Welcome to the

Thank you for volunteering to serve as a judge!

Judging at HSEF

- Your judging will serve as the basis for deciding which student projects receive monetary awards and for Senior Division which advance to ISEF
- Please ensure that each student, leaves HSEF believing they have received a just, equitable judging experience
- Our intent is to provide students with a **positive** and **inspiring** environment so please use positive reinforcement and provide constructive criticism to help participants grow as a STEM scholars

THANK YOU in advance for your willingness to take part in ensuring a positive, educational experience for ALL

Student Projects

Projects are available for you to review before the fair when you log in to https://sefireg.org/judging

Once you receive your judging schedule, you can then focus on those specific projects.

Feel free to look over any other projects in your grade level, especially if they are relevant to your research or interests.

If you see any inappropriate material posted on the e-portfolio (i.e. student personal information) please let your Grade Level Chair know immediately.

Student e-Portfolio Expectations

The following information should be available for you to review on the judging website:

- 30 second "elevator speech"
- 7-10 slide presentation
- Quad Chart (high school)

Students may also post the optional items for you to review:

- 5 minute video presentation
- research paper
- Poster image
- data book or project log

Scoring Projects

Please bring a fully charged device to the fair.

All scores will be submitted online.

WiFi:
iuguest
Enter your own email address.
EduLink access also available

Judging Process

- You may use a judging worksheet to help with your scoring.

  Copies will be provided at the fair. Download a copy here

- The worksheet is for your own convenience. It will not be collected but do not share with students.

Hoosier Science and Engineering Fair
JUDGES WORKSHEET   PROJECT #_____
USE THIS SHEET FOR SCIENCE PROJECTS
The scales given for each section are a suggestion, but you may use your own ranking system out of 100 points.

I. Research Question (10 pts)

	5	4	3	2	1	
						clear and focused purpose that is testable using scientific methods
						identifies contribution to field of study

II. Design and Methodology (15 pts)

	5	4	3	2	1	
						well designed plan and data collection methods
						variables and controls defined, appropriate and complete
						familiarity with scientific literature in the studied field, and awareness of other approaches or theories

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

	5	4	3	2	1	
						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)

Please rank on a 1-20 scale	project demonstrates significant creativity in: subject studied and/or methodology

V. Presentation (35 pts)
     a. Poster (10 pts)

	5	4	3	2	1	
						logical organization of material
						clarity of graphics and legends; supporting documentation displayed

     b. Interview (25 pts)

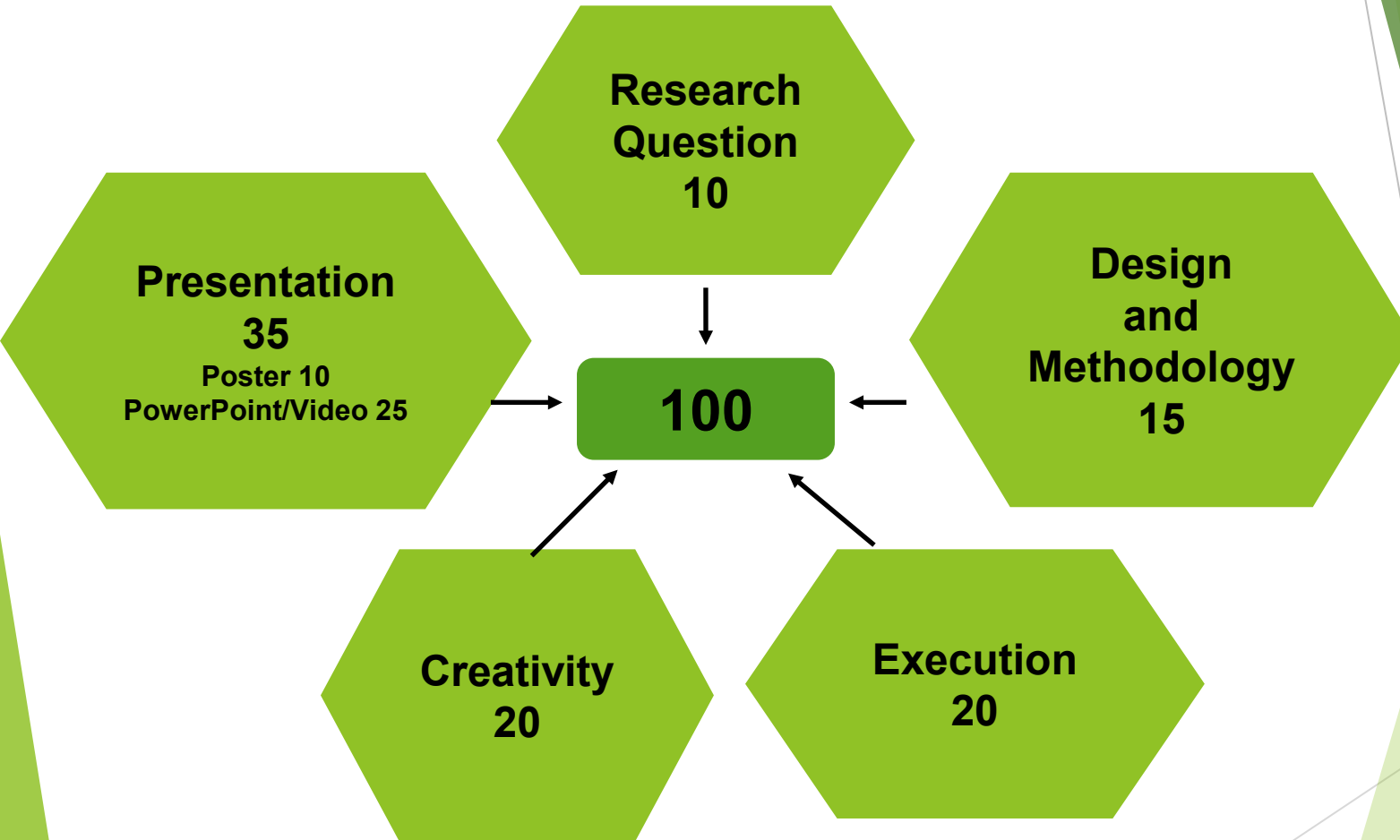|	5	4	3	2	1	
						For team projects include in your scoring the participation or lack of participation of all team members in the interview.
						clear, concise, thoughtful responses to questions
						understanding of basic science relevant to project
						understanding interpretation and limitations of results and conclusions
						recognition of potential impact in science, society and/or economics
						quality of ideas for further research

Total Score	NOTES

Once you have arrived at a total score, please complete the score scan card for this project. Bubble in the score and write the score and the project number at the bottom of the scan card (three digit code) on the score card.

Judging Guidelines - Science
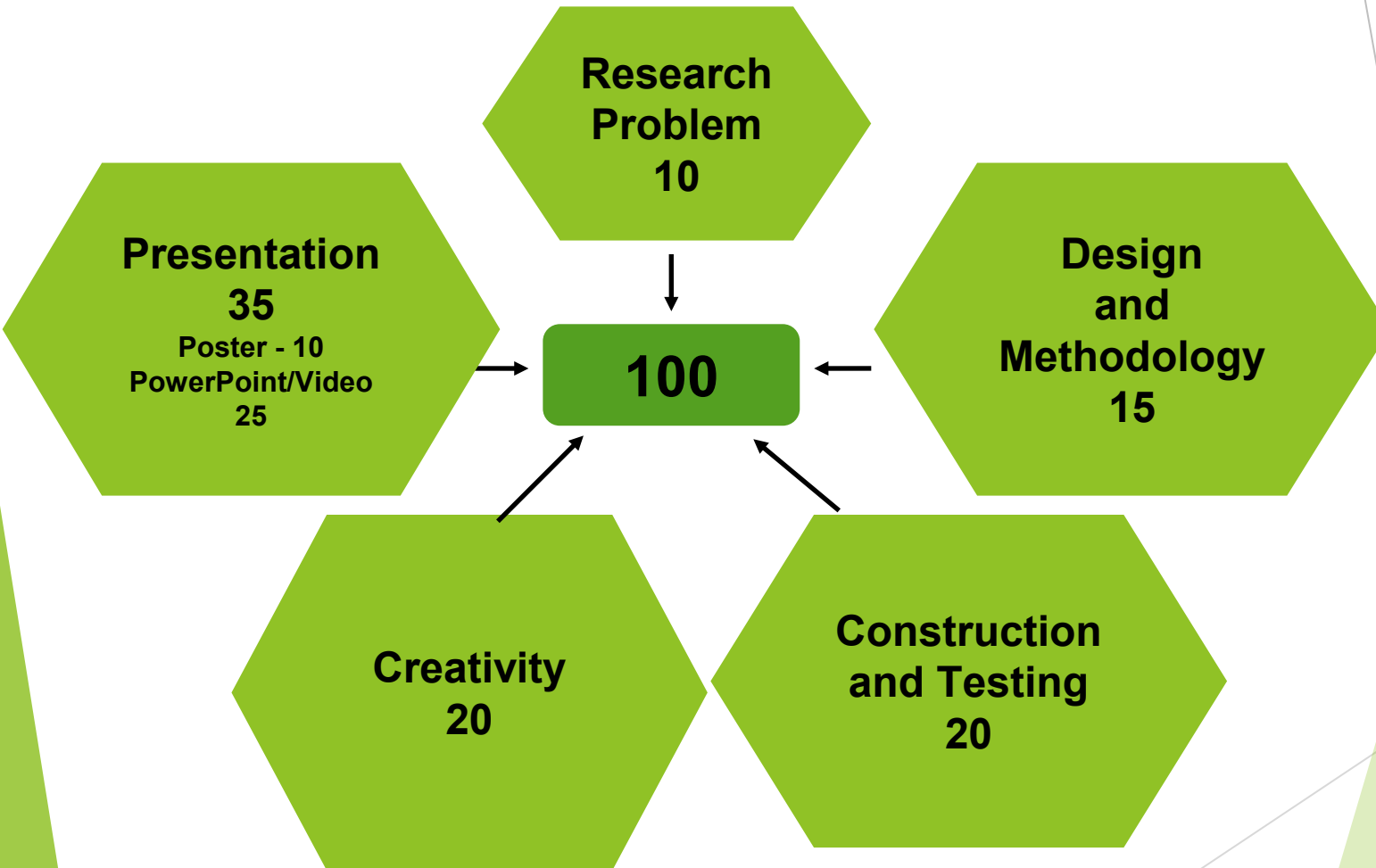(as on the provided Judges Worksheets)

Research Question 10

Presentation 35
Poster 10
PowerPoint/Video 25

Design and Methodology 15

100

Creativity 20

Execution 20

Suggested point value breakdown, but
all final scores must be out of 100 total points

Judging Guidelines - Engineering
(as on the provided Judges Worksheets)

Research Problem 10

Presentation 35
Poster - 10
PowerPoint/Video 25

100

Design and Methodology 15

Creativity 20

Construction and Testing 20

Suggested point value breakdown, but
all final scores must be out of 100 total points

Judging Process – Score Entry

- Enter the following in your web browser:

    http://sefireg.org/judging

- Login using the email address you used to apply as a judge

    Current password is 2025free

- If you have a problem logging in or submitting your scores, please speak with your grade-level coordinator or co-chair.

Judging Process – Score Entry

- Only interview the projects assigned to you
  - Student free periods must be respected!
- Only discuss projects in the assigned caucusing room, away from students.
- Scores must be entered throughout the day.
  - We will be monitoring the entry of scores to see if students are being properly interviewed.

Please do not wait until the end of the day to enter all of your scores!

Judging Schedule

Project #0
The Effects of Antioxidants on the Neuromuscular Function of C. elegans
## Prashanth, Neha
Vohra, Amil

School: Valparaiso High School- change for 2023

Grade: 12

Category: MCRO

Abstract: Caenorhabditis elegans (C. elegans), is a nematode widely used in neurobiology and aging studies. They provide a valuable insight into the effects of external compounds on motor behavior and overall health. This study investigates the impact of antioxidants on the thrashing rates of C. elegans to explore their potential influence on neuromuscular function. Thrashing rate is defined as the number of times the body bends per minute in a liquid medium. This serves as a measure of the worms' motor activity and vitality. Experimental groups were exposed to the antioxidants (ascorbic acid, turmeric, and ginger), while the control groups were maintained in conditions without treatment. By comparing thrashing rates across the groups, this experiment aimed to assess whether antioxidants improve or hinder neuromuscular performance in C. elegans. This project offers implications for understanding antioxidant effects on cellular processes which may be relevant to aging and neurodegenerative disease research in higher organisms.

Elevator Pitch Video:

A — Amil Vohra & Neha Prashanth Science Fair

Share
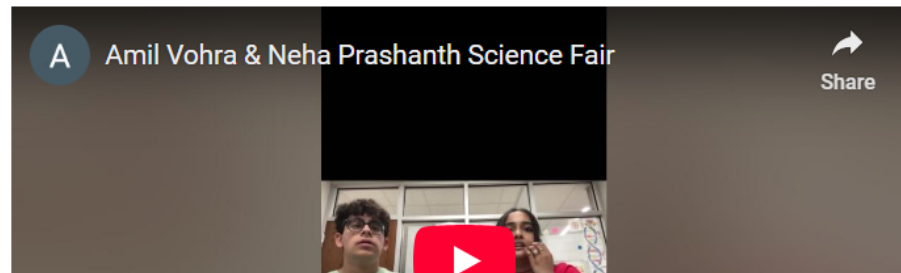
Period 4

Booth: 213

Caucusing Information

Judging Process

- All judging assignments and caucusing will be by Grade Level
- Each judge will have a number of projects to judge
- Each judge is welcome to review all projects in grade level
- Grade Level Chairs will facilitate caucusing to select the top projects in each Grade Level

Caucusing

- Many projects have similar scores. This presents a problem when trying to determine which participants would benefit from exposure to the ISEF environment.

- Caucusing is an attempt at forming a consensus on
  - The scientific merits of the closely scored projects
  - Which participants show the potential for performing strong science or engineering accomplishments in the future.

Caucusing

- Keep the discussion focused on one project at a time.
- A judge must be recognized by a co-chair before speaking.
- Judges should minimize repetition of comments.
- The final award selection is made by majority vote.

Judging Score Review

Score Reporting - Grade 9

Booth	Project	Student	Interviews	Average Rank
			2	3
			2	3.5
			2	4
			2	4.5
			2	5
			2	5.5
			2	5.5
			2	6
			2	9
			2	9

Judge Tips

Tips: General

- The project abstract is a valuable source of information regarding the student's project and research

- Some students may have worked on a research project for more than one year (Continuation). However, **ONLY** research conducted since the last Intel ISEF is to be evaluated during judging and caucusing

- Compare projects only with those competing at HSEF and not with projects seen in other competitions or scholastic events

- **Remember that ALL judging results are confidential, the top projects will be announced at the awards ceremonies**

- **Please limit your discussions of the projects to the Judges Caucus Rooms and DO NOT discuss in hallways.**

- **If you see someone without a Badge in the caucus arear, ask them to leave the are and report the incident to co-chair**

Tips─ Student's work

- It is important that you determine how much of a project's work can be attributed to the student versus contributions (intellectual and resources) from other individuals (parents or mentors) or institutions

- Do not judge a project only on level of sophistication but rather judge the project on the merit of the science presented and the student's ability to answer your questions and explain their project and results

- The interview should be interactive with the goal of determining if the student has a knowledge of the project consistent with having performed the work

Tips– Assigning Scores

- The score sheets are a suggested way for you to place values on the various aspects of the project

- You are free to adjust the overall score if you feel the rubric is too rigid, the overall score must be from 100 to 0

- You should not be giving projects the same exact score, this could affect the rankings

- When assigning score, be careful not to **"box yourself in"** so that you can score future projects in between the ones that you judged earlier in the day

- **Average judge rankings** will be used to select the top projects so your relative ranking of projects is what counts

- If you need to adjust a score, please see one of your Judging Division Co-Chairs

Conflicts of Interest

- If you have any real or potential conflict of interest with any student or project in your Grade Level, let your Judging Division Co-Chair know immediately!

- These include:
  - → mentor or teacher relationship with a student in your Grade Level
  - → parent or relative of a student in your Grade Level

Conduct with Competitors

- Treat the competitors as **young professionals** - but remember they are neither college students nor highly trained scientists

- ALWAYS speak in a **positive, encouraging** tone – do not be critical, demeaning, or discouraging

- At the end of your interview, thank the student, and leave them with a positive note (but without indicating your scoring of the project)

- Examples: "interesting project" "good concept" or "thank you for telling me about your project"

*"**Reward the best, encourage the rest.**"*

Conduct with Finalists

- **Inappropriate conduct with the students will not be tolerated**

- A copy of the ethics statement and policy that each of you signed upon applying to judge is available for review

- As adults we all bear responsibility for monitoring our own behavior and those around us

- If you want to have some contact with a student after the fair, all such communications must happen through SEFI to the teacher or parent

If you have a concern or see an issue developing, please report them to your Judging Division Co-Chair

Thank you for serving as a judge at HSEF!

Please email the Co-Chairs or your Grade Level Chairs if you have any questions.