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| **Animatronics**  *(3 Teams per Chapter: State)*  *(1 per Chapter: National)*  *(There is a limit of three (3) representatives per team for the semifinalist presentation/interview.)* |  |
| **Architectural Renovation**  **Due March 19th**  *(3 Teams per Chapter: State)*  *(1 per Chapter: National)*  *(No more than two (2) team members set up the display.)*  **2014 High School Architectural Renovation**  Design Problem Statement  TSA is pleased to announce the basis for the design for the 2014 HS Architectural Renovation event. This year the design problem will focus on specific renovations and additions to one of the 1923 series of the Sears Modern Homes. The model selected is the Americus, a six bedroom, one bath, two story home in the Italian Revival Craftsman style.  A unique aspect of this year’s design problem is that TSA has identified an existing Americus home located in one of the suburbs of Washington, DC. The couple that currently owns the home is interested in making renovations and additions to the structure and is working with the Architectural Renovation event manager. The details for the design statement have been developed and finalized.  Pictures of the existing house and a site plan are now posted, along with this problem statement, on the TSA website.  1. This year’s house, the Americus model, was part of the 1923-1928 series of mail order homes sold by Sears Roebuck.  2. The house is situated on a double lot, located in a northwest Washington, DC suburb.  3. The current owners (4th owners) of the property are a married couple with two children.  4. The couple is interested in adding a two story addition to the existing house.  5. The house has a covered front porch, where the front door is located. Entrance through the front door is directly into the living room.  6. The couple does not wish to alter the design and room arrangement of the front portion of the house.  Specific considerations for designing the addition are:  a. an enlarged kitchen and eating area  b. additional informal family living area  c. a mud room with storage off of the back of the house  d. a master bedroom with an en-suite bath and closets  e. an enlarged stair landing area on the second floor  f. an outside entrance to the basement (which already has been renovated)  g. an alternative entrance from the front side of the house to access the enlarged kitchen and family living area  7. The house, as it exists now, has three bedrooms (all on the second floor) that share one bath.  8. The two larger bedrooms (at the front of the house) would become separate bedrooms for the couple’s sons.  9. The couple is interested in adding a garage/storage building with an attached in-law/guest suite. There is a parking pad on the property where this addition can be built.  10. A mature magnolia tree located near the right back side corner of the house must be preserved. Selective pruning of this tree is an option for consideration, if necessary.  11. There is new pergola with wisteria vines located in the middle of the side yard that is to remain.  12. The couple wants the addition/renovation to remain true to the historical character and integrity of the existing house.  **Site Board Size Change**  A 15" x 30.25" site board must be used this year to accommodate the 60' x 120.65' lot size. This will allow for a ¼" = 1' model scale. | Peter Haugen  Sabrina Smith  Natalie Weed |
| **Biotechnology Design**  **Due Feb. 8th**  *(3 teams per chapter)*  *(3 teams per State: national)*  Students select a contemporary biotechnology problem that relates to the current year’s published area of focus and demonstrate understanding of it through research, development of a solution, a display, and an effective multimedia presentation. Focus area: *The Role of Biotechnology in Water and Waste Technology.* | Heejoon Ahn  Hannah Cho  Leah Shin  Indira Rayaia  Peter Liao  Ashley Regudon  Emily Heng  Ali Al-Ameedi  Colin Nordquist  Andrew Lee  John Youn  Jinzheng Li  Lessane Ketema  Yuepon Fon-Hernandez  Anish Prasad  Paul Moon  Naveen Janrathanan  Natalie Weed |
| **Career Preparation**  **Due Feb. 8th**  *(No Limit)*  *(1 per Chapter: national)*   |  | | --- | | Entries must be submitted via email to promo@washingtontsa.org by March 15th. More Details to follow later. |   *For the 2013-2014 school year, students research and prepare a resume and cover letter for each of the following careers:*  Career areas:  *Meteorologist*  *Software engineer*  *Construction project manager* | Chester Pham  Sai Nimmagadda  Gurveena Gill  Ashley Andersen  Nabil Syed  Emily Heng |
| **Chapter Team (Written and Oral)**  *(Not offered at state)*  *(1 per Chapter: national)*  *one (1) team of six (6) members per chapter* | Heejoon Ahn #2  Brian Uyeda #7  Yuepon Fon-Hernandez  #8  Akshy Palomswamy #9  Peter Liao #10  Peter Haugen#1  Madeline Baker #5 |
| **Computer Aided Design 2D, Architectural**  *(3 Teams per Chapter: State)*  *(2 teams per State: National)*  *(Participants may only enter 1 of the CAD Events)* |  |
| **Computer Aided Design 3D, Engineering**  *(3 Teams per Chapter: State)*  *(2 teams per State: National)*  *(Participants may only enter 1 of the CAD Events)* |  |
| **Computer Numerical Control (CNC)**  *(3 Teams per Chapter: State)*  *(1 teams per State: National)* |  |
| **Construction Renovation**  *(3 Teams per Chapter: State)*  *(1 per Chapter: National)*  *one (1) team of two to five (2-5) members per chapter* |  |
| **Debating Technological Issues**  **Due March. 19th**  *(3 Teams per Chapter: State)*  *(3 teams per State: National)*  *(Entries are limited to three (3) teams of two (2) members per state.)*  Team members prepare to debate both pro and con views of a subtopic (which falls under a general topic) against a team from another chapter.  Topic: *Surveillance*, with the subtopics below   1. Should surveillance devices be used in a public educational facility? 2. Should public notices be posted by entities using surveillance devices? 3. Should the Federal Transportation Security Administration change current surveillance practices for public transportation? | Lessane Ketema  Yuepon Fon-Hernandez  Madeline Baker  Seven Bennett  Lydia Kim  Caleb Kim |
| **Desktop Publishing**  **Due March. 19th**  *(3 Teams per Chapter: State)*  *(1 teams per State: National)*  *The theme for 2012 is “Beyond Tradition”* | John Youn  David Hwang  Keanu Tuskan |
| **Digital Video Production**  **Due Feb. 8th**  *(3 Teams per Chapter: State)*  *(3 teams per State: National)*  *(Teams will have 36 hours to complete the video)*  *Theme: Documentary* | Brian Uyeda  Joseph Yoon  Aaron Oh  Caleb Kim  Robert Kim  Andrew Lee  Connor Hauenstein  Dean Reykdal  Ryan Hester  Jack Hylland  Mathew Peters  Akshy Palanisamy  Rafael Valdez  Naveen Janrathanan  Sai Nimmagadda  Shadi Mattar  Nabil Syed  Viante Dile-Basnight  Dae Durisko ? |
| **Dragster Design**  **Due March. 19th**  *(3 Individuals per Chapter: State)*  *(2 teams per Chapter: National)*   |  | | --- | | Cars must be accompanied by a completed and signed Advisor Certification Form in addition to the other required materials. | | John Youn  David Hwang  Aaron Oh  Jinzheng Li (have kits)  Colin Nordquise (have kits)  Anhton Duong (have kits)  Paul Moon  Robert Kim (have kits)  Naveen Janrathanan |
| **Engineering Design**  **Due March. 19th**  *(5 Teams per Chapter: State)*  *(1 team per Chapter: National)*  *(Participants are limited to one (1) team of three to five (3-5) students per chapter; one (1) entry per team.)* | Amy Chiu  Colin Nordquist  Heejoon Ahn  Natalie Weed  Hannah Cho  Indira Rayaia  Lydia Kim |
| **Essays on Technology**  *(3 Individuals per Chapter: State)*  *(3 per State National)*  **Due March. 19th**  Topic: *The Greatest Invention(s) of the Modern Technological World*  Subtopics:  *Communications*  *Manufacturing*  *Transportation* | Lessane Ketema  Anish Prasad |
| **Extemporaneous Speech**  **Due Feb. 8th**  *(3 Individuals per Chapter: State)*  *(3 Individuals per State: National)* | Sridutt Nimmagadda  Seven Bennett  Lessane Ketema  Viante Dile-Basnight  Natalie Weed |
| **Fashion Design**  **Due March. 19th**  *(Not offered at state)*  *(1 team per Chapter: national)*  (Entries are limited to one (1) team of two to four (2-4) members per chapter.)  Theme: *Design two outfits for a NEW children’s fairy tale storybook character.* | Michelle Bohnen |
| **Flight Endurance**  *(3 Individuals per Chapter: State)*  *(3 Individuals per Chapter: National)* |  |
| **Future Technology Teacher**  **Due March. 19th**  *(Not offered at state)*  *(3 Individuals per Chapter: National)* | Viante Dile-Basnight |
| **Manufacturing Prototype**  **Due March. 19th**  *(5 Teams per Chapter: State)*  *(1 team per Chapter: National)*  Product: *a product developed in an alternative way (versus by a traditional method) that demonstrates a reduction of waste.* | **(No Team Yet)**  Peter Cung |
| **Music Production**  **Due Jan. 31st**  *(3 Teams per Chapter: State)*  *(3 teams per State: National)*  *(Entries are limited to three (3) teams per state. Teamwork is strongly encouraged, but a team of one (1) member is permitted.)* | Amy Chiu  Janice Lim  Ryan Ateser  Mathew Peters  Kelton Green  Ashley Andersen  Alex Park  Brandon Mar  Demetrius Badua  Keanu Tuskan  Sabrina Smith  Brian Uyeda ?  Robert Kim ?  Caleb Kim ?  Lydia Kim ?  Gurveena Gill ? |
| **On-Demand Video**  **Due March. 27th**  *(1 Teams per Chapter: State)*  *(1 teams per Chapter: National)*  *(Participants are limited to one (1) team of two (2) or more students per chapter. One (1) entry per team is permitted).*  Teams will have less than 36 hours to complete their video. Elevators may not be utilized in the production of the video. Additional rules will be supplied at the meeting on Thursday Night. | Caleb Kim  Andrew Lee  Aaron Oh  Robert Kim  Joseph Yoon  Brian Uyeda |
| **Open Source Software Development**  *(3 Teams per Chapter: State)*  *(1 team per Chapter: National)* |  |
| **Photographic Technology**  **Due Feb. 8th**  *(3 Individuals per Chapter: State)*  *(1 Individual per Chapter: National)*  *(Scores from the Static display and the finals will be combined to determine the winner)*  Theme: *Goodwill* | Ryan Ateser  Mathew Peters  Ashley Andersen  Kelton Green  Gurveena Gill  Michelle Bohnen  Kim See |
| **Prepared Presentation**  **Due Feb. 8th**  *(3 Individuals per Chapter: State)*  *(3 Individual per State: National)*  Theme: *The Spirit of Innovation* | Leah Shin  Viante Dile-Basnight |
| **Promotional Graphics**  **Due Jan. 31st**  *(3 Individuals per Chapter: State)*  *(2 Individual per Chapter: National)*  Options: *Flight Endurance, System Control Technology, Webmaster*  Entries must be submitted via email to promo@washingtontsa.org by March 10th in the format described in the rules. | Jonathan Tan  Michelle Bohnen  Leah Shin  Emily Heng  Brian Uyeda  Keanu Tuskan  Kim See  Mathew Peters  Kelton Green |
| **Sci-Vis**  **Due March 19th**  *(3 Teams per Chapter: State)*  *(3 teams per State: National)*  *The theme for 2012 is on a subject or topic from one or more of the following areas: science, technology, engineering, and mathematics* | Amy Chiu  Hannah Tan  Jonathon Tan  Heejoon Ahn  Rafael Valdez  Akshy Palanisamy  Viante Dile-Basnight |
| **Structural Engineering**  **Due Feb. 8th**  *(No Limit)*  *(1 team per Chapter: National)*  At check in, students will present a construction drawing for each designated length. The drawings of the student designed structions must be on 11x17 paper and include a minimum of a front nad end view with proper dimensions. Each drawing will include a schedule of parts with identification label, quantity, dimensions, and length. Drawings may be finished sketches, board drawings, or computer generated drawings and must be to full scale. | Nabil Syed  Jack Hylland  Andrew Lee  Joseph Yoon  Kim See  Chester Pham  Colin Nordquist  Jinzheng Li  Amy Chiu  Sabrina Smith  **(No Team Yet)**  Peter Cung  Madeline Baker  Michelle Bohnen  Efren Chavez |
| **System Control Technology**  *(1 Team per Chapter)* |  |
| **Technical Sketching and Application**  *(No Limit)*  *(2 team per Chapter: National)*  Testing will be done in an online format prior to the conference. The testing window closes March 15th. |  |
| **Technology Bowl**  **Due Mandatory Meeting TBA Due**  *(No Limit on Written)*  *(1 Team per Chapter: State)*  *(1 team per Chapter: National)* |  |
| **Technology Problem Solving**  **Due Feb. 8th**  *(2 Team per Chapter: State)*  *(1 team per Chapter: National)* | **All Students will test**  Nabil Syed  Jack Hylland  Peter Haugen  Sabrina Smith  Peter Cung  Janice Lim  **(No Team Yet)**  Madeline Baker  Michelle Bohnen |
| **Transportation Modeling**  *(No Limit)*  *(1 team per Chapter: National)*  Theme: The participant’s vision of the next generation of a high speed rail train engine | Efren Chavez |
| **Video Game Design**  **Due March 27th**  *(3 Teams per Chapter: State)*  *(3 teams per State: National)*  *(Three (3) teams per state. There will be a minimum of two (2) people per team.)* | Nabil Syed  Brandon Mar  Tiffany Lai  Kevin Hittle  Alex Park  Michelle Bohnen  Lessane Ketema  Yuepon Fon-Hernandez  Anish Prasad |
| **VEX Robotics Challenge**  *(5 Teams per Chapter: State, 1 team per school)*  *(7 teams per State: National)* |  |
| **Webmaster**  **Due May 15th**  *(1 Teams per Chapter: State)*  *(1 team per Chapter: National)*  *(Participants are limited to one (1) team of three (3) to five (5) members per TSA chapter.)*  **2014 Design Brief**  **How to Build Your First Web Site**  ***Create a website that teaches basic web design and development principles to middle school students.***  **I. Context**  One of the challenges for TSA middle school students is learning a number of new skills in order to compete. Before these skills can be refined and expanded upon through experience, a basic understanding of the skills must first be learned. In the case of TSA’s middle school “Website Design” competition, students must learn - most for the very first time - the basics of proper web design. Often, students resort to using template sites, thereby bypassing the design process and failing to learn the basic fundamentals of real-world web design.  **II. Challenge Statement**  Design a website that serves as a guide for middle school-aged students interested in learning how to build a website. Entries should be engaging, exciting, technically accurate, and, at the same time, presented in a manner that an 11-14 year old student with no previous web design experience can understand and learn from. Basic HTML and CSS should be the focus, with additional information regarding content organization and visual design principles being an important secondary priority. By the end of the solution, the student should be able to create from scratch a working basic website using little more than a text editor.  Teams may decide how they wish to present the guide, be it through a series of how-to’s, an interactive tutorial, or any other method the team feels effectively accomplishes the goal. Emphasis should be placed on engagement and interest. Teams may add additional features not specifically mentioned in this design brief, if they feel it adds to the effectiveness of their solution.  **\*Important change from previous years\***  Whereas many entries in years past have integrated the design brief solution with the required TSA chapter and school technology education program information within a single website, this year the design brief solution should be a **separate** website independent of the required TSA and program information, with an “About” page linking to the TSA and program web pages.  **III. Evaluation**  Thought should be given to effective website design practices and cross-platform compatibility. The website will be evaluated using any combination of Windows 7 and 8, as well as Mac OS X, in any browser supported by those platforms, including the latest versions of Internet Explorer 9/10, Firefox, Chrome, and Safari. Mobile browsers MAY be used in evaluation. Teams should strive to create a clean, easy-to-use website that features an excellent presentation of the required content.  Teams are reminded that ALL work (design, content, and markup/code) should be the product of the 2013-2014 school year. Allowed prior work would include photographs and news pieces from previous conferences and activities.  Questions pertaining to this competition should first be researched at the website of Stephen Blue, competition coordinator. The website address is http://www.tsawebmaster.com. If necessary, an email may be sent to Stephen at stephen@stephenblue.net, using the subject line “TSA Webmaster.” | Leah Shin  Tiffany Lai  Ashley Regudon  Kevin Hittle |
| 1. *Washington State Only Events:* |  |
| **Woodworking Design** |  |
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