

LEADERSHIP SKILLS LEARNED THROUGH TSA HIGH SCHOOL COMPETITIVE EVENTS

Agriculture and Biotechnology Design

Leadership skills promoted in this event:

Evaluation –read and review information to determine what is most important and/or relevant

Decision making –research and develop a solution

Communication – communicate within a group and to an audience

Additional leadership skills promoted in this event: teamwork, organization, ethics, critical thinking

Animatronics

Leadership skills promoted in this event:

Critical thinking – use prior knowledge to accomplish a task

Teamwork – (equally) delegate tasks based on individual skills

Problem solving – work out the bugs/design flaws to animate the object

Additional leadership skills promoted in this event: self esteem, organization, creative thinking, communication

Architectural Model

Leadership skills promoted in this event:

Critical thinking – research ideas, which leads to the development of logical plans

Communication – communicate ideas for the development of plans

Creative thinking – create original ideas based on specifications

Additional leadership skills promoted in this event: organization, teamwork, self esteem, evaluation, problem solving

Career Comparisons

Leadership skills promoted in this event:

Communication - communicate ideas to the judges through the interview

Evaluation - compare and contrast careers

Ethics – prepare a resume and an application

Additional leadership skills promoted in this event: self esteem, organization

Chapter Team (Written and Oral)

Leadership skills promoted in this event:

Problem solving - conduct business

Communication - perform an opening and closing ceremony

Teamwork – work together effectively as a team

Additional leadership skills promoted in this event: organization, self esteem decision making

Computer Aided Design (CAD), Architecture with Animation

Leadership skills promoted in this event:

Creative thinking – create representations of ideas

Evaluation - evaluate a design according to the requirements

Communication – use design principals as a language to communicate ideas through animation

Additional leadership skills promoted in this event: organization, problem solving, teamwork, self esteem

Computer Aided Design (CAD), Engineering with Animation

Leadership skills promoted in this event:

Creative thinking – create representations of ideas

Evaluation - evaluate a design according to the requirements

Communication – use design principals as a language to communicate ideas through animation

Additional leadership skills promoted in this event: organization, problem solving, teamwork, self esteem

Construction Systems

Leadership skills promoted in this event:

Teamwork – work as a team member to solve an on-site problem

Critical thinking – analyze and evaluate, using logic

Problem solving - work to develop a plan and carry it out

Additional leadership skills promoted in this event: communication, evaluation, organization, creative thinking

Cyberspace Pursuit

Leadership skills promoted in this event:

Communication - communicate ideas through various on-line media

Critical thinking - acquire information to analyze and evaluate

Teamwork – as a team member, contribute to project design and the interview

Additional leadership skills promoted in this event: organization, problem solving, evaluation, creative thinking, decision making

Debating Technological Issues

Leadership skills promoted in this event:

Critical thinking – gather research in order to develop an argument

Teamwork – members work together to compete and share knowledge

Communication – effectively communicate a position related to the argument

Additional leadership skills promoted in this event: evaluation, organization, self esteem

Desktop Publishing

Leadership skills promoted in this event:

Communication - ensure that presentation is clean, neat, and presentable

Problem solving - devise a plan on how to solve the issue

Creative thinking – create original ideas based on specifications

Additional leadership skills promoted in this event: organization, decision making, evaluation

Dragster Design

Leadership skills promoted in this event:

Problem solving - fix the car after the evaluation

Evaluation – evaluate using time trials, testing and rebuilding

Creative thinking – produce ideas based on specifications

Additional leadership skills promoted in this event: self esteem, organization, decision making

Electronic Game Design

Leadership skills promoted in this event:

Problem solving – devise a plan and evaluate it

Creative thinking – develop new ideas that appeal to a diverse audience

Communication – portray educational, artistic and social concepts through graphical representations

Additional leadership skills promoted in this event: self esteem, teamwork, critical thinking, evaluation

Electronic Research and Experimentation

Leadership skills promoted in this event:

Critical thinking - acquire the information needed to make decisions

Teamwork – as a team member, contribute to project design and the interview

Evaluation – evaluate using testing and the problem log

Additional leadership skills promoted in this event: problem solving, ethics, self esteem

Engineering Design

Leadership skills promoted in this event:

Communication – choose an existing design problem and come up with a unique solution; explain the solution

Problem solving – devise a plan that will yield an acceptable solution

Critical thinking – analyze and evaluate a problem in order to arrive at an acceptable solution

Additional leadership skills promoted in this event: self esteem, teamwork, organization, decision making, ethics, creative thinking, evaluation

Essays on Technology

Leadership skills promoted in this event:

Communication – write a well thought-out report

Decision making – examine behaviors and select those that will accomplish the intention

Critical thinking – develop original ideas based on research

Additional leadership skills promoted in this event: self esteem, organization, creative thinking, evaluation

Extemporaneous Presentation

Leadership skills promoted in this event:

Communication – acquire poise, confidence, and comfort with presentations

Evaluation – understand the need to rehearse presentations and do so before competitions (for improvement purposes)

Creative thinking – acquire the ability to select a topic

Additional leadership skills promoted in this event: organization, self esteem

Fashion Design

Leadership skills promoted in this event:

Creative thinking – create designs that appeal to a mass audience

Team work – divide responsibilities among team members

Communication – display a visual and narrative understanding of a fashion idea

Additional leadership skills promoted in this event: organization

Film

Leadership skills promoted in this event:

Communication – organize and produce a well written notebook

Creative thinking - use original thoughts

Evaluation - review and critique work throughout the development of the film

Additional leadership skills promoted in this event: organization, teamwork

Flight Endurance

Leadership skills promoted in this event:

Problem solving – make adjustments to fix problems

Evaluation – improve an entry via testing and time trials

Creative thinking – come up with unique ideas for a competitive edge

Additional leadership skills promoted in this event: organization, self esteem, communication, critical thinking

Future Technology Teacher

Leadership skills promoted in this event:

Creative thinking – find a creative way to present a lesson that captivates an audience

Decision making – decide on college selections, based on research

Communication – convey all aspects of the lesson effectively

Additional leadership skills promoted in this event: ethics, organization

Imaging Technology

Leadership skills promoted in this event:

Communication – convey theme effectively using technology

Evaluation – ensure that entry captures the viewer’s attention

Creative thinking – use original ideas to depict the theme and meet the requirements

Additional leadership skills promoted in this event: self esteem, organization, decision making, critical thinking, ethics, problem solving

Manufacturing Prototype

Leadership skills promoted in this event:

Creative thinking - use original thoughts

Critical thinking - determine how an item can be manufactured

Teamwork – (equally) use skills of team members to manufacture a product

Additional leadership skills promoted in this event: problem solving, organization, communication

Medical Technology

Leadership skills promoted in this event:

Problem solving – choose a problem, come up with a solution

Communication – master the use of both PowerPoint presentations and oral presentations

Critical thinking – analyze future possibilities

Additional leadership skills promoted in this event: organization, teamwork, ethics, creative thinking, decision making

Music Production

Leadership skills promoted in this event:

Creative thinking – explore the link between creative ideas and the tools used to materialize them

Ethics – create an entirely original product

Communication – convey a wide array of thoughts and emotions through music

Additional leadership skills promoted in this event: evaluation, teamwork, organization

On- Demand Video

Leadership skills promoted in this event:

Creative thinking – create a video that is interesting and informative

Communication – convey a theme or message to the audience

Problem solving – work through challenges that arise due to the short amount of time allowed to create a product

Additional leadership skills promoted in this event: evaluation, teamwork, organization

Prepared Presentation

Leadership skills promoted in this event:

Communication - use AV equipment as part of a presentation

Creative thinking - develop unique methods to present original thoughts

Evaluation – practice and revise presentation and presentation techniques

Additional leadership skills promoted in this event: self esteem, organization, problem solving, critical thinking

Promotional Graphics

Leadership skills promoted in this event:

Communication – participants effectively communicate the theme

Evaluation – continual evaluation of the effectiveness

Ethics – follow copyright procedures

Additional leadership skills promoted in this event: problem solving, organization, teamwork, decision making

Radio Controlled Transportation

Leadership skills promoted in this event:

Critical thinking – acquire information to reach a conclusion based on logic

Problem solving - work through the design and fabrication of the entry

Teamwork – contribute equally (i.e. each team member) to the project design and performance of the entry

Additional leadership skills promoted in this event: self-esteem, communication, evaluation

SciViz

Leadership skills promoted in this event:

Creative thinking – use original thoughts develop the representation

Communication – portray scientific concepts through aesthetically pleasing illustrations

Critical thinking – analyze entry in order to make enhancements

Additional leadership skills promoted in this event: communication, self esteem, organization, teamwork, evaluation, problem solving

Structural Engineering

Leadership skills promoted in this event:

Problem solving – working under time and material constraints

Teamwork – prepare in advance to work together effectively on site

Evaluation – work to eliminate the possibility of failure

Additional leadership skills promoted in this event: critical thinking, creative thinking

System Control Technology

Leadership skills promoted in this event:

Teamwork – assign tasks based on specific skills

Creative thinking – emphasize original ideas to create a competitive edge

Problem solving – analyze each step in the design process

Additional leadership skills: evaluation, ethics, communication, self esteem, critical thinking

Technical Sketching and Application

Leadership skills promoted in this event:

Problem solving - analyze and interpret a problem

Communication – use design principals as a language

Critical thinking - analyze and interpret a design

Additional leadership skills promoted in this event: evaluation, decision making

Technology Bowl

Leadership skills promoted in this event:

Critical thinking – use evidence, judgment and knowledge to answer questions

Teamwork – know and understand the strength of team members

Communication – be able to demonstrate knowledge

Additional leadership skills promoted in this event: self esteem, evaluation, decision making, problem solving

Technology Dare

Leadership skills promoted in this event:

Critical thinking - analyze and reach conclusions

Problem solving – select of appropriate applications

Evaluation – test and revise the entry at each stage of the design process

Additional leadership skills promoted in this event: teamwork, organization, creative thinking, ethics

Technology Problem Solving

Leadership skills promoted in this event:

Problem solving – find the best solution based on time and limited materials

Teamwork – prepare in advance to work efficiently on site

Creative thinking - use reasoning and judgment to produce original thoughts

Additional leadership skills promoted in this event: organization, communication, critical thinking, evaluation

Transportation Modeling

Leadership skills promoted in this event:

Problem solving – determine the design of the entry

Critical thinking – analyze research to create a model

Communication – document research and the design process

Additional leadership skills promoted in this event: ethics, creative thinking, evaluation