



AZSEF

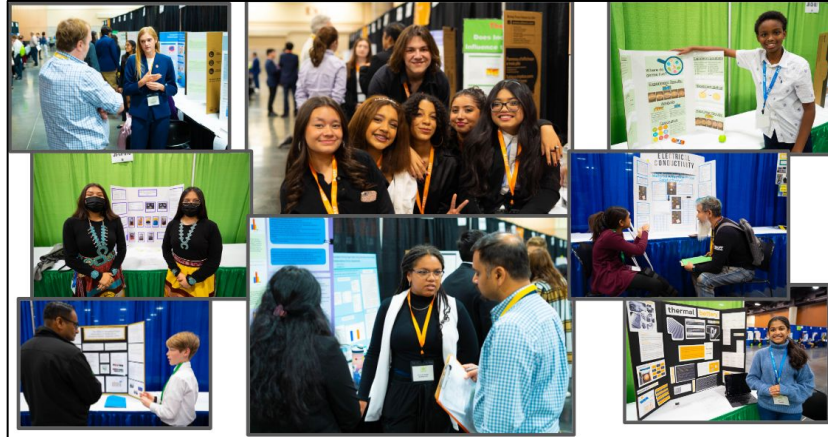
ARIZONA SCIENCE & ENGINEERING FAIR

Fair Director Meeting

March 5, 2024

AGENDA

- AzSEF Event Details
- Schedules
- Display & Safety
- Judging Rubrics
- Judging Tips
- Office Hours
- zFairs Registration
- Questions?



AzSEF 2024

- Location – Mountain America Stadium in Tempe, AZ (i.e. Sun Devil Stadium)
- Date: April 4-6, 2024
 - Elementary & Junior Divisions - Thursday, April 4, 2024
 - Senior Division - Friday, April 5, 2024
 - Awards Ceremony and Public Viewing - Saturday, April 6, 2024 at Arizona Science Center



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Arizona State Sun Devils Seating Chart With Rows
at Sun Devil Stadium

Main Entrance
Stairs

Accessible
Entrance

Concession
Stands

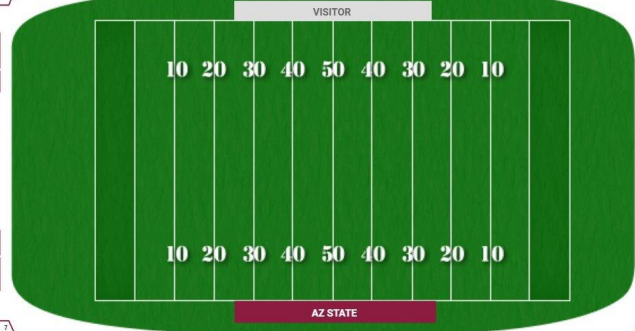
Exhibitors

Participant
Check in

Elem &
Junior
D & S

Judge area –
Lagunitas Room

Judging
Concourse



Attendee
Waiting Concourse

SR Division D & S
Project Check in & Out

COACHS' CLUB

FOUNDERS' CLUB

LEGENDS' CLUB

PRESS BOX & SUITES

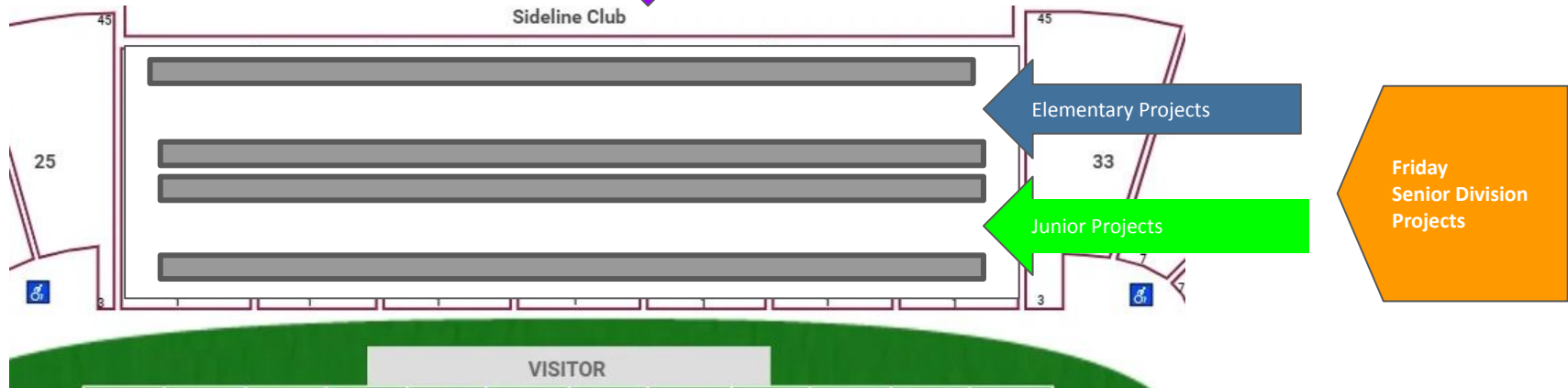


All TV's and Jumbo
Screen
will play live and
recorded feed
throughout both days

We would love for schools
to send pre-recorded shout
outs for student
representatives



Judging Location Details



THURSDAY - 1 PM TO 6 PM

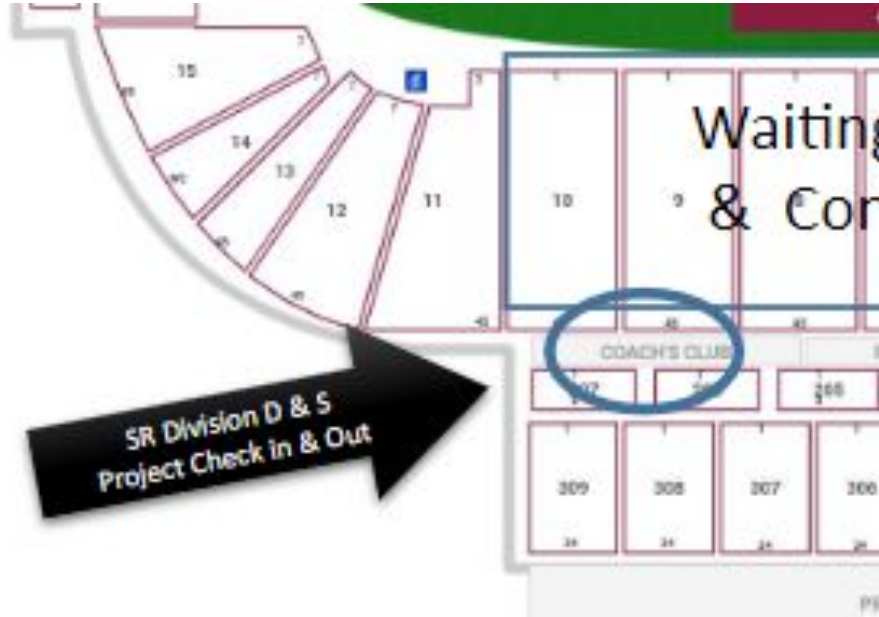
1. Check in at Registration Desk - form issues taken care of.
2. Review your project for D&S compliance - make changes as necessary.
3. Submit signed D&S form to staff.
4. Inspector will be assigned to review project.
5. Additional changes made if needed.
6. Check in project with staff in the Coaches Club - QR code

FRIDAY - 7:30 AM - 9:00 AM

1. Check out project from staff at the Coaches Club - Signature required
2. Set project up at designated table

If checking in for first time, follow steps 2-5 above, then set up project.

If project is deemed to need a second D&S review proceed to D & S table located near the Coaches Club



Senior Division Project Check in/out & D & S

AzSEF 2024

Other Details

- **Parking & Buses is off Rio Salado Drive - Lot 59 (confirming)**
- **Concessions will be open but can bring own lunch.**
- **Highly encouraging refillable water bottles - many refill stations throughout the stadium**
- **Wear comfortable shoes - the stadium is large!**
-



AzSEF 2024 Schedule
ELEMENTARY & JUNIOR DIVISIONS

Mountain America Stadium 500 E Veterans Way, Tempe, AZ 85287

Thursday, April 4, 2024		Activity	Location
9:00 a.m.	11:30 a.m.	Elementary & Junior Participant/Project check in & set up	Top of Concourse
9:00 a.m.	12:00 p.m.	Elementary & Junior Division safety checks	Judging Concourse
12:00 p.m.		Elementary & Junior Participant lunch break All students exit	Coca-Cola Deck (within the Stadium)
1:00 p.m.		Elementary & Junior Participant return to projects	Judging Concourse
1:00 p.m.	4:00 p.m.	Elementary & Junior Division Judging	Judging Concourse
4:00 p.m.	5:00 p.m.	Students leave while the judges are caucusing	Coca-Cola Deck (within the Stadium) and/or attendee concourse and seating areas
5:00 p.m.	5:30 p.m.	All Elementary & Junior projects removed	Judging Concourse
5:30 p.m.		All Elementary & Junior projects not picked up will be disposed of	Judging Concourse
10:00 p.m.		Elementary & Junior winners announced on the AzSEF Homepage on AzScience.org	www.azsef.org Winners will also be notified by email

Award Ceremony & Public Day
Arizona Science Center 600 E. Washington St. Phoenix Az 85004

Saturday, April 6, 2024		Activity	Location
10:00 a.m.	11:30 a.m.	Elementary & Junior Division Awards Ceremony	Irene P. Flinn Giant Screen Theater
10:00 a.m.	12:00 p.m.	Senior Division display and present projects to Science Center visitors	Level One
12:00 p.m.	2:00 p.m.	Lunch & Explore the Science Center	CREATE Public Hall
2:00 p.m.	3:30 p.m.	Senior Division Awards Ceremony	Irene P. Flinn Giant Screen Theater
2:00 p.m.	4:00 p.m.	Elementary & Junior Division display & present project to Science Center visitors	Level One

**Elementary & Junior Division
Schedule**

AzSEF 2024 Schedule**SENIOR DIVISION****Mountain America Stadium 500 E Veterans Way, Tempe, AZ 85287**

Thursday, April 4, 2024		Activity	Location
1:00 p.m.	6:00 p.m.	Senior Division Participant/Project check in and set up. Ongoing SRC, Safety & Display checks	Outside the Legends Club; Projects stored in the Legends Club overnight
Friday, April 5, 2024		Activity	Location
7:30 a.m.	9:00 a.m.	(Final) Senior Division project Check in; Final SRC, Safety & Display checks	Top of Concourse
9:00 a.m.		Senior Division Participants allowed into Judging Concourse	Judging Concourse
9:15 a.m.	11:00 a.m.	Senior Division Interviews	Judging Concourse
11:00 a.m.	12:00 p.m.	Lunch - students leave judging concourse	Coca-Cola Deck (within the Stadium)
12:00 p.m.		Senior Division Participants return to Judging Concourse	Judging Concourse
12:00 p.m.	2:30 p.m.	Senior Interviews continue	Judging Concourse
2:30 p.m.		Senior Division participants exit Judging Concourse	Coca-Cola Deck (within the Stadium) and/or attendee concourse and seating areas
2:30 p.m.	5:00 p.m.	Judges caucus to determine category and special awards	Judging Concourse & Lagunitas Room
5:00 p.m.		All Senior Division Projects removed	Judging Concourse
5:30 p.m.		All Senior projects not picked up will be disposed of	Judging Concourse
7:00 p.m.		Senior Division winners announced on the AzSEF Homepage on the Arizona Science Center website	www.azsef.org Winners will also be notified by email
Award Ceremony & Public Day			
Arizona Science Center 600 E. Washington St. Phoenix Az 85004			
Saturday, April 6, 2024		Activity	Location
10:00 a.m.	11:30 a.m.	Elementary & Junior Division Awards Ceremony	Irene P. Flinn Giant Screen Theater
10:00 a.m.	12:00 p.m.	Senior Division display and present projects to Science Center guests	Level One
12:00 p.m.	2:00 p.m.	Lunch & Explore the Science Center	CREATE Public Hall
2:00 p.m.	3:30 p.m.	Senior Division Awards Ceremony	Irene P. Flinn Giant Screen Theater
2:00 p.m.	4:00 p.m.	Elementary & Junior Division display & present project to Science Center guests	Level One

Senior Division Schedule

Awards Ceremony & Public Day

Saturday, April 6, 2024		Awards Ceremony & Public Day at Arizona Science Center	
10:00: AM	11:30 AM	Elementary & Junior Division Awards Ceremony	Giant Screen Theater
10:00: AM	12:00 PM	Senior Division display and present projects to Science Center visitors	First Floor
12:00: PM	12:45 PM	Lunch for all	CREATE Public Hall
12:45: PM	2:00 PM	Explore the Science Center	All Floors
2:00: PM	3:30 PM	Senior Division Awards Ceremony	Giant Screen Theater
2:00: PM	4:00 PM	Elementary & Junior Division display & present project to Science Center visitors	First Floor

Awards Ceremony & Public Day

- Students who won awards can bring their projects to the Science Center and share them with the general public during their designated time.
- Network with other students during lunch and explore time.
- Attend their designated Awards Ceremony to receive their award!

DISPLAY AND SAFETY REGULATIONS - Student Checklist

The following regulations must be adhered to by ALL Exhibitors. Knowledge of Display & Safety requirements is the responsibility of the Student Exhibitor and Adult Sponsor(s). The Display & Safety Committee may require students to make revisions to conform to the regulations. Any questionable items or safety concerns identified during inspection require review by the Display & Safety Committee Chair(s) and/or Scientific Review Committee Chair.

Students: check each box on this form after you have inspected your project and confirmed your project board meets the guideline.

<input type="checkbox"/>	The project display DOES NOT have any of the PROHIBITED ITEMS as described below and on the other side of this form. Inspectors: be sure to complete BOTH sides of this form!
<input type="checkbox"/>	Exhibitor name CANNOT appear on front of display board but can be displayed on back of board, notebooks, etc. Exhibitor's school, grade, or any personal information SHALL NOT be displayed on the front of display board, notebooks, or other display items.
<input type="checkbox"/>	Display Dimensions and Construction: <ul style="list-style-type: none"> The exhibit is within 30" deep; 48" wide; 108" from the floor to the top of project (or 78" from top of table). ALL project materials fit within the given dimensions. The exhibit items and backboard are self-standing and stable, or secured to table. All items on display board are attached securely. All sharp edges on project are removed or protected. No tripping hazards are present.
<input type="checkbox"/>	ALL images are credited. This includes all graphs, photos, and other images on the project display. IF the student took/created all the images, one statement in a visible location on the board that states "all images taken/created by Exhibitor" will suffice.
<input type="checkbox"/>	Display of photographs other than that of the student must have a photo release signed by the subject, and if under 18 years of age, also by the guardian of the subject (these forms must be available upon request, but shall not be displayed) OR all faces are blacked out, covered, or otherwise obscured.
<input type="checkbox"/>	LAPTOP COMPUTERS – if a laptop is a part of the display, it must be present and available at both the initial and final Display and Safety checks. No changes or additions are allowed after the initial Display and Safety review on Thursday.
<input type="checkbox"/>	Forms (Senior Division) - must include the official abstract and form 1C and 7 (if applicable).
<input type="checkbox"/>	This project does not have the word "abstract" on the project board.
<input type="checkbox"/>	This project does not have QR codes, linked websites, patent status.
<input type="checkbox"/>	This project does not have acknowledgements, self-promotion, or external endorsements.

[Link to D&S Guidelines](#)

ITEMS NOT ALLOWED ON EXHIBIT

Photographs of these items are allowed as long as they are appropriate and not deemed offensive by Display and Safety inspectors.

<input type="checkbox"/> Living organisms, including plants	<input type="checkbox"/> Glass (including light/heat sources)
<input type="checkbox"/> Taxidermy specimens or parts	<input type="checkbox"/> Preserved vertebrate or invertebrate animals
<input type="checkbox"/> ALL chemicals including water. Absolutely no liquids can be utilized in the project display	<input type="checkbox"/> Flames and highly flammable materials. Any materials that were previously flame or fire tested.
<input type="checkbox"/> Plant materials (living, dead, or preserved) that are in their raw, unprocessed, or non- manufactured state	<input type="checkbox"/> Any apparatus with belt, pulleys, chains, or moving parts with tension or pinch points that are not appropriately shielded
<input type="checkbox"/> Human or animal food	<input type="checkbox"/> 3D Printers unless the power source is removed
<input type="checkbox"/> Human/animal parts or body fluids	<input type="checkbox"/> Batteries with open-top cells or wet cells
<input type="checkbox"/> Soil, sand, rock, cement, concrete, and/or waste samples, even if permanently encased in acrylic	<input type="checkbox"/> Inadequately insulated apparatus capable of producing dangerous temperatures
<input type="checkbox"/> Sharp items (examples: syringes, needles, pipettes, knives)	<input type="checkbox"/> Any display items that are deemed distracting (i.e. sounds, lights, odors, etc.)
<input type="checkbox"/> Items that may have contained or been in contact with hazardous chemicals (Item <i>may</i> be permitted if professionally cleaned and documentation for such cleaning is available)	<input type="checkbox"/> All hazardous substances or devices (examples: poisons, drugs, firearms, weapons, ammunition, reloading devices, grease/oil and sublimating solids such as dry ice)
<input type="checkbox"/> Drones or any flight capable apparatus unless the propulsion power source is removed	<input type="checkbox"/> Brand names, logos, copyrighted /trademarked images UNLESS integral to the project
<input type="checkbox"/> Incandescent and fluorescent light bulbs or any other heat generating light source	<input type="checkbox"/> Any apparatus or project material deemed unsafe by the Display & Safety Committee

LASER/LASER POINTER REGULATIONS

<input type="checkbox"/>	Any Class 1, 2, 3A, or 3R lasers are allowed to be used RESPONSIBLY. No other lasers are allowed.
<input type="checkbox"/>	Laser beams may not pass through magnifying optics such as microscopes and telescopes.
<input type="checkbox"/>	Lasers must be labeled by the manufacturer so that power output can be inspected. Lasers without labels will NOT be permitted.
<input type="checkbox"/>	Use of handheld lasers is discouraged.
<input type="checkbox"/>	Lasers will be confiscated with no warning if not used in a safe manner.

I/we have reviewed our project to ensure that it meets the Display & Safety guidelines per AzSEF Rules & Regulations. I/we further understand that any infractions found must be fixed prior to the initial Display & Safety review during AzSEF check-in. I/we further understand that returning items that have been remove by the SRC or D&S and/or adding items that are not permitted after final clearance are grounds for failing to qualify for competition and/or forfeiture of all awards received.

Name of Project Lead

Signature of Project Lead

Date

[Link to D&S Guidelines](#)

Display & Safety Regulations

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Judging Rubrics

Scientific vs Engineering Projects

Criteria	Points	Scientific	Engineering
Research Question/Problem	10	clear & focused purpose; testable	description of practical need or problem to be solved; proposed solutions, explanation of constraints
Design & Methodology	15	well designed plan; data collection; variables identified	exploration of alternatives; identifies a solution; develop a prototype
Execution	20	systematics data collection; reproducible; was there sufficient data collected to support the conclusion	prototype demonstrates intended design; prototype tested multiple times/conditions; prototype demonstrates engineering skills
Creativity	20	demonstrates imagination and inventiveness; new possibilities or alternatives	demonstrates imagination and inventiveness; new possibilities or alternatives
Presentation Poster	10	logically organized, easy to read; graphs, charts, etc. clear	logically organized, easy to read; graphs, charts, etc. clear
Presentation interview	25	consise and thoughtful responses, demonstrates an understanding of the science relevant to the project, degree of independence; recognition of potential impacts in science/society; ideas for further research	consise and thoughtful responses, demonstrates an understanding of the science relevant to the project, degree of independence; recognition of potential impacts in science/society; ideas for further research

Senior - Engineering

I. Research Problem (10 pts.)

- ___ description of a practical need or problem to be solved
- ___ definition of criteria for proposed solution
- ___ explanation of constraints

II. Design and Methodology (15 pts.)

- ___ exploration of alternatives to answer need or problem
- ___ identification of a solution
- ___ development of a prototype/model

III. Execution: Construction and Testing (20 pts.)

- ___ prototype demonstrates intended design
- ___ prototype has been tested in multiple conditions/trials
- ___ prototype demonstrates engineering skill and completeness

IV. Creativity (20 pts.)

(A creative project demonstrates imagination and inventiveness. Such projects often offer different perspectives that open up new

possibilities or new alternatives. Judges should place emphasis on research outcomes in evaluating creativity.)

- ___ project demonstrates significant creativity in one or more of the above criteria

V. Presentation (35 pts.)

(Presentation/Interview: The interview provides the opportunity to interact with the finalists and evaluate their understanding of the project's basic science, interpretation and limitations of the results and conclusions.

If the project was done at a research or industrial facility, the judge should determine the degree of independence of the finalist in conducting the project, which is documented on Form 1C and Form 2. If the project was completed at home or in a school laboratory, the judge should determine if the finalist received any mentoring or professional guidance. If the project is a multi-year effort, the interview should focus ONLY on the current year's work. Judges should review the project's abstract and Form 7 (Intel ISEF Continuation Projects) to clarify what progress was completed this year.

Please note that both team and individual projects are judged together, and projects should be judged only on the basis of their quality. However, all team members should demonstrate significant contributions to and an understanding of the project.)

a. Poster (10 pts.)

- ___ logical organization of material
- ___ clarity of graphics and legends
- ___ supporting documentation displayed

b. Interview (25 pts.)

- ___ clear, concise, thoughtful responses to questions
- ___ understanding of basic science relevant to project
- ___ understanding interpretation and limitations of results and conclusions
- ___ degree of independence in conducting project
- ___ recognition of potential impact in science, society and/or economics
- ___ quality of ideas for further research
- ___ for team projects, contributions to and understanding of project by all members

Senior - Scientific

I. Research Question (10 pts.)

- ___ clear and focused purpose
- ___ identifies contribution to field of study
- ___ testable using scientific methods

II. Design and Methodology (15 pts.)

- ___ well-designed plan and data collection methods
- ___ variables and controls defined, appropriate and complete

III. Execution: Data Collection, Analysis and Interpretation (20 pts.)

- ___ systematic data collection and analysis
- ___ reproducibility of results
- ___ appropriate application of mathematical and statistical methods
- ___ sufficient data collected to support interpretation and conclusions

IV. Creativity (20 pts.)

(A creative project demonstrates imagination and inventiveness. Such projects often offer different perspectives that open up new possibilities or new alternatives. Judges should place emphasis on research outcomes in evaluating creativity.)

- ___ project demonstrates significant creativity in one or more of the above criteria

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- ___ logical organization of material
- ___ clarity of graphics and legends
- ___ supporting documentation displayed

b. Interview (25 pts.)

- ___ clear, concise, thoughtful responses to questions
- ___ understanding of basic science relevant to project
- ___ understanding interpretation and limitations of results and conclusions
- ___ degree of independence in conducting project
- ___ recognition of potential impact in science, society and/or economics
- ___ quality of ideas for further research
- ___ for team projects, contributions to and understanding of project by all members

Elem & JR Engineering

I. Research Problem (15 pts.)

- description of a practical need or problem to be solved
- definition of criteria for proposed solution
- explanation of constraints

II. Design and Methodology (25 pts.)

- exploration of alternatives to answer need or problem
- identification of a solution
- development of a prototype/model

III. Execution: Construction and Testing (25 pts.)

- prototype demonstrates intended design
- prototype has been tested in multiple conditions/trials
- prototype demonstrates engineering skill and completeness

IV. Creativity (20 pts.)

(A creative project demonstrates imagination and inventiveness. Such projects often are ones that are about something that the student personally cares about, have not been done hundreds of times before or frequently listed in Science Fair idea books or web. Creative projects offer different perspectives that open up new possibilities or new alternatives.)

- project demonstrates significant creativity in one or more Criteria I -III or V
- idea appears novel – at least to the student (not copied or seen repeatedly)
- idea appears to be something that student cares about

V. Board/Presentation (15 pts.)

- evidence of scientific process, understanding of basic science relevant to project
- colorful, creative and logical organization of display
- clarity of graphs, legends & graphics
- supporting documentation displayed
- understanding limitations of results and conclusions
- recognition of potential impact in science, society and planet/ world
- thought through implications, ideas for further research

Elem & JR - Scientific

I. Research Question (15 pts.)

- clear and focused purpose
- identifies contribution to field of study
- testable using scientific methods (follows rules and SRC)

II. Design and Methodology (25 pts.)

- well-designed plan and data collection methods
- variables and controls defined, appropriate and complete

III. Execution: Data Collection, Analysis and Interpretation (25 pts.)

- systematic data collection and analysis
- reproducibility of results
- sufficient data collected to support interpretation and conclusions
- appropriate application of mathematical methods for comparison

IV. Creativity (20 pts.)

(A creative project demonstrates imagination and inventiveness. Such projects often are ones that are about something that the student personally cares about, have not been done hundreds of times before or frequently listed in Science Fair idea books or web. Creative projects offer different perspectives that open up new possibilities or new alternatives.)

- project demonstrates significant creativity in one or more Criteria I -III or V
- idea appears novel – at least to the student (not copied or seen repeatedly)
- idea appears to be something that student cares about

V. Board/Poster Presentation (15 pts.)

- evidence of scientific process, understanding of basic science relevant to project
- colorful, creative and logical organization of display
- clarity of graphs, legends & graphics
- supporting documentation displayed
- understanding limitations of results and conclusions
- recognition of potential impact in science, society and planet

Judging Tips

- 30 second elevator speech
 - What you did
 - Why you did it
 - What did you discover
 - Why it is important/future implications
- Eye contact with judges
- Answer questions clearly & honestly; don't make up an answer as judges probably know the answer
- Nice school attire and comfortable shoes

Office Hours 2024

Elementary & Junior Divisions

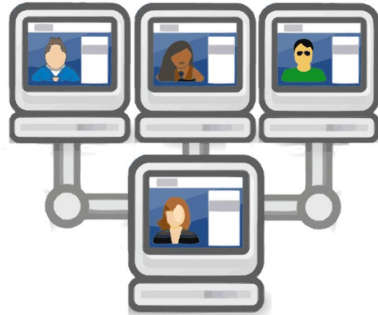
All Office Hours will be held from
from 4-5 PM on [Zoom](#)

- **Monday, March 11, 2024**

Senior Divisions

All Office Hours will be held from
from 4-5 PM on [Zoom](#)

- **Tuesday, March 12, 2024**





AZSEF

ARIZONA SCIENCE & ENGINEERING FAIR

All Registration:

<https://az.zfairs.com>



AZSEF

ARIZONA SCIENCE & ENGINEERING FAIR

AzSEF Website

www.azsef.org

Questions

