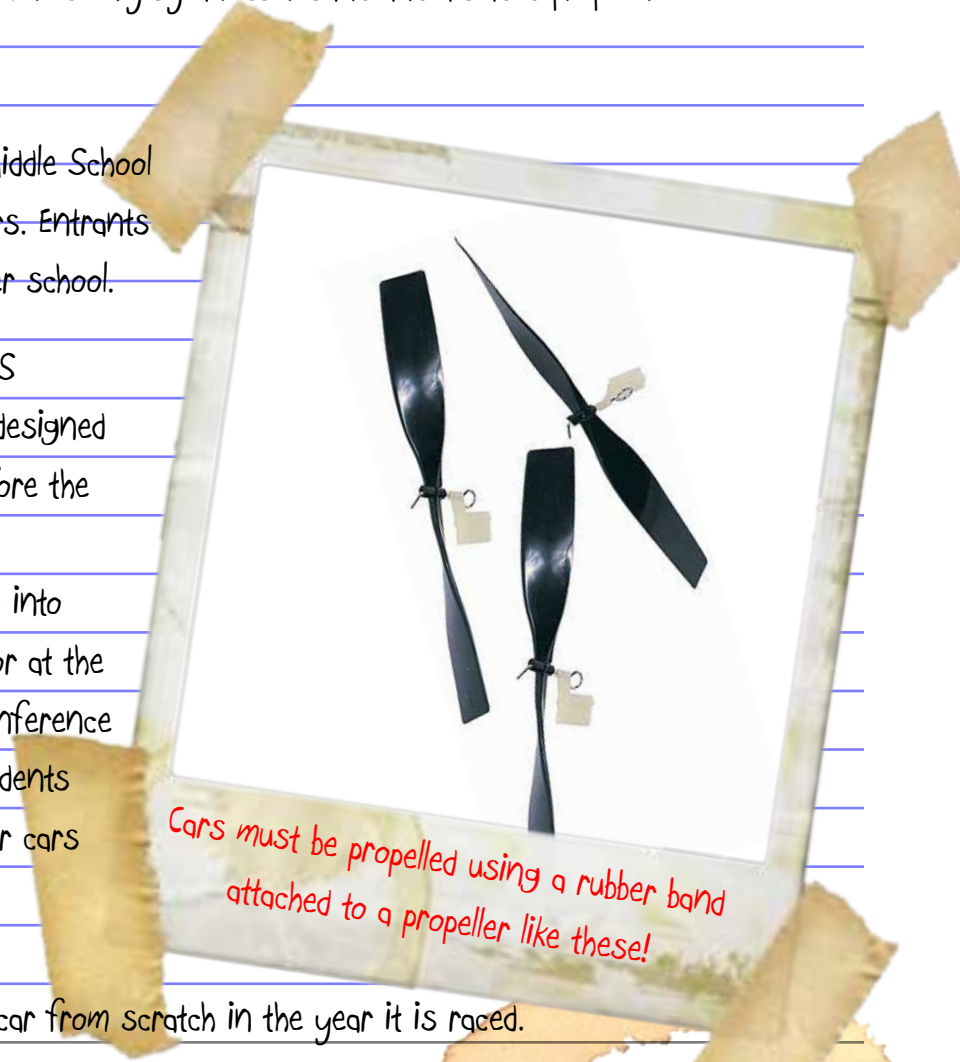
III. SPECIFIC REGULATIONS

A. All entries must be designed and constructed before the conference.

B. Cars must be turned into the event coordinator at the beginning of the conference to be displayed. Students may not pick up their cars until the end of the conference.

C. Student must make car from scratch in the year it is raced.
(No kits)

D. Racers may use any commercial wheels, axles and bladed propellers (as shown in the illustration on this page.)



Cars must be propelled using a rubber band attached to a propeller like these!

RUBBER BAND POWERED CARS (CONTINUED)

E. Vehicle Specifications:

- The vehicle should resemble a commercially produced automobile (a sedan, pickup truck, or sports car for example) and not just be of simple stick + propeller configuration.
- The car may not exceed 24 inches in length.
- The car may not exceed 8 inches in width.
- The car may not exceed 10 inches in height.
- The car will be powered by a single 7" x 1/8" rubber band (also known as a file band) attached to the bladed propeller (as illustrated above).
- The car must be designed so that an eyelet is placed at the front of the car, 1/4" from the floor.
- The car must be powered solely by the rubber band and bladed propeller; the rubber band should NOT be used in a manner other than to provide power to the propeller.



The eyelet screw must look like this!



- F. The track will be 20' long x 15" wide. The surface of the track will be hardwood flooring (hotel dance floor).
- G. The cars will race against the stopwatch. Each car will race twice, and an average speed will be calculated.
- H. If the vehicle does not meet the specifications, it will have points deducted from the final score.

IV. PROCEDURES

- A. Participants will turn in their car to the display area at the beginning of the conference.
- B. Participants must launch their own cars.

V. EVALUATION

The vehicle will be evaluated using the rubric on the following page. In the event of a tie, ranking will be determined by the most economically-produced model. The Event Coordinator will make this determination.

RUBBER BAND POWERED CARS

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____

Time Trials -- Calculated by: Distance (in inches) traveled / Time (in seconds)

Speed Trial 1: _____" / _____ sec. = _____ /second

Speed Trial 2: _____" / _____ sec. = _____ /second

Speed Trial 3: _____" / _____ sec. = _____ /second

TOTAL = _____ / 3 = (_____ /sec) x 10 = PUT TOTAL HERE >>

CRITERIA	10 POINTS	8 POINTS	6 POINTS	4 POINTS	TOTAL
Drawing	Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the vehicle. It is to scale. Measurements are included.	Drawing is neatly prepared on 8.5" x 11" paper and accurately reflects the design of the vehicle, but is not to scale. Measurements are included.	Drawing may not be on 8.5" x 11" paper and reflects the design of the vehicle, but may not be accurate. It is not to scale. Measurements are not included.	Drawing is not neat, is not on 8.5" x 11" paper, is not accurate, or is missing. It is not to scale. Measurements are not included.	
Design Specs - Overall	The vehicle meets design specs for length, width and height. It has an eyelet screw placed at the front of the car 1/4" from the floor.	Vehicle does not meet one of the specs for width, length or height, or it may not have an eyelet screw correctly placed at the front of the car.	Vehicle does not meet two of the specs for width, length or height or may not have an eyelet screw placed at the front of the car.	Vehicle does not meet the design specs for width, length and height and does not have an eyelet screw at the front of the car.	
Design Specs - Rat Trap	The vehicle is powered no more than the specified 7" x 1/8" rubber band.	N/A	N/A	The vehicle is powered by a source other than the specified 7" x 1/8" rubber band.	
Design Specs - Appearance	The vehicle is neatly constructed, using a proper amount of glue, tight fitting pieces, and cuts are clean. Vehicle is decorated/themed. Theme/ decoration does not interfere with the operation of the vehicle.	Vehicle is neatly done, but there is one need for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is painted or decorated. Theme is not clear. Theme/ decoration may occasionally interfere with operation of vehicle.	Vehicle has two needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is decorated, but quality is lacking. Theme is not clear. Theme/ decoration consistently interferes with the operation of the vehicle.	Vehicle has three needs for improvement: glue usage, tight fitting pieces, and cuts are clean. Vehicle is not decorated or themed.	
Race Final Placement	1st Place: 50 points 2nd Place: 45 points 3rd Place: 40 points	4th Place: 35 points 5th-6th Place: 30 points 7th-8th Place: 35 points	9th-12th Place: 20 points 13-16th Place: 10 points Did Not Finish = 0 points	PUT TOTAL HERE >>	
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____					
				TOTAL	

T-SHIRT DESIGN

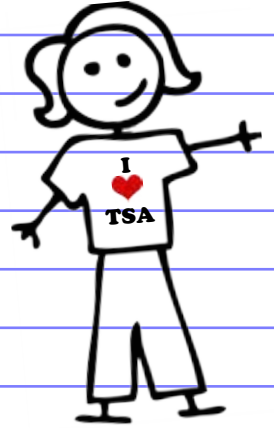
OPEN TO MIDDLE AND HIGH SCHOOL CONTESTANTS

UPDATED!

Please read the descriptions carefully even if you've competed in this event before.

OVERVIEW:

Participants are required to develop and submit electronically in PDF format a T-shirt design, which can be adopted as the Colorado state delegation T-shirt to be worn at the National TSA conference.



NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "T-SHIRT DESIGN - MS - 2015 - [CONTESTANT ID #]". or "T-SHIRT DESIGN - HS - 2015 - [CONTESTANT ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.



I. PURPOSE

Provide a means for TSA members to demonstrate their ability to communicate design and layout skills.

II. ELIGIBILITY FOR ENTRY

This event is open to Middle School and High School Chapters. Entries are limited to TWO (2) per chapter.

Note: Since only one design can be selected and used to promote the state of Colorado at the National conference, the top middle school and high school designs will be re-evaluated to determine the overall winning design for the national delegation T-shirt.

T-SHIRT DESIGN (CONTINUED)

III. SPECIFIC REGULATIONS

- A. The T-shirt design is an individual event. No recognition will be given for a group effort.
- B. The student should develop a design for the back of the T-shirt as well as an accompanying design for the front left pocket area of the shirt.
- C. The student should create a design for the back of the shirt (it must fit on a standard 8.5" x 11" piece of paper in portrait orientation).
- D. The student should also create a design for the left chest area of the front of the shirt not to exceed 5" x 5".
- C. The design of the shirt may have a maximum of three (3) colors. This does not include the color of the shirt (for example, if a white shirt is used, white can be incorporated into the design along with three other colors).
- D. The design should reflect the current year's national conference theme.
- E. The following information MUST be included in the design:
 - The words "TSA National Conference"
 - Date of the National Conference
 - Location of the National Conference (City + State)
 - The theme for the National Conference
 - Either the Colorado TSA logo, or the official TSA logo
 - The type face(s) may be original in design or may consist of a traditional-type style(s). The required alphanumeric characters may be incorporated as an integral part of the illustration.
- F. Public domain computer clip art may be included in the design. Use of copyrighted or registered artwork in design is prohibited without verified permission from the original artist/publisher.

T-SHIRT DESIGN (CONTINUED)

**NEW
RULES!**

G. Students DO NOT have to print out the design or prepare a mock up of the shirt. Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "T-SHIRT DESIGN - MS - 2015 - [CONTESTANT ID #]" or "T-SHIRT DESIGN - HS - 2015 - [CONTESTANT ID#]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.

H. When submitting the designs, students should submit a SINGLE, MULTI-PAGE PDF FILE, containing the following items:

- Design: A full-color design for the back of the shirt (no larger than 8.5" x 11" - portrait orientation). This page should also include the contestant's individual ID number. Nothing else should appear on this page.
- Design part II: A full-color design for the front of the shirt (no larger than 5" x 5"). This page should also include the contestant's individual ID number. Nothing else should appear on this page.
- Blackline Masters: Clean blackline masters for EACH COLOR used in the design. These will be used to create the screen print separations.
- Documentation: A one (1) page description of the design process (including research efforts, design plans, creation process and self evaluation). This would include an explanation of the designer's inspiration. This description should also include software programs used, artwork/graphic/ photo sources used in the production of the graphics.
- References: All entries must be the original work of the participant. Computer generated type fonts and public domain computer clip-art may be used. All ideas, text or images from sources other than the designer must be cited (copyrighted or not). Cited works should be in MLA format (see the Documentation Style Guide in this book for formatting examples!).

T-SHIRT DESIGN (CONTINUED)

- Letters of permission: If copyrighted material is used, separate written permission must be included as well. Failure to follow this procedure results in disqualification. If the artwork is completely original, this must be stated in the description.

I. All submissions are to be received by FEBRUARY 1, 2015.

J. Copies of previously submitted (winning or non-winning) designs shall not be used.

IV. PROCEDURE

A. Registration: Event participants must register and follow the guidelines for the event in accordance with the procedures established for the conference.

B. All winning entries will become the property of Colorado TSA. Colorado TSA reserves all rights to use and modify the designs for use on the state delegation t-shirt.

V. EVALUATION

The designs will be evaluated using the rubric on the following page. In the event of a tie, ranking will be determined by the Event Coordinator.

T-SHIRT DESIGN

NOTE: ALL DECISIONS BY THE JUDGE ARE FINAL

Contestant ID: _____		10 POINTS		8 POINTS		6 POINTS		4 POINTS		TOTAL	
Design Specs: Artwork	T-shirt design is prepared neatly and in color. Design consists of no more than three colors (not including the color of the shirt). Design is presented on a T-shirt.	Artwork is clear and all elements are distinct and easily readable/recognizable. Design includes: <ul style="list-style-type: none"> The words "TSA National Conference" The Colorado TSA logo or official TSA logo Dates of the National Conference Location of the National Conference The words "Colorado TSA" 	Artwork is clear and all elements are readable/recognizable. Design may be missing one of the following elements: <ul style="list-style-type: none"> The words "TSA National Conference" The Colorado TSA logo or official TSA logo Dates of the National Conference Location of the National Conference The theme of the design reflects some aspect of Colorado and Colorado TSA The words "Colorado TSA" 	T-shirt design in color. Design consists of no more than three colors (not including the color of the shirt). Design may not be presented on a T-shirt.	Artwork is not clear and all elements are readable/recognizable. Design may be missing two or more of the following: <ul style="list-style-type: none"> The words "TSA National Conference" The Colorado TSA logo or official TSA logo Dates of the National Conference Location of the National Conference The theme of the design reflects some aspect of Colorado and Colorado TSA The words "Colorado TSA" 	Artwork is not clear and all elements are not readable/recognizable. Design may be missing two or more of the following: <ul style="list-style-type: none"> The words "TSA National Conference" The Colorado TSA logo or official TSA logo Dates of the National Conference Location of the National Conference The theme of the design reflects some aspect of Colorado and Colorado TSA The words "Colorado TSA" 	T-shirt design is poorly prepared or consists of more than 3 colors (not including the color of the shirt). Design is not presented on a T-shirt.	Artwork is not clear and all elements are not readable/recognizable. Design may be missing two or more of the following: <ul style="list-style-type: none"> The words "TSA National Conference" The Colorado TSA logo or official TSA logo Dates of the National Conference Location of the National Conference The theme of the design reflects some aspect of Colorado and Colorado TSA The words "Colorado TSA" 	T-shirt design is poorly prepared, is not in color, or has more colors than specified. It is not presented on a T-shirt.		
Design Specs: Documents	The artwork reflects, interprets, or in some other way communicates the theme of the Colorado and Colorado TSA.	N/A	N/A	N/A	N/A	N/A	N/A	The artwork DOES NOT reflect, interpret or in some other way communicate the theme of the national conference. Design also does not include some element that reflect, interprets or in some other way communicates a sense of the specified theme as outlined in the rules.			
Design Specs: Size	The design is accompanied by clean black-line copies of each color separation in the entire screen design.	N/A	N/A	The design is accompanied by documentation of where the artwork was obtained but may be incomplete or may contain errors.	N/A	The design is accompanied by incomplete documentation of where the artwork was obtained and contains errors.	The design is not accompanied by clean black-line copies of each color separation in the entire screen design.	The design is not accompanied by documentation of where the artwork was obtained.			
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____		N/A		N/A		N/A		Back design is >20 cm x 25 cm; front design is >13 cm x 13 cm.			
TOTAL											

UNDERWATER ROV CHALLENGE

OPEN TO MIDDLE AND HIGH SCHOOL CONTESTANTS

I. PURPOSE

The challenge is a test of the accuracy, robustness and design of an Underwater Remotely Operated Vehicle (ROV). The vehicle will navigate a course laid out in a tank or swimming pool that will be disclosed at the State Conference. The course will consist of tunnels, hoops and an underwater obstacle course. When competitors arrive the specifics of the course will be explained and practice runs will be allowed before the team takes the first of two runs through the course. please review the rubric carefully.

II. ELIGIBILITY FOR ENTRY

Eligibility is limited to ONE (1) team of up to SIX (6) members per chapter. This event is open to MIDDLE AND HIGH SCHOOL STUDENTS.

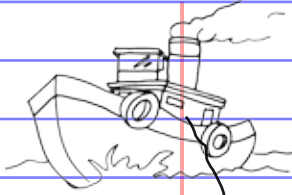
III. SPECIFIC REGULATIONS

A. All entries must be turned in at the designated time. Each team is responsible for signing up for a technical interview time. The whole team will attend the technical interview.

B. Every entry shall include a standard three ring 8.5" x 11" notebook. The notebook shall contain:

- A title page with the event title, state conference information, including date of conference.
- A typewritten description of the vehicle, including the building system/ components used and the design or engineering process used in designing and building the ROV. Photos or pictures may be included, and special features of the vehicle/programming and student driver interface (remote control) should be documented.

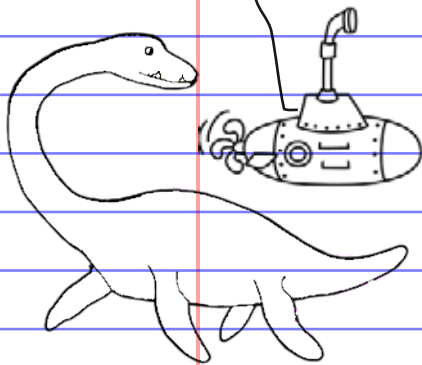
UNDERWATER ROV (CONTINUED)



- A set of technical drawings of the vehicle. The drawings will be standard orthographic, plan view, or other standard technical drawing format. Cutouts, exploded views, and multiple views are encouraged. Drawings may be done either by hand, or CAD generated.
- At least one (1) page of schematic drawings representing the vehicle's electrical and control systems. Block diagrams are acceptable, but more points will be awarded for more detailed schematics.
- A programming log if applicable, including a printout of the complete program for operation. Comments in the program log are encouraged.

C. Vehicles may be constructed from a kit or may be built from scratch, more points will be awarded for student designed models vs. one built or modeled from a kit. Kits might include the Seaperch kit (www.seaperch.org). If building the ROV from scratch, note that a 12 volt power supply will be supplied at the event, other

sources of power may be used, but you must supply your own if anything other than 12V DC is needed. 12V DC is the maximum voltage allowed.



D. Each team will be expected to discuss project flow, performance and engineering aspects of their vehicle. Discussions may or may not be limited to the technical interview. Due to the highly technical nature of the challenge, expect the judges to ask the team questions.

E. Vehicles deemed unsafe by the judges will be removed from competition. If any part of the vehicle is removed, falls off, or leaks into the pool or tank, the vehicle will be atomically removed and disqualified. Any exposed wire connections will be seen as unsafe, and will be disqualified.

F. Ultrasonic, infrared, touch, motion, light sensors, and distance encoders may be used. Cameras may be used, and a viewing device to see the image from the camera. No images may be used, other than that from the ROV mounted camera.

UNDERWATER ROV (CONTINUED)

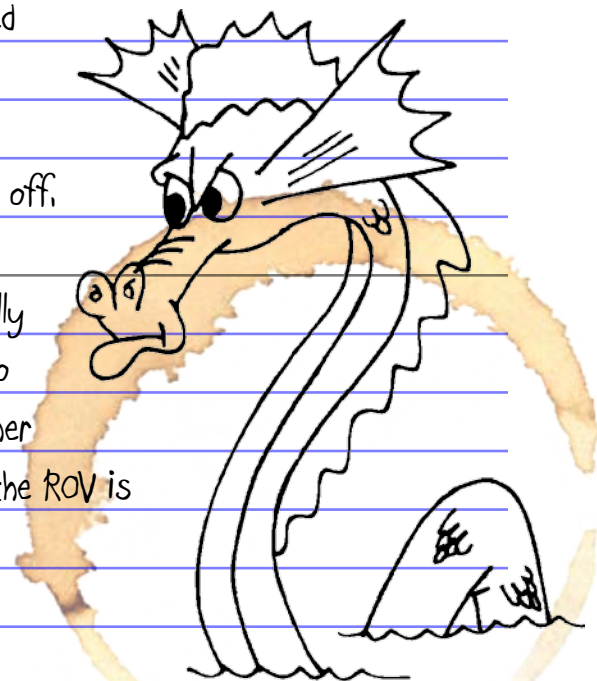
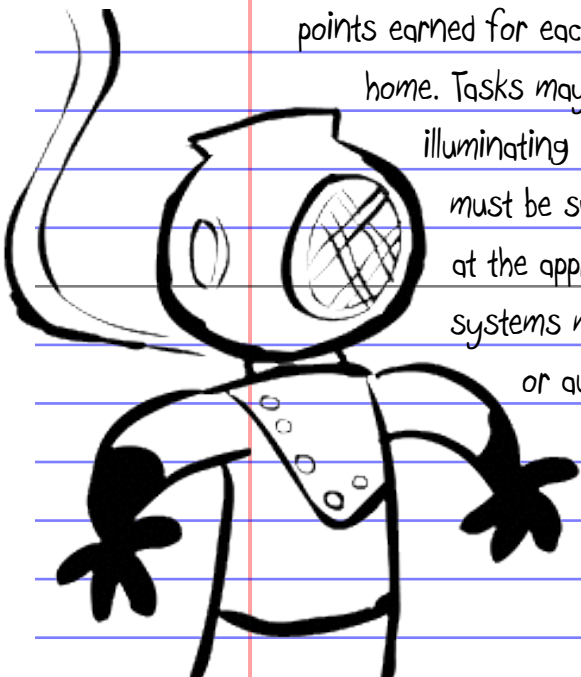
IV. The Course

The course will consist of a tank or a swimming pool no less than 6' wide x 8' long x 3' tall. Competitors should come prepared to get wet, and the event will most likely be outside, so be prepared for the weather. Tasks may or may not have to be performed in a specific order.

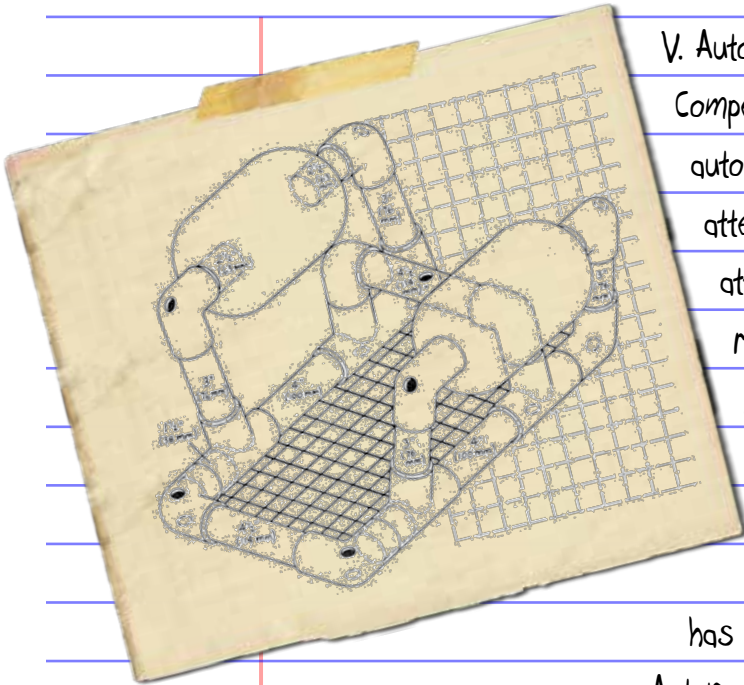
Three students are allowed "On Deck" at the time of the run, navigating the obstacle course. They are not allowed to touch the robot, or manipulate it in any way other than using their designed controls. The students will be designated: (1) pilot, and (2) Deck Hands. The pilot is the only one allowed to control the ROV, but will not be allowed to view the course while navigating it. The 2 Deck Hands are allowed to coach, direct, and tell the pilot what to do, but may not touch the remote controls or have any control of the ROV in any way. The pilot's view of the course will be obstructed; the Deck Hand's view will not be obstructed. The pilot may have another device to view an image from the ROV, but only images that come from the ROV are allowed to be viewed.

Tasks may include, but are not limited to: passing through one or more rings/hoops/gates, and then backing through the same route; or picking up a ring, hoop or small objects. There may be multiple objects to collect, with points earned for each object collected and delivered

home. Tasks may also include entering and illuminating a cave. Any lighting systems must be switchable (able to turn on and off, at the appropriate time). The lighting systems may be operated either manually or automatic (e.g., there is a photo sensor that will detect whether or not the light source on the ROV is turning on and off).



UNDERWATER ROV (CONTINUED)



V. Autonomous Operation

Competitors may opt for an additional challenge of autonomous operation. This will consist of an autonomous attempt to retrieve a ring from the tank or pool. Three attempts will be given and each attempt will end at the return to the surface of the Robot. For example, the judges will signal the team to begin the attempt, the robot will descend and make its attempt to secure the ring. When the robot returns to the surface, with or without the ring, the attempt is over. Each attempt has a one minute time limit. Extra points will be awarded for Autonomous operation.

V. EVALUATION

The ROV will be evaluated based on the rubric on the following page.



UNDERWATER ROV

NOTE: ALL DECISIONS BY THE JUDGES ARE FINAL

Contestant ID#: _____		Good 1-4 points	Better 5-7 points	Best 8-10 points	Judges' Comments
Technical Interview	Team knew little of the intricacies of the technical nature of their product. _____/10 pts.	Team was well informed, able to discuss in detail the engineering and logical framework of their design. _____/10 pts.	Team exceeded judges' expectations with regards to the detail of their design. This might include the ability to present calculations, interactive design stages, and advanced construction or control system. _____/10 pts.		
Notebook & Drawings	Notebook is not complete, not organized well, or lacks description of engineering process. Drawings lacking sufficient detail and measurements. Schematics are incomplete, or do not represent the electrical system. _____/10 pts.	Notebook has required components, but may not clearly describe design or build process. Drawings may be missing measurements, or important view, schematics lack some important details. _____/10 pts.	Notebook is complete and well organized. Design process is clearly communicated. Drawings and schematics are complete, and have sufficient detail. _____/10 pts.		
ROV Construction and Design (Note: brushless motors are considered water proof without any additional coatings or casing)	ROV is not constructed well, has exposed wire connections, components not waterproofed, or other deficiencies. _____/10 pts.	ROV appears well built, and wire connections and motors are waterproofed, but may have been directly produced or designed from a kit. _____/10 pts.	ROV is clearly well designed and built, has extra features, all connections and motors are waterproofed. ROV is designed by students and is not from a kit. _____/10 pts.		
Technical Performance/ Obstacle Course (Note: time will only be used to determine a tie)	1st obstacle course Time: Points for tasks completed: _____/10 pts.	2nd obstacle course Time: Points for tasks completed: _____/10 pts.	*Optional Autonomous Operation Time: Points for tasks completed: _____/up to 10 points		
Rules Violation: Rules violations (a deduction of 20% of the total possible points) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____					
				TOTAL POINTS	

MIDDLE SCHOOL EVENT SUMMARIES

The following descriptions are only brief summaries about the events available to students. For detailed information about each of the national events, please consult the official Middle School National TSA Conference Competitive Events Guide. State-only event rules are detailed earlier in this guide. Please be sure to carefully read the event descriptions, regulations and procedures as some events have had updates and changes!

IMPORTANT UPDATE: Several events have moved to EARLY ELECTRONIC SUBMISSION to help make our state conference run more efficiently. Events which have early submission deadlines are noted in these summaries. For those events, unless otherwise stated, contestants are to send a PDF version of any required documentation and related links (to download videos or game files, for example) to cotsa.submissions@gmail.com. The subject line of the email should be "[THE EVENT TITLE] - [LEVEL] - 2015 - [CONTESTANT ID # / TEAM ID #]" (for example: "DIGITAL PHOTOGRAPHY - MIDDLE SCHOOL - 2015 - 1539001"). All early entries must be submitted electronically by February 1, 2015. Entries for those early submission events that are not submitted electronically will NOT be considered for competition at the state conference.

Be aware that contest updates and clarifications may occur throughout the school year and are available at: www.tsaweb.org/Updates-and-Clarification. Advisors and students are urged to check this site periodically throughout the year to prevent a disqualification at the state or national conferences! Themes for the various events are available at: www.tsaweb.org/Themes-and-Problems

***NOTE: With each event, you will find the number of entries allowed. This number of entries is only applicable to the Colorado TSA State Conference; the number of entries permitted at the National TSA Conference are listed in the National TSA Competitive Events Guide.*

MIDDLE SCHOOL EVENTS (CONTINUED)

MIDDLE SCHOOL NATIONAL EVENTS

Agriculture and Biotechnology Design

Participants conduct research on a contemporary agriculture or biotechnology issue of their choosing, document their research, and create a display. The entry may include student-performed research or a re-creation or simulation of research performed by the scientific community. If appropriate, a model or prototype depicting some aspect of the issue may be included in the display.

Limited at State to: Three (3) teams of two (2) to six (6) students per chapter.

Career Prep

Participants conduct research on a selected technology-related career and use the knowledge gained to prepare a resume and cover letter, and participate in a mock interview. In 2015, students choose one (1) of these careers: Nuclear engineer, Database administrator, Information systems security professional, or Software developer. *NOTE:*

Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their resume and cover letter as a single multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "CAREER PREP - MS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.

Limited at State to: Three (3) students per chapter.

Challenging Technology Issues

Participants prepare and deliver an extemporaneous, debate-style presentation with team members explaining opposing views of a current technology issue that has been selected from a choice of three (3) issues that are provided on site.

Limited at State to: Three (3) teams of two (2) per chapter.



MIDDLE SCHOOL EVENTS (CONTINUED)

Chapter Team

Participants take a written parliamentary procedures test in order to qualify for the semifinals, where they perform an opening ceremony, dispose of three (3) items of business, and perform a closing ceremony within a specified time period.

Limited at State to: One (1) team of six (6) per chapter.

Communication Challenge



Participants design and produce 1) a trifold brochure that promotes the chapter, 2) an effective sponsor support request on chapter letterhead, and 3) an 8½" x 11" two (2)-sided card stock or glossy postcard promoting TSA's current national service project. Semifinalists are asked to work creatively under constraints in designing a solution to a problem given on site. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their trifold brochure, sponsor support request letter and two-sided postcard as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "COMMUNICATION CHALLENGE - MS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Three (3) students per chapter.

MIDDLE SCHOOL EVENTS (CONTINUED)

Community Service Video



Participants create and submit a finished video, capable of being played on a standalone DVD player that depicts the local TSA chapter's service with the American Cancer Society, national TSA's service partner. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit any required documentation as a single, multi-page PDF file along with the video or a link to where the video can be viewed or downloaded to to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "COMMUNITY SERVICE VIDEO - MS - 2015 - [TEAM ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: One (1) entry per chapter with no more than six (6) students per entry.

Construction Challenge

Participants identify a community need related to construction and then plan and implement a course of action that involves students and community members.

Limited at State to: Three (3) teams of two (2) per chapter.



Look for this symbol to see which events have an early deadline!

If an event has this symbol, contestants should submit their projects and documentation electronically by February 1 to cotsa.submissions@gmail.com! Entries for contests designated as EARLY DEADLINE that are not submitted electronically will NOT be considered for competition at the state conference.

MIDDLE SCHOOL EVENTS (CONTINUED)

Digital Photography



Participants produce a digital album consisting of color or black and white digital photographs that represent or relate to a chosen theme and place the album on a storage device for submission. Semifinalists produce a series of digital photographs taken at the conference site and edited appropriately for the on-site task. The theme for 2015 is "Our Town." *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their album of black and white photographs as a single multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "DIGITAL PHOTOGRAPHY - MS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Two (2) students per chapter.

Dragster

Participants design, produce working drawings for and build a CO₂-powered dragster.

Limited at State to: Three (3) students per chapter.

Electrical Applications

Participants take a written test of basic electrical and electronic theory and assemble a specific circuit from a schematic diagram using a provided kit and make required electrical measurements.

Limited at State to: Three (3) students per chapter.

MIDDLE SCHOOL EVENTS (CONTINUED)



Energy Sources

Participants conduct research on an energy source selected from one (1) of the three (3) areas and develop marketing pieces that will be used to help convince their local government officials and citizens to make strides to implement the energy source. The marketing pieces will consist of 1) a tri-fold brochure detailing their region's current energy resources and how the proposed energy source will be better for the citizenry and the environment, and 2) a promotional video that outlines the benefits of the proposed energy source and how it will be implemented in the region. Semifinalists will participate in an interview. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their documents as a single, multi-page PDF file along with the video (or a link where the video can be viewed or downloaded) to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "ENERGY SOURCES - MS - 2015 - [TEAM ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: One (1) team per chapter (up to 6 students), but limited to 2-3 student representatives for finalist interview.

Environmental Focus

Participants identify and research a specific environmental problem or issue that has been influenced by advancements in technology. They will gather information, analyze data, develop strategies and submit conclusions relative to the specific problem or issue and its impact/s on society and the environment. Students will present their findings in a multimedia presentation and interview.

Limited at State to: One (1) team per chapter (up to 6 students), but limited to two (2) student representatives for finalist review.

MIDDLE SCHOOL EVENTS (CONTINUED)

Essays on Technology

Participants conduct research in specified subtopics of a broader technological area and, using the knowledge and resources gained through that research, write an outline on the one (1) subtopic that is designated on site. Finalists write an essay onsite. The topic for the 2015 conference is "Trends in Social Networking" with the subtopics of: Teenagers/Young Adults, Businesses/Corporations, and Future potential of Social Networking.

Limited at State to: Three (3) individuals per chapter.

Flight

Participants create a glider that stays in flight for the greatest elapsed time. The glider must be designed to be launched from a catapult that is provided on site. The design process is documented in a notebook that is submitted for evaluation.

Limited at State to: Six (6) students per chapter.

Geospatial Technology

Based on a design brief provided by TSA, participants develop a notebook containing maps, data, and appropriate documentation. Semifinalists make a presentation for an on-site problem that demonstrates their abilities to use geospatial data to develop solutions to environmental and social issues.

Limited at State to: One (1) team of two (2) to five (5) members per chapter.

MIDDLE SCHOOL EVENTS (CONTINUED)

Go Green Manufacturing

Participants identify a consumer need and manufacture a marketable product. The chapter submits documentation of chapter activities and two (2) product samples made during the manufacturing experience.

Limited at State to: One (1) team of a minimum of three (3) to six (6) members per chapter.

Inventions and Innovations

Participants investigate and determine the need for an invention or innovation of a device, system or process and brainstorm possible solutions to determine the best idea for the invention or innovation. Team members will: 1) create a prototype or model, 2) develop a stand-alone multimedia presentation, and 3) document work completed as they prepare to promote and demonstrate their idea for the invention or innovation. Semifinalists will make an oral presentation to a panel of evaluators.

Limited at State to: Three (3) teams of three (3) to six (6) individuals per chapter.

Junior Solar Sprint

Participants demonstrate their knowledge of science, technology, engineering, and mathematics (STEM) concepts, creativity, teamwork, and problem-solving skills as they design, construct and race a solar-powered car.

Limited at State to: One team per chapter.

Leadership Strategies

Participants demonstrate leadership and team skills by preparing a presentation based on challenges that officers of a TSA chapter might encounter.

Limited at State to: Three (3) teams of three (3) per chapter.

MIDDLE SCHOOL EVENTS (CONTINUED)

Medical Technology Issues

Participants conduct research on a contemporary medical technology issue of their choosing, document their research, and create a display. The information may include student-performed research or a re-creation or simulation of research performed by the scientific community. If appropriate, a model or prototype depicting some aspect of the issue may be included in the display.

Limited at State to: Three (3) teams of two (2) to six (6) individuals per chapter.

Prepared Speech

Participant delivers a speech that reflects the theme of the current national TSA conference. The theme for 2015 is: Designing Your Dreams.

Limited at State to: Three (3) students per chapter.

Problem Solving

Participants must work effectively as a team to manipulate and process materials using only the tools designated. An objective measurement is used to determine the best solution to the given problem.

Limited at State to: Two (2) teams of two (2) members per chapter.



Look for this symbol to see which events have an early deadline!

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MIDDLE SCHOOL EVENTS (CONTINUED)

Promotional Design



Participants create and produce a color trading pin design that is appropriate for trading at the national TSA conference. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "PROMOTIONAL DESIGN - MS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Six (6) students per chapter.

STEM Animation



Participants have the opportunity to use computer graphic tools and design processes to communicate, inform, analyze and/or illustrate a topic, idea, subject, or concept.

Sound may accompany the graphic images. *NOTE: Due to the large number of entries in this event and the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their animations as a video file either attached to an email or as a link to where the video can be viewed/downloaded to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "STEM ANIMATION- MS - 2015 - [TEAM ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Three (3) teams per chapter, one (1) entry per team.

MIDDLE SCHOOL EVENTS (CONTINUED)

Structural Model

Participants model a through bridge of the Howe, Pratt, or Warren truss style for destructive testing. Participants research and design a model of a Howe, Pratt or Warren truss style bridge built using the supplied materials. They also prepare drawings to reflect their work. Teams will have two (2) hours to fabricate their entry from their prepared drawings. Bridges will be submitted, with drawings, for evaluation and destructive testing.

Limited at State to: Two (2) teams of two (2) per chapter.

System Control Technology

Participants use a team approach to develop a computer-controlled model solution to a given problem, typically one from an industrial setting. Teams analyze the problem, build a computer-controlled mechanical model, program the model, explain the program and mechanical features of the model-solution, and leave instructions for evaluators to operate the device.

Limited at State to: One (1) team of three (3) per chapter.

Tech Bowl

A team of three (3) students complete a written test and then compete in a head-to-head competition similar to "Jeopardy" where students "buzz-in" and answer technical questions orally.

Limited at State to: One (1) team of three (3) per chapter.

Technical Design

Participants demonstrate their ability to use the technical design process when they are given a design brief on-site that includes a problem statement and specific criteria and constraints.

Limited at State to: Two (2) teams of two (2) individuals per chapter.

MIDDLE SCHOOL EVENTS (CONTINUED)

Video Game Design



Participants develop an E-rated game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing and intellectually challenging. The game should have high artistic, educational, and social value. A working, interactive game will be submitted on a DVD for evaluation. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries to cotsa.submissions@gmail.com by February 1, 2015. Documentation for the entry should be submitted as a single, multi-page PDF file. A link to the executable for the game should be provided. DO NOT TRY TO SEND THE EXECUTABLE VIA EMAIL. Most email systems block executable files; instead, send a link where the file may be downloaded from (for example, Dropbox, High Tail or Sendspace). The subject line of the email must be: "VIDEO GAME DESIGN - MS- 2015 - [TEAM ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: One (1) team of two (2) to six (6) students per chapter.

Look for this symbol to see which events have an early deadline!



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MIDDLE SCHOOL EVENTS (CONTINUED)

Water Infrastructure

Participants conduct research on the posted water infrastructure topic, document their research, and develop a multimedia presentation around the topic. Participants explore public knowledge about the value of water related to the posted topic on the TSA website (tsaweb.org/Themes-and-Problems) demonstrate understanding of the topic through research and develop a multimedia presentation around the topic. For 2015, the topic is: The Impact of Green Infrastructures on Communities.

Limited at State to: One (1) team of up to six (6) per chapter, with two-to-three (2-3) representatives for the semifinalist interview.

Website Design



Participants are required to design, build and launch a World Wide Web site that features the team's ability to research topics pertaining to technology. Semifinalists participate in an on-site interview to demonstrate the knowledge and expertise gained during the development of the website with an emphasis on Internet and web history, web design of the design brief pages, and research about cutting edge advances in technology.

NOTE: Due to the complexity of the event and the limited duration of the state conference, FOR THE STATE CONFERENCE ONLY, this event has an early submission deadline! Contestants should submit the URL of their website to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "WEBSITE DESIGN - MS - 2015 - [TEAM ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference. For the national conference, there is also an early deadline. please consult the National Competitive Events Guide for national deadlines.

Limited at State to: One (1) team of three (3) to five (5) members per chapter. One (1) entry per team is permitted. Up to five (5) members of a team participate in the interview.

MIDDLE SCHOOL EVENTS (CONTINUED)

MIDDLE SCHOOL STATE-ONLY EVENTS

Castle Ballistics

Teams work to design a catapult, ballista or trebuchet to launch a hackey-sack/footbag at three randomly placed targets within a specified area.

Limited to: Two (2) teams of three (3) per chapter.

Crash Test

Teams consisting of a middle school student and an elementary student design and build a "crash test" car that will be tested in multiple head-on and rear-end collisions. This year's theme is: Pickup Truck

Limited to: Ten (10) teams of two (2) students per chapter. Each team MUST include one (1) MS and one (1) Elementary student (grades 1-5).

Integrated Autonomous Vehicle

Participants create and operate an integrated autonomous vehicle. The vehicle will operate in a number of courses, but must be able to navigate a course without prior knowledge of distance or direction within a chosen course. Two separate modes of operation will be used: Student-controlled and Autonomous.

Limited to: Two (2) teams of three (3) members per chapter.

Middle School Creativity Challenge

Design teams, composed of one middle school student and one elementary student, work to solve an on-site problem.

Limited to: Ten (10) teams of two (2) students per chapter. Each team MUST include one (1) MS and one (1) Elementary student (grades 1-6* See rules for more information).

MIDDLE SCHOOL EVENTS (CONTINUED)

Mousetrap Tractor Pull

Participants design, build and test a model vehicle powered only by a standard mousetrap. The vehicle is tested by having it pull as much weight as possible over a set distance.

Limited to: Six (6) students per chapter.

Rubber Band Powered Cars

Participants design, build and then race a rubber band-powered propeller car that resembles a commercially produced automobile.

Limited to: Six (6) students per chapter.



T-shirt Design

Participants design the Colorado delegation's national conference T-shirt. The winner between the middle and high school top finishers will become the state delegation T-shirt.

NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be:

"T-SHIRT DESIGN - MS - 2015 - [CONTESTANT ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.

Limited to: Two (2) entries per chapter.



MIDDLE SCHOOL EVENTS (CONTINUED)

Underwater ROV Challenge

Participants apply and document the engineering design process, mathematical principles and scientific concepts used in the research, design, construction, testing and evaluation of an underwater remote operated vehicle (ROV). The ROV will be expected to perform a range of tasks including: passing through one or more rings, and then backing through the same route; retrieving rings from the bottom of the testing tank/pool; entering and illuminating a cave area; and/or demonstrating full maneuverability in three axes of motion.

Limited to: One (1) team of 2 (two) to six (6) students per chapter.



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HIGH SCHOOL EVENT SUMMARIES

The following descriptions are only brief summaries about the events available to students. For detailed information about each of the national events, please consult the official High School National TSA Conference Competitive Events Guide. State-only event rules are detailed earlier in this guide. Please be sure to carefully read the event descriptions, regulations and procedures!

IMPORTANT UPDATE: Several events have moved to EARLY ELECTRONIC SUBMISSION to help make our state conference run more efficiently. Events which have early submission deadlines are noted in these summaries. For those events, unless otherwise stated, contestants are to prepare the required documentation and then send a PDF version of any required documentation and related links (to download videos or game files, for example) to cotsa.submissions@gmail.com. The subject line of the email should be "[THE EVENT TITLE] - [LEVEL] - 2015 - [INDIVIDUAL ID# / TEAM ID #]" as the subject line (for example: "DESKTOP PUBLISHING - HIGH SCHOOL - 2015" - 2501001"). All early entries must be submitted electronically by February 1, 2015. Entries for those early submission events that are not submitted electronically will NOT be considered for competition at the state conference.

Be aware that contest updates and clarifications may occur throughout the school year and are available at: www.tsaweb.org/Updates-and-Clarification. Advisors and students are urged to check this site periodically throughout the year to prevent a disqualification at the state or national conferences! Themes for the various events are available on the National TSA website at: www.tsaweb.org/Themes-and-Problems

***NOTE: With each event, you will find the number of entries allowed. This number of entries is only applicable to the Colorado TSA State Conference; the number of entries permitted at the National TSA Conference are listed in the National TSA Competitive Events Guide.*

HIGH SCHOOL EVENTS (CONTINUED)

HIGH SCHOOL NATIONAL EVENTS

Animatronics

Participants work as a team to demonstrate knowledge of mechanical and control systems by designing, fabricating, and controlling an animatronics device that will communicate, entertain, inform, demonstrate and/or illustrate a topic, idea, subject or concept. Sound, lights and surrounding environment are to accompany the device.

Limited at State to: Two (2) teams of two(2) to six (6) individuals per chapter with a limit of three (3) representatives per team for the presentation/interview.

Architectural Renovation

Participants develop a set of architectural plans and related materials for an annual architectural renovation design challenge and construct a physical as well as computer-generated model to accurately depict their design. For 2015, the challenge is the renovation of an 1930's kit home.

Limited at State to: Three (3) individuals or teams (2-6 individuals) per chapter; one (1) entry per individual or team.

Biotechnology Design

Participants select a contemporary biotechnology problem that relates to the current year's published area of focus and demonstrate understanding of it through documented research, the development of a solution, a display, and an effective multimedia presentation. If appropriate, a model or prototype of the solution may be included in the display. Participants may choose to recreate or simulate research that previously has been performed within the scientific community. For 2015, the theme is: The role of biotechnology in forensics.

Limited at State to: Three (3) teams of two to six (2-6) members per team with with a limit of two (2) representatives per team for the finalist presentation.

HIGH SCHOOL EVENTS (CONTINUED)

Career Preparation



During the school year participants research technology-related careers designated by the Bureau of Labor Statistics as falling in the top ten employment growth areas in the near future. Participants research and prepare a resume and cover letter for each of the careers: Aeronautical Engineer, Computer Information Security Specialist Professional (CISSP), and Geographical Information Systems (GIS) Analyst. Semifinalists participate in an on-site job interview related to one of the careers. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their resume and cover letter as a single multi-page PDF file to*

submissions@gmail.com by February 1, 2015. The subject line of the email must be: "CAREER PREPARATION - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.

Limited at State to: Six (6) students per chapter.

Chapter Team

Participants take a written parliamentary procedures test in order to qualify for the semifinals, where they perform an opening ceremony, dispose of items of business, and perform a closing ceremony within a specified time period.

Limited at State to: One (1) team of six (6) per chapter.

Look for this symbol to see which events have an early deadline!



If an event has this symbol, contestants should submit their projects and documentation electronically by February 1 to cotsa.submissions@gmail.com! Entries for contests designated as EARLY DEADLINE that are not submitted electronically will NOT be considered for competition at the state conference.

HIGH SCHOOL EVENTS (CONTINUED)

Children's Stories



Participants create an illustrated children's story of high artistic, instructional, and social value. The story may be written in prose or poetry and take the form of a fable, adventure story, or other structure. The narrative, along with the accompanying illustrations, is to result in an experience that delights, enlightens, and helps in the wholesome development of a child.

Limited at State to: One (1) team of two (2) to six (6) individuals per chapter.

Computer Aided Design - 2D Architecture

Participants create representations, such as foundation and/or floor plans, and/or elevation drawings, and/or details of architectural ornamentation or cabinetry.

Participants may compete in CAD 2D, Architecture or CAD 3D, Engineering, but not both.

NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, the amount of time students will have to complete the onsite problem will be shortened to 2.5 hours instead of the 4 hours listed in the national competitive event guide. Please plan appropriately when preparing for this event.

Limited at State to: Three (3) students per chapter with only one (1) CAD event per student.

Computer Aided Design - 3D Engineering

Participants create a 3D computer model(s) of an engineering or machine object, such as a machine part, tool, device, or manufactured product. Participants may compete in CAD

2D, Architecture or CAD 3D, Engineering, but not both. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, the amount of time students will have to complete the onsite problem will be shortened to 2.5 hours instead of the 4 hours listed in the national competitive event guide. Please plan appropriately when preparing for this event.*

Limited at State to: Three (3) students per chapter with only one (1) CAD event per student.

HIGH SCHOOL EVENTS (CONTINUED)

Computer Numerical Control Production

Participants design, fabricate, and demonstrate their ability to use a CNC (computer numerical control) machine to produce a device based on an annual problem posted on the TSA website under Competitions/Themes and Problems. Documentation and two (2) machined samples are checked in and evaluated. Teams return for an assembly session of their entry, using the tools in their tool box, and immediately demonstrate their device. For 2015, teams have to produce a Fabricate a mechanical bank device that self-deposits pennies.

Limited at State to: One (1) team of two (2) individuals per chapter

Debating Technological Issues

Team members work together to prepare for a debate against a team from another chapter. The teams will be instructed to take either the pro or con side of the designated topic. For 2015, the topic is: One-to-one laptops/devices for students in public education.

Limited at State to: One (1) team of two (2) members per chapter.

Desktop Publishing

Participants produce a notebook containing a news release, a three (3)-column newsletter, and a poster to be used to attract students to the TSA organization. At the state conference, all participants work to solve an on-site problem to demonstrate their abilities in using a computer to design and edit materials for publication. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their newsletter and poster as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "DESKTOP PUBLISHING - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Three (3) students per chapter.



HIGH SCHOOL EVENTS (CONTINUED)

Digital Video Production

Participants develop a digital video/film that focuses on the given year's theme.

Sound may accompany the film. For 2015, the theme is: Cyber Spying. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit any required documentation as a single, multi-page PDF file along with the video or a link to where the video can be viewed or downloaded to*

submissions@gmail.com by February 1, 2015. The subject line of the email must be: "DIGITAL VIDEO PRODUCTION - HS - 2015 - [TEAM ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.

Limited at State to: One (1) team of two (2) to six (6) individuals per chapter.



Dragster Design

Participants design, produce working drawings for and build a CO₂- powered dragster.

Limited at State to: Three (3) students per chapter.

Engineering Design

Participants work as part of a team to design and fabricate device that will meet the specific needs of a person with a disability. Through use of a model/prototype, display, and notebook, participants document and justify their approach and reasoning in identifying a problem and their solution's direct impact on a member of their community and on society. Semifinalists justify and demonstrate their solution to their identified problem in a timed presentation.

Limited at State to: Three (3) teams of three to five (3-5) people per chapter.

HIGH SCHOOL EVENTS (CONTINUED)

Essays on Technology

Participants conduct research in a published technological area and, using the knowledge and personal insights gained from this research, write an essay on one (1) subtopic selected from two (2) or three (3) related subtopics designated on site. Consider your audience to be the readers of the local daily newspaper.

Limited at State to: Three (3) students per chapter.

Extemporaneous Presentation

Participants give a three to five (3-5) minute speech fifteen (15) minutes after having drawn a card on which a technology or TSA topic for their speech is written.

Limited at State to: Three (3) students per chapter.

Fashion Design

Students have the opportunity to research, develop, and create garment designs, garment mock-ups, and portfolios that reflect the current year's published theme. At the state competition, teams participate in an on-site event in which they present their potential garment designs to the judges on a TSA runway. For 2015, the theme is American Colonial period dress.

Limited at State to: Two (2) teams of two (2) to four (4) individuals per chapter.

Flight Endurance

Participants have the opportunity to build, fly, and adjust (trim) a model to make long endurance flights inside a contained airspace. Any model design is acceptable if the model complies with the event specifications. All models are to be built and test flown before the event date.

Limited at State to: Three (3) individuals per chapter.

HIGH SCHOOL EVENTS (CONTINUED)



Future Technology Teacher

Participants research and select three (3) accredited colleges or universities that offer technology education/engineering technology teacher preparation as a major. Each participant will write no more than one (1) page (simulated college essay) explaining why s/he would like to become a technology education/engineering technology teacher and what would constitute success in the field. In addition, each participant will develop and present a one (1)-class period activity, with a lesson plan, using the ITEEA standards for technological literacy. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "FUTURE TECHNOLOGY TEACHER - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Three (3) individual students per chapter.

Manufacturing Prototype

Participants design and manufacture a prototype of a product and provide a description of how the product could be manufactured in a state-of-the-art American manufacturing facility. For 2015, the theme is: Child's pull toy.

Limited at State to: One team of two (2) to six (6) individuals per chapter.

HIGH SCHOOL EVENTS (CONTINUED)

Music Production



Participants produce an original musical piece that is designed to be played during the national TSA conference opening or closing general sessions. The musical piece should be energizing, interesting and of a spirit consistent with the Technology Student Association. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit any required documentation as a single multi-page PDF file along with an .mp3 or .wav file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "MUSIC PRODUCTION - HS - 2015 - [TEAM ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: One (1) entry per chapter.

On Demand Video

Participants write, shoot, and edit a short video during the conference in this on-site event. Required criteria, such as props and a line of dialogue, make the competition more challenging and will be revealed at the event orientation meeting. *NOTE: Due to the length of the state conference, this event will be shortened at state to fit within the allotted time.*

Limited at State to: One (1) team of two (2) to six (6) students per chapter.

HIGH SCHOOL EVENTS (CONTINUED)



Photographic Technology

Students capture images and process photographic and digital prints that depict the current year's published theme. For 2015, the theme is: Innovation. Qualifying semifinalists participate in an on-site event in which they capture digital images and utilize multimedia software to prepare and develop a media presentation during the annual conference. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their albums as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "PHOTOGRAPHIC TECHNOLOGY - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Two (2) individuals per chapter.

Prepared Presentation

Participants deliver an oral presentation that includes audio and/or visual enhancement based on the theme for the current year's conference. For 2015, the theme is: Designing Your Dreams.

Limited at State to: Three (3) individuals per chapter.



Look for this symbol to see which events have an early deadline!

If an event has this symbol, contestants should submit their projects and documentation electronically by February 1 to cotsa.submissions@gmail.com! Entries for contests designated as EARLY DEADLINE that are not submitted electronically will NOT be considered for competition at the state conference.

HIGH SCHOOL EVENTS (CONTINUED)

Promotional Graphics



Participants will act as freelance designers to develop and present a graphic design that can be used to promote participation in TSA-related interests. For 2015 the challenge is to create a promotional design to inform and encourage participation in TSA's official community service project — the American Cancer Society (ACS). *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "PROMOTIONAL GRAPHICS - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Six (6) students per chapter.

SciVis



SciVis refers to Scientific and Technical Visualization, the graphical representation of complex scientific concepts. Participants develop a visualization focusing on a subject or topic from one (1) or more of the following areas: science, technology, engineering or mathematics. *NOTE: Due to the large number of entries in this event and the limited duration of the state conference, this event has an early submission deadline! Contestants should submit any required documentation as a single, multi-page PDF file along with the animation as a video file either attached to an email or as a link to where the video can be viewed/downloaded to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "SCIVIS- HS - 2015 - [TEAM ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Three (3) teams of one (1) to six (6) individuals per chapter.

HIGH SCHOOL EVENTS (CONTINUED)

Software Development



Participants work as part of a team to participate in the development, debugging, and documentation of a software design project using freely available software development toolkits. Through a multimedia presentation and entrant documentation, the team demonstrates its knowledge of the software development process. The project should have educational or social value.

Limited at State to: One (1) team of two (2) to six (6) members per chapter.

Structural Engineering



Participants work as a team to build a designated structure prior to the conference. The team applies the principles of structural design and engineering through research, design, construction, destructive testing, and assessment, to determine the design efficiency of the structure. Finalist teams compete in an onsite challenge.

Limited at State to: Two (2) teams of two (2) per chapter.

System Control Technology

Participants work as part of a team on-site to develop a computer-controlled model-solution to a problem. Teams analyze the problem, build and program a model, explain the program and mechanical features, and provide instructions to operate the device.

Limited at State to: One (1) team of three (3) per chapter.

Technical Sketching and Application

Participants complete a written test in order to qualify as semifinalists. Semifinalists then demonstrate their ability to solve on-site engineering graphics problems using standard drafting techniques.

Limited at State to Six (6) individuals per chapter.

HIGH SCHOOL EVENTS (CONTINUED)

Technology Bowl

A written test followed by a knowledge bowl format like "Jeopardy" where students "buzz-in" and answer technical questions orally.

Limited at State to: One (1) team of three (3) individuals per chapter.

Technology Problem Solving

Participants work together to develop and create a solution to a problem using the limited materials provided and the tools allowed. Completed solutions will be objectively measured and judged to determine the best and most effective solution for the stated problem.

Participants won't know what this one is until they show up!

Limited at State to: Two (2) teams of two (2) individuals per chapter.

Transportation Modeling

Participants use engineering skills to design and fabricate a CO₂-powered scale model of a vehicle that meets the current year's stated design theme. For 2015, the theme is: Helicopters.

Limited at State to: Three (3) individuals per chapter.

HIGH SCHOOL EVENTS (CONTINUED)

Video Game Design



Participants develop an E-rated game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing and intellectually challenging. The game should have high artistic, educational, and social value. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries to cotsa.submissions@gmail.com by February 1, 2015. Documentation for the entry should be submitted as a single, multi-page PDF file. A link to the executable for the game should be provided. DO NOT TRY TO SEND THE EXECUTABLE VIA EMAIL. Most email systems block executable files; instead, send a link where the file may be downloaded from (for example, Dropbox, High Tail or Sendspace). The subject line of the email must be: "VIDEO GAME DESIGN - HS - 2015 - [TEAM ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: One (1) team of two (2) to six (6) students per chapter.

Look for this symbol to see which events have an early deadline!



If an event has this symbol, contestants should submit their projects and documentation electronically by February 1 to cotsa.submissions@gmail.com! Entries for contests designated as EARLY DEADLINE that are not submitted electronically will NOT be considered for competition at the state conference.

HIGH SCHOOL EVENTS (CONTINUED)



Webmaster

Participants are required to design, build and launch a World Wide Web site that features the school's career and technology education program, the TSA chapter, and the chapter's ability to research topics pertaining to technology. Conference semifinalists participate in an on-site interview to demonstrate the knowledge and expertise gained during the development of the website with an emphasis on Internet and web history, web design (school, chapter and design brief pages), and research about cutting edge advances in technology. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit the URL of their website to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "WEBSITE DESIGN - MS - 2015 - [TEAM ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference. For the national conference, there is also an early deadline. please consult the National Competitive Events Guide for national deadlines.*

Limited at State to: One (1) team of three to five (3-5) members.

HIGH SCHOOL STATE-ONLY EVENTS

Castle Ballistics

Teams work to design a catapult, ballista or trebuchet to launch a hackey-sack/footbag at three randomly placed targets within a specified area.

Limited at State to: Two (2) teams of three (3) individuals per chapter.

Fore!

Teams, composed of one high school student and one elementary student, design and develop one hole for a proposed miniature golf course.

Limited at State to: Ten (10) teams of two (2) students per chapter. Each team MUST include one (1) HS and one (1) elementary student (grades 1-5).

HIGH SCHOOL EVENTS (CONTINUED)

High School Creativity Challenge

Design teams, composed of one high school student and one elementary student, work to solve an on-site problem.

Limited at State to: Ten (10) teams of two (2) students per chapter. Each team MUST include one (1) HS and one (1) elementary student (grades 1-6* See rules for more information). NOTE: This is a non-competitive event and does not earn points for your school toward the Chapter of the Year award.

Integrated Autonomous Vehicle

Participants create and operate an integrated autonomous vehicle. The vehicle will operate in a number of courses, but must be able to navigate a course without prior knowledge of distance or direction within a chosen course. Two separate modes of operation will be used: Student-controlled and Autonomous.

Limited at State to: Two (2) teams of three (3) individuals per chapter.

Promotional Design



Participants design a mock-up for the Colorado trading pin to be used at the national conference. The high school winner will be one of two trading pins produced for the national conference. *NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline! Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com by February 1, 2015. The subject line of the email must be: "PROMOTIONAL DESIGN - HS - 2015 - [CONTESTANT ID #]" Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.*

Limited at State to: Six (6) entries per chapter.

HIGH SCHOOL EVENTS (CONTINUED)

Rat Trap Drag Races

Participants design and build a vehicle powered solely by a standard rat trap.

Limited at State to: Six (6) individuals per chapter.

Rubber Band Powered Cars

Participants design, build and then race a rubber band-powered propeller car.

Limited at State to: Six (6) students per chapter.



T-shirt Design

Participants design the Colorado delegation's national conference T-shirt. The winner between the middle and high school top finishers will become the state delegation T-shirt.

NOTE: Due to the complexity and the large number of entries in this event as well as the limited duration of the state conference, this event has an early submission deadline!

Contestants should submit their entries as a single, multi-page PDF file to cotsa.submissions@gmail.com

by February 1, 2015. The subject line of the email must be: "T-SHIRT DESIGN - HS - 2015 - [CONTESTANT ID #]". Do not include student or school names in the email. Entries that are not submitted electronically will NOT be considered for competition at the state conference.

Limited to: Two (2) entries per chapter.



Underwater ROV Challenge

Participants apply and document the engineering design process, mathematical principles and scientific concepts used in the research, design, construction, testing and evaluation of an underwater remote operated vehicle (ROV). The ROV will be expected to perform a range of tasks including: passing through one or more rings, and then backing through the same route; retrieving rings from the bottom of the testing tank/pool; entering and illuminating a cave area; and/or demonstrating full maneuverability in three axes of motion.

Limited at State to: One (1) team of 2 (two) to six (6) students per chapter.



Early Deadline Events

Several events (listed below) have an early submission deadline of February 1, 2015. Along with each event listed is a brief summary of what is to be submitted and in what format. All early submissions are to be sent to: cotsa.submissions@gmail.com.

The following events have an early submission deadline.

MIDDLE SCHOOL	
Event	What to Submit
Career Prep	Resume & cover letter as a single, multi-page PDF document.
Communication Challenge	Trifold brochure, sponsor support letter and cardstock/post card as a single, multi-page PDF document.
Community Service Video	Consent forms as a single, multi-page PDF AND the URL to location of video file.
Digital Photography	Photo album as described in the rules as a single multi-page PDF document.
Energy Sources	Portfolio of samples in one multi-page PDF document AND a link to the URL of the video.
Promotional Design	Design and related documentation as a single, multipage PDF document.
STEM Animation	Documentation portfolio as described in the rules as a single, multi-page PDF document along with the URL of the animation's location.
T-Shirt Design	Design in a single, multi-page PDF document.
Video Game Design	Documentation portfolio as described in the rules as a single, multi-page PDF document AND a URL link to where the game executable can be downloaded.
Website Design	URL of website



Early Deadline Events

Several events (listed below) have an early submission deadline of February 1, 2015. Along with each event listed is a brief summary of what is to be submitted and in what format. All early submissions are to be sent to: cotsa.submissions@gmail.com.

The following events have an early submission deadline.

HIGH SCHOOL	
<i>Event</i>	<i>What to Submit</i>
Career Prep	Resume & cover letter as a single, multipage PDF document.
Desktop Publishing	Portfolio containing a news release, a three (3)-column newsletter, and a poster as a single, multi-page PDF document.
Digital Video Production	Documentation notebook as described in the rules as a single, multi-page PDF document AND a link to the URL of the video.
Future Technology Teacher	Portfolio containing three (3) college research summaries, a college essay, a lesson plan with technology standards correlation, relevant handouts, and materials and resources as a single- multi-page PDF document.
Music Production	Documentation portfolio as described in the rules AND an MP3 or WAV file of the music.
Photographic Technology	Photo album as described in the rules as a single multi-page PDF document.
Promotional Design	Design and related documentation as a single, multipage PDF document.
Promotional Graphics	Documentation portfolio as described in the rules, AND the design as a single, multi-page PDF document.
SCIVIS	Documentation portfolio as described in the rules as a single, multi-page PDF document along with the URL of the animation's location.
Software Development	Documentation portfolio as described in the rules as a single, multi-page PDF document AND links to multimedia presentation, project source code, and runnable, compiled program.
T-Shirt Design	Design in a single, multi-page PDF document.
Video Game Design	Documentation portfolio as described in the rules as a single, multi-page PDF document AND a URL link to where the game executable can be downloaded.
Webmaster	URL of website.

Middle School Competitive Event Eligibility

Below, please find the number of entries that may be submitted for events at both the STATE and National Conferences.

<i>NATIONAL EVENTS</i>		
EVENT	AT STATE	AT NATIONALS
Ag & Biotech Design	3 teams of 2-6 students per chapter	3 teams of 2 per STATE
Career Prep	3 students per chapter	1 student per chapter
Challenging Tech Issues	3 teams of 2 students per chapter	3 teams of 2 students per STATE
Chapter Team	1 team of 6 students per chapter	1 team of 6 students per chapter
Communication Challenge	3 students per chapter	1 student per chapter
Community Service Video	1 entry per chapter	1 entry per chapter
Construction Challenge	3 teams of 2-6 students per chapter	1 team of 2-6 students per chapter
Digital Photography	2 students per chapter	3 students per STATE
Dragster	3 students per chapter	2 students per chapter
Electrical Applications	3 students per chapter	2 students per chapter
Energy Sources	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Environmental Focus	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Essays on Technology	3 students per chapter	3 students per STATE
Flight	6 students per chapter	2 students per chapter
Geospatial Technology	1 team of 2-5 students per chapter	1 team of 2-5 students per chapter
Go Green Manufacturing	1 team of 3-6 students per chapter	1 team of 3-6 students per chapter
Inventions & Innovations	3 teams of 3-6 students per chapter	1 team of 3-6 students per chapter
Junior Solar Sprint	1 team per chapter	1 team per chapter
Leadership Strategies	3 teams of 3 students per chapter	1 team of 3 students per chapter
Medical Technology Issues	3 teams of 2-6 students per chapter	3 teams of 2-6 students per STATE
Prepared Speech	3 students per chapter	1 student per chapter
Problem Solving	2 teams of 2 students per chapter	1 team of 2 students per chapter
Promotional Design	6 students per chapter	2 students per chapter
STEM Animation	3 teams of 2-6 students per chapter	3 teams of 2-6 per STATE
Structural Model	2 teams of 2 students per chapter	1 team of 2 students per chapter
System Control Technology	1 team of 3 students per chapter	1 team of 3 students per STATE
Tech Bowl	1 team of 3 students per chapter	1 team of 3 students per chapter
Technical Design	2 teams of 2 students per chapter	2 students per chapter
Video Game Design	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Water Infrastructure	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Website Design	1 team of 3-5 students per chapter	1 team of 3-5 students per chapter

Middle School Competitive Event Eligibility

Below, please find the number of entries that may be submitted for events at the STATE Conference for STATE-ONLY events.

<i>STATE ONLY EVENTS</i>	
EVENT	AT STATE
Castle Ballistics	2 teams of 2-3 students per chapter
Crash Test	10 teams of 2 students per chapter - 1 must be an elementary student
Integrated Autonomous Vehicle	2 teams of 3 per chapter
Middle School Creativity Challenge	10 teams of 2 students per chapter - 1 must be an elementary student
Mousetrap Tractor Pull	6 students per chapter
Rubberband Powered Cars	6 students per chapter
T-Shirt Design	2 students per chapter
Underwater ROV	1 team of 2-6 students per chapter

High School Competitive Event Eligibility

Below, please find the number of entries that may be submitted for events at the STATE Conference for STATE-ONLY events.

<i>STATE ONLY EVENTS</i>	
EVENT	AT STATE
Castle Ballistics	2 teams of 2-3 students per chapter
Fore!	10 teams of 2 students per chapter - 1 must be an elementary student
High School Creativity Challenge	10 teams of 2 students per chapter - 1 must be an elementary student
Integrated Autonomous Vehicle	2 teams of 3 students per chapter
Promotional Design	6 students per chapter
Rat Trap Drag Races	6 students per chapter
Rubberband Powered Cars	6 students per chapter
T-Shirt Design	2 students per chapter
Underwater ROV	1 team of 2-6 students per chapter

High School Competitive Event Eligibility

Below, please find the number of entries that may be submitted for events at both the STATE and NATIONAL Conferences.

<i>NATIONAL EVENTS</i>		
EVENT	AT STATE	AT NATIONALS
Animatronics	2 teams of 2-6 students per chapter	1 team of 2-6 students per chapter
Architectural Renovation	3 teams (1-6 students) per chapter	1 team of 2-6 students per chapter
Biotechnology Design	3 teams of 2-6 per chapter	3 teams of 2-6 students per STATE
Career Preparation	6 students per chapter	6 students per STATE
Chapter Team	1 team of 6 students per chapter	1 team of 6 students per chapter
Children's Stories	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Computer Aided Design - 2D	3 students per chapter	2 students per STATE
Computer Aided Design - 3D	3 students per chapter	2 students per STATE
CNC Production	1 team of 2 students per chapter	1 team of 2 students per chapter
Debating Technological Issues	1 team of 2 members per chapter	3 teams of 2 students per STATE
Desktop Publishing	3 students per chapter	1 student per STATE
Digital Video Production	1 team of 2-6 students per chapter	3 teams of 2-6 students per STATE
Dragster Design	3 students per chapter	2 students per chapter
Engineering Design	3 teams of 3-5 students per chapter	1 team of 3-5 students per chapter
Essays on Technology	3 students per chapter	3 students per STATE
Extemporaneous Presentation	3 students per chapter	3 students per STATE
Fashion Design	2 teams of 2-4 students per chapter	3 teams of 2-4 students per STATE
Flight Endurance	3 students per chapter	2 students per chapter
Future Technology Teacher	3 students per chapter	3 students per chapter
Manufacturing Prototype	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Music Production	1 team of 2-6 per chapter	3 teams of 2-6 per STATE
On-Demand Video	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Photographic Technology	2 students per chapter	1 student per chapter
Prepared Presentation	3 students per chapter	3 students per STATE
Promotional Graphics	6 students per chapter	2 students per chapter
Scivis	3 teams of 1-6 students per chapter	3 teams of 1-6 per STATE
Software Development	1 team of 2-6 students per chapter	1 team of 2-6 students per chapter
Structural Engineering	2 teams of 2 students per chapter	1 team of 2 students per chapter
System Control Technology	1 team of 3 students per chapter	1 team of 3 students per STATE
Technical Sketching & Application	6 students per chapter	2 students per chapter
Technology Bowl	1 team of 3 students per chapter	1 team of 3 students per chapter
Technology Problem Solving	2 teams of 2 students per chapter	1 team of 2 students per chapter
Transportation Modeling	3 students per chapter	1 student per chapter
Video Game Design	1 team of 2-6 students per chapter	3 teams of 2-6 students per STATE
Webmaster	1 team of 3-5 students per chapter	1 team of 3-5 students per chapter

2015 COTSA SCHEDULE

This is the tentative schedule for the 2015 Colorado TSA State Conference which you can use for your planning. *This schedule is subject to change and is to be used only for initial conference planning purposes.* Please consult the conference program for the final, official schedule.

THURSDAY - SCHEDULE OF EVENTS

TIME	EVERGREEN D	RMEC	LUPINE	BLUEBELL	ASPEN	SPRUCE
1:00 - 7:00 PM	Display/Event Check-In					
7:00 PM		Opening Session				
7:30 PM						
8:00 PM						
8:30 PM				Judging Orientation #1		
9:00 PM			HS Chapter Team Written	MS Chapter Team Written	Essays on Tech - Preliminary Round MS & HS	Onsite Problem Pickup
9:30 PM			HS Tech Sketching Written	MS Electrical Apps. Written		
10:00 PM						
10:30 PM						
11:00 PM			HS Tech Bowl Written	MS Tech Bowl Written		
11:30 PM						

2015 COTSA SCHEDULE

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THURSDAY - SCHEDULE OF EVENTS (continued)

TIME	EVERGREEN A	EVERGREEN B	EVERGREEN C	CONIFER 1 & 2	ATRIUM	
7:00 PM						
7:30 PM						
8:00 PM						
8:30 PM						
9:00 PM		Structural Engineering HS - Testing of Pre-Built Structures	MS Mouse Trap Tractor Pull	MS Leadership Strategies	Finalist Sign Ups & Onsite Problem Pickup	Candidate Meet & Greet
9:30 PM	MS Flight Build					
10:00 PM						
10:30 PM						
11:00 PM						
11:30 PM						

2015 COTSA SCHEDULE

This is the tentative schedule for the 2015 Colorado TSA State Conference which you can use for your planning. This schedule is subject to change and is to be used only for initial conference planning purposes. Please consult the conference program for the final, official schedule.

FRIDAY - SCHEDULE OF EVENTS

TIME	Aspen	RMEC	Pool	Altum	Evergreen D-F	Evergreen A	Evergreen B	Evergreen C	Conifer 1	Conifer 2	Conifer 3	His	Lafayette	Bluebell	Primrose	Blanche Peak	Crestone Peak	Humboldt Peak	Longs Peak	Maroon Peak	Platte Peak	TIME	
7:00 AM	JUDGING ORIENTATION #2																					7:00 AM	
7:30 AM																						7:30 AM	
8:00 AM	Essays on Tech MSHS Finals	Problem Solving ROV MSHS	Underwater ROV MSHS		Interviews for MS Application Construction Energy Sources	Rail Trip Day MSHS	Fashion Design HS	Integrated Autonomous MSHS Competition				Engineering Design HS	Chapter Team MS	Debating Tech Issues HS Prep Room	Debating Tech Issues Competition Room	Career Prep MSHS Finals Interviews	Medical Tech MS Finalist Interviews	Prepared Speech MSHS	Challenging Tech Issues Prep Room	Challenging Tech Issues MS Presentation Room	CAD-3D Setup HS		8:00 AM
8:30 AM		8:00-10:00 a.m. Tech. Prob. Solving HS			HS Architectural Renovation Biotech Design	Junior Solar Sprint MS						Open Source HS Software Finalist Interviews	Leadership Strategies MS Finalist Prep	Leadership Strategies MS Finalist Presentation			Music Production MS Finalist Interviews				CAD-3D Setup HS	8:30 AM	
9:00 AM		9:00-11:00 a.m. Endurance HS											Chapter Team HS	Leadership Strategies MS Finalist Prep								9:00 AM	
9:30 AM																						9:30 AM	
10:00 AM																						10:00 AM	
10:30 AM																						10:30 AM	
11:00 AM																						11:00 AM	
11:30 AM	JUDGING ORIENTATION #3																					11:30 AM	
12:00 PM																						12:00 PM	
12:30 PM																						12:30 PM	
1:00 PM	Tech Sketching & Apps HS	Structural Engineering Build			Interviews for MS Go Green Maint. Innovation Environ. Focus HS	Junior Solar Sprint MS	CNC Production Assembly & Demo	Integrated Autonomous Interviews	Water Infrastructure MS Finalist Interviews	Communicative Challenge - MS Desktop Publishing - HS		Extemp. Presentation HS Prep Room	Digital Photography MS	Geospatial Tech MS	Electrical Apps. Onsite Competition	Future Tech Teacher HS						1:00 PM	
1:30 PM																						1:30 PM	
2:00 PM																						2:00 PM	
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6:00 PM																						6:00 PM	

FRIDAY EVENING EVENTS:

- Tech Bowl Finals for both Middle and High School be at 7:30 p.m.
- The Giant Jenga Tournament will begin at 7:00 p.m.
- The Movie will start at 7:30 p.m.
- The Dance will begin at 9:00 p.m.
- Please note: There is no banquet dinner this year; the one meal provided in conference registration will be a box lunch that students/advisors/chaperones can pick up around the noon hour. Chapters are on their own for dinner.

2015 COTSA SCHEDULE

This is the tentative schedule for the 2015 Colorado TSA State Conference which you can use for your planning. This schedule is subject to change and is to be used only for initial conference planning purposes. Please consult the conference program for the final, official schedule.

SATURDAY - SCHEDULE OF EVENTS

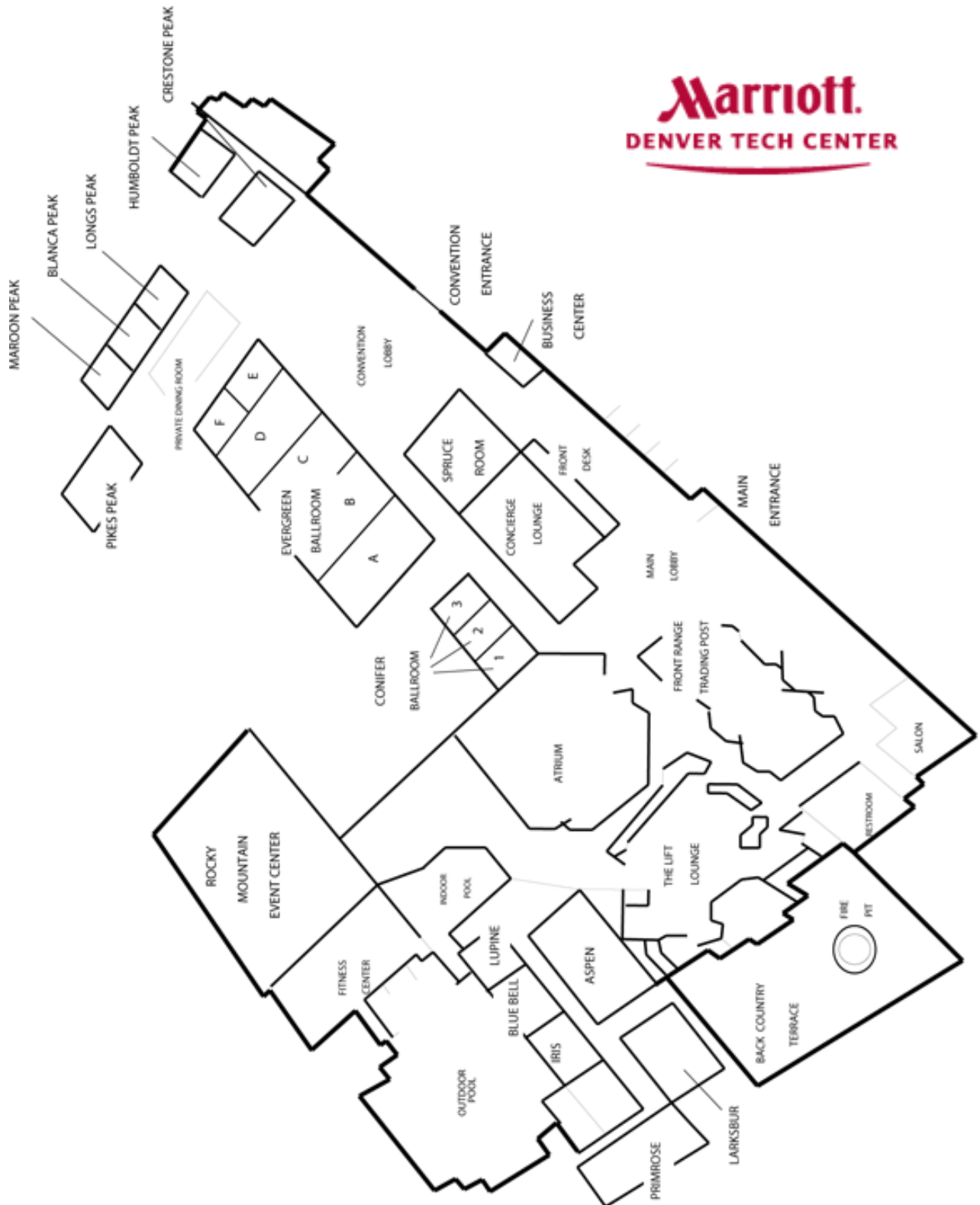
TIME	Lupine	Atrium	Evergreen A	Evergreen B	Evergreen C	Conifer 1
6:30 AM	Judge Orientation 4					
7:00 AM		Structural Engineering HS	Fore! HS Interviews	Crash Test MS		Photographic Tech HS Finalist Presentations
7:30 AM						
8:00 AM		Structural Model MS Destructive Testing	Creativity Challenge MS/HS			
8:30 AM						
9:00 AM						
9:30 AM						
10:00 AM						
10:30 AM						
11:00 AM						
11:30 AM	ALL COMPETITIONS END					
12:00 PM	AWARDS / CLOSING CEREMONY - ROCKY MOUNTAIN EVENTS CENTER					

Just a reminder:

We will NOT be allowing access to the awards ceremony to anyone except those individuals who are registered and badged conference attendees. We will also not be providing seating or video feeds to the hotel atrium for parents. We have a very limited space and regret that we cannot accommodate parents and guests, however, our focus has been and shall continue to be on our TSA members.

As of the writing of this Call to Conference, COTSA staff is working to provide a video feed via the Internet where parents can watch the awards ceremony as well as arrange for professional photographers to take all of the award winners' photographs after receiving their medals.

STATE CONFERENCE HOTEL MAP.





SPECIAL INTEREST SESSION PROPOSAL FORM

At the 2015 Colorado TSA State Conference there will be several special interest sessions offered for both students and advisors. Use this form if you would like to be a presenter at one of these sessions.

Each special interest sessions will last 50 minutes and should offer an opportunity for advisors and/or students to explore various topics in TSA, including competitive events, chapter management, and/or leadership development.

The deadline for submission of a special interest session proposal is February 1, 2015. You will be notified if your proposal has been selected to present at the 2015 COTSA State Conference.

You can complete the form below and mail/fax/email it to the COTSA State Advisor, or you can complete and submit it online at: www.ctsoadvisor.com/cotsa/special_interest_session_proposal.html.

Name of Presenter(s):		
Contact Information:		
School/Company:		
Address:		
City:	State:	Zip:
Phone Number:		
Email:		
Title of Special Interest Session:		
Brief Outline of the Session (up to 200 words):		

Thank you! Submit your proposal to:
Tony Raymond, COTSA State Advisor,
9101 E. Lowry Blvd., Denver, CO 80230, or tony.raymond@cccs.edu.