



# 2022 STATE SCIENCE DAY Judge Orientation

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# Judge Orientation Goals:

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- What is expected of the judges; what to look for within the student projects
- Judging Process
- Judging Ethics



# What do we expect from Judges?

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*We expect judges to evaluate student research projects on the basis of standards using our criteria and **to encourage the next generation of scientists in Ohio.***



# Put the time in...show up to judge!

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- The students have worked very hard to persevere and get to this point...please give them the time they deserve
- We understand that life happens...if you can no longer judge, please let us know ASAP
  - Thank you for not “ghosting” us
- Pace yourselves! Don't wait until the last minute to judge



# What to look for as a Judge

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1. Identified problem and hypothesis or technological design statement
2. Detailed Research Report & Abstract
3. Oral Presentation of information they discovered and learned



# Engineering Design Clarification

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- Original software/algorithm development is considered Engineering Design, **if that software is the purpose of the project.**
  - If the goal is for instance, to test human subject intelligence or other mental traits, then that would be considered Behavioral Science and the software just a means to an end.
- Physical prototypes designed, built and tested are Engineering Design, **if the prototype is the purpose of the project** (better mousetrap).
- Equipment built to test (strength, durability, etc.) of various materials is **NOT** engineering design, it is material science.
  - Testing which type of bait works best in that mousetrap could be animal science.



# Detailed Research Report & Abstract

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1. Title
2. Abstract
3. Introduction (Relevant Background Research you chose to include. Sources must be cited)
4. Methods and Materials (Step-by-step procedures. Equipment & materials listed)
5. Results (Include data collected. May be text, graphs, tables, photos, diagrams)
6. Discussion
7. Acknowledgments (May include in written Final Report)
8. Literature Cited or References





# Oral Presentation

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- Student summarizes research ~ 10-15 minutes
  - Most will be using a ppt or Google Slides
  - CAN have a tri-fold display board though
- Unique experience because of the virtual nature
  - ALL students have participated in the District Science Day
    - Students were waived of attending a local fair prior to the District Fair
- Please score for quality of the presentation...**not quality of the filming**



# You will hear answers to the following prompts...

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1. What interests you about this topic and where did you get the idea for your project?
2. If you found the idea in published research, did you modify the idea and if so, how?
3. What question are you trying to answer and how did you go about answering it?
4. What did you learn about the science behind your project before and during the experiment?
5. What did you learn from the data?
6. If you had to do it again, what would you change?
7. What improvements would you make?
8. What's next? Continue the project? Go on to a different topic?
9. How can your project help people/make the world better?
10. IF ENGINEERING DESIGN: What design problem are you trying to address and how did you decide to go about addressing it?
11. IF ENGINEERING DESIGN: What did you learn about the engineering and previous designs for your project before and during the process?



# Technical Report Clarification vs. Meta-Analysis Project

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- Every project must complete background research which means students might use information in their project collected from several sources. That is **NOT** Meta-analysis.
- For a project to be considered meta-analysis, students must compile actual data collected from multiple previous studies and statistically analyze the data to answer a different question than the previous researchers were addressing, or look at it in a broader scope.



# What to do if it doesn't fit?

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- Some of the projects are neither engineering design nor are the meta-analysis
  - Score the project as it stands!
  - It may still be a great project
  - They could lead to continuations of projects for the next year



# Judging Process

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# JUDGING RATINGS ...

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- **Maximum of 40 points for ALL projects**
- **Sample scorecard provided (may want to print out)**
- **All comments go into the computer program...not on paper, not on Youtube**
- **No second judge to confer with; go with gut**
- **Stay away from 34/35 please**
- **Do NOT penalize them because you couldn't have a conversation with them or ask them questions**
- **Do not "over score"**



# Comments Need to Match the Evaluation

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Please provide them thorough feedback.

- Explain in detail what they can improve/expand upon for next year
- Low scores without adequate comments to justify the score is not acceptable
- It goes without saying, but...be kind
- Think about a comment for each section of the rubric; 4 total sentences at least!



# Judging Ethics

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- Listen carefully to students' complete presentation (they were told max 15 minutes...up to you if you go on after that)
- Be exceptionally courteous to all students
- Judge students against CRITERIA not against other students
- **Consider age and grade level**





# Judging Ethics

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Please contact the Ohio Academy of Science Office Immediately if:

- You know the student
- The project is out of your expertise or appears to be assigned in the wrong topic category
- There are language issues/barriers that impair communication
- Lack of time to devote to student
- Any reason/uncomfortable

\*\*\*See Academy contact information on last slide\*\*\*



# AFTER YOU FINISH

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- Submit form...make sure everything is filled out correctly
- Pace yourself!
- Should spend around 20-30 min/project (watching video, reviewing report and making comments/filling out online form)



# Simply Said...Thank you!

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- This could **NOT** be possible without our judge's dedication to the program. We know that this is unprecedented times and we appreciate **YOUR** time.
- Please let us know about the experience when we send out follow up surveys. If you have an amazing idea that would enhance this program for students, please let us know!
- Join us next year at local, District and State competitions.



# Need help quick???

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**Contact:**

**[info@ohiosci.org](mailto:info@ohiosci.org)**

**Office phone: (614) 389-2182**