

Uwchlan Hills 2020 Science Fair Information Packet



Important Dates

December 4th, 2019: Paperwork Due!

Remember, you may not begin your project until you have received approval to do so!!

Friday January 17th, 2020: Science Fair night!



For Questions please contact:

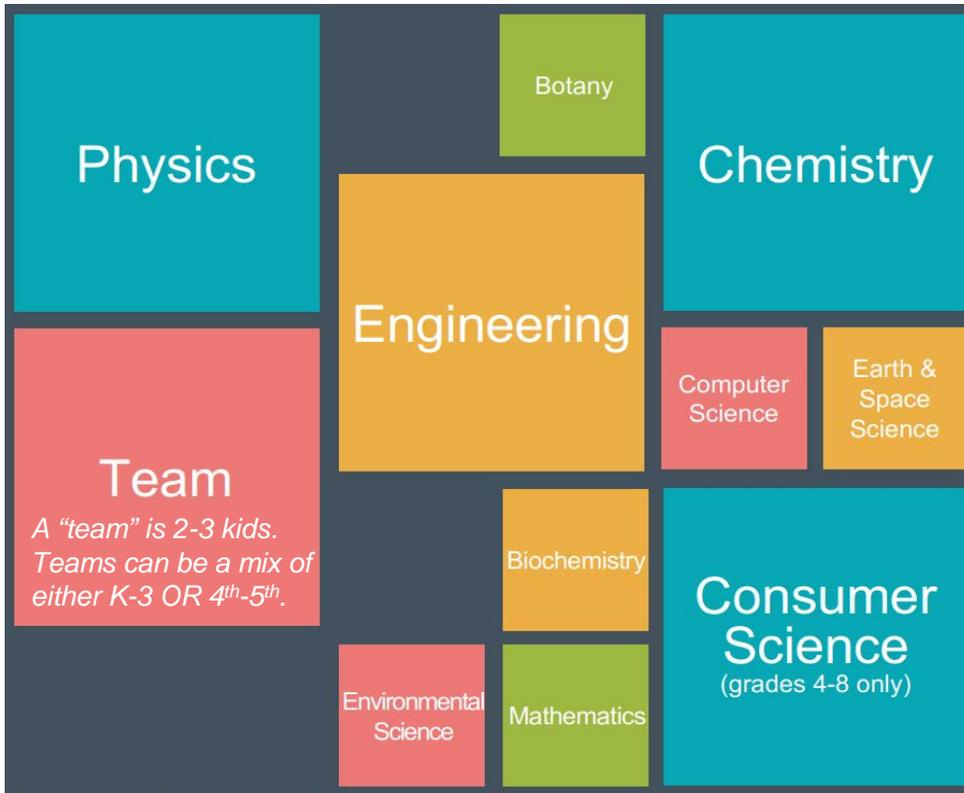
Kathy Rybinski : kathyrybinski@gmail.com

Christina Bucci: cbucci@dasd.org

2020 ISEF International Rules and Guidelines Website:

<https://student.societyforscience.org/international-rules-pre-college-science-research>

Project Categories



We will not be accepting projects that look at microbiology, animal research, human health or behavioral research! *Please talk to us if this is an issue!

Paperwork: Due December 4th!

* Paperwork can be turned in to your homeroom teacher

All Projects need to complete and submit the following paperwork:

- 1) Research Plan
- 2) Checklist for Adult Sponsor*
- 3) Student Checklist (1A)*
- 4) Approval Form (1B)*

***All official forms have yellow highlighted sections. Please fill out these sections as completely as possible!**

Approval Form (1B)
A completed form is required for each student, including all team members.

1. To Be Completed by Student and Parent/Guardian:

a. Student Acknowledgment:

- I understand the risks and possible consequences of this research.
- I have read the Intel ISEF Rules and Regulations and agree to abide by them.
- I have read and will abide by the Intel ISEF Code of Ethics.

Student researchers are expected to maintain the highest level of integrity. Any misconduct are not condoned at any level of plagiarism, forgery, use or presentation of false information. Projects that fail to qualify for competition in the Intel ISEF competition will be disqualified.

Student's Printed Name: _____

b. Parent/Guardian Approval: I have read and understand the Student's Research Plan/Project Summary. I agree to support my child's participation in the Intel ISEF competition.

Parent/Guardian's Printed Name: _____

Checklist for Adult Sponsor (1)
This completed form is required for ALL projects.

To be completed by the Adult Sponsor in collaboration with the student researcher(s):

Student's Name(s): _____

Project Title: _____

1. I have reviewed the Intel ISEF Rules and Guidelines.
2. I have reviewed the student's completed Student Checklist (1A) and Research Plan/Project Summary.
3. I have worked with the student and we have discussed the possible risks involved in the project.
 - Humans Potentially Hazardous Biological Agent
 - Vertebrate Animals Microorganisms DNA
5. Items to be completed for ALL PROJECTS
 - Adult Sponsor Checklist (1) Research Plan/Project Summary
 - Student Checklist (1A) Approval Form (1B)
 - Regulated Research Institutional/Industrial Setting Form (IC) (when applicable; after completed experiment)
 - Continuation/Research Progression Form (7) (when applicable)

Student Checklist (1A)
This form is required for ALL projects.

1. a. Student/Team Leader: _____ Grade: _____
Email: _____ Phone: _____
- b. Team Member: _____ c. Team Member: _____
2. Title of Project: _____
3. School: _____ School Phone: _____
School Address: _____
4. Adult Sponsor: _____ Phone/Email: _____
5. Does this project need SRC/IRB/IACUC or other pre-approval? Yes No **Tentative start date:** _____

What you need for your Science Fair project!



1. A science research notebook or log book

In a notebook or a binder, keep track of what you do in your experiments every day. It will help you organize your background research and will let you record the data as you go.

Your research notebook should be displayed at the fair with your poster!

2. A poster board

This is how you will show your research to everyone at the fair!

3. Practice talking to the judges!!

Be able to explain your project and answer questions. Make sure you can tell the judges **WHAT** you did and **WHY** you did it!

Notes about judging:

- Our scoring is divided into two parts; the interview portion and the poster portion.
- Every poster is judged without the scientist present by multiple judges, so each poster needs to be able to explain the project.
- Every scientist will then be interviewed by multiple judges.
- The scores for each category range from 0 to 4, with 0 being “no evidence present” and 4 being “superior”.
- Scoring is broken down into subcategories: Student interview, Laboratory Notebook, Skill (evidence of hands-on involvement), Overall Scientific process, Written Communication, and Overall Board Presentation.

Helpful Websites:

<http://www.stevespanglerscience.com>

<http://www.sciencebuddies.org>

<http://www.teacherspayteachers.com>

<http://www.scienceproject.com>

<http://www.scienceprojectideasforkids.com>

<http://www.candyexperiments.com>

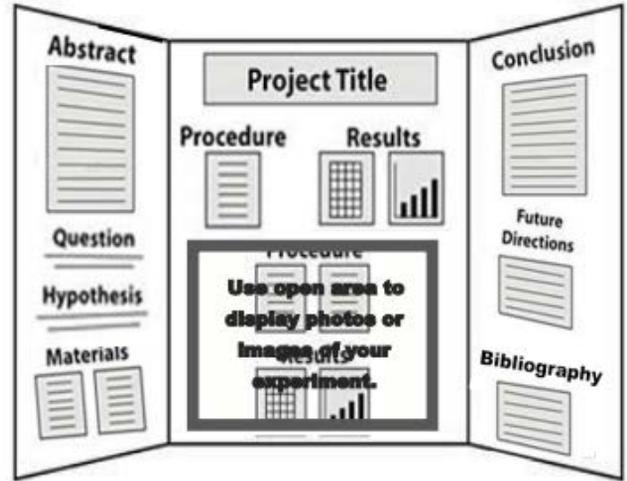
Your Poster Board

A poster board is how you will show your research to everyone at the fair!



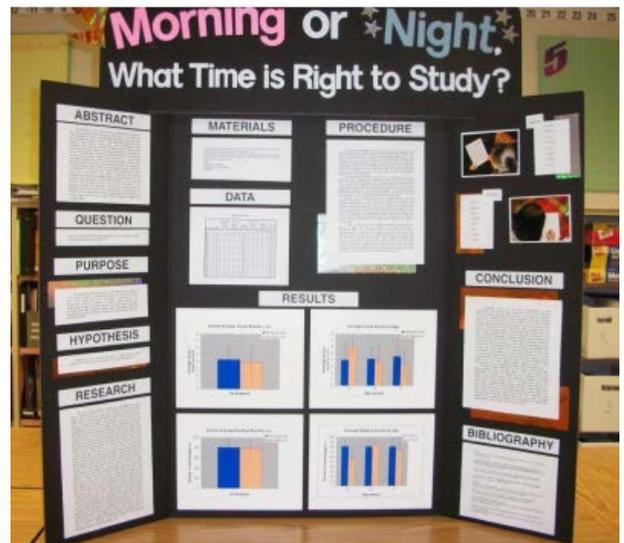
Your display should contain the following sections:

1. Title
2. Abstract
3. Introduction or Purpose
(*include some background info!)
4. Hypothesis
5. Materials
6. Procedure
7. Results and Data Analysis
8. Conclusion
9. References
10. Logbook (on table)



Tips for your display board:

1. **All projects (all grades) MUST HAVE an abstract!!**
2. Your name should not appear on the board.
3. Any photographs should be of the process NOT the people. Do not include faces – even your own.
4. Your title should be large enough to be seen from a distance.
5. Your board should be able to explain itself without you there.
6. Use graphs, charts and tables to present your data.
7. Use colors to draw viewers in.
8. Avoid cluttering your board or leaving large open spaces.
9. Focus on neatness and clarity.
10. Check your spelling!!
11. Adapt the presentation for the age group.



For 4th and 5th Graders

Those projects placing 1st through 5th place in our fair will be able to move onto the CCIU sponsored Jonas Salk Fair.

*Note: The date of the fair is **Wednesday** March 18th, 2020 which means your child will miss school that day (excused absence).*

Location of the fair: Parkesburg Point Youth Center

Timing: 9:00am-1:30pm **AND** 6:00-7:00pm

The rules for the Jonas Salk Fair for the poster boards are strict!

The following items are required for student projects:

- **Each student is required to display a project notebook showing a chronological accounting of his/her project.** Having a project notebook increases the overall score.
- **An abstract of 250 words or less **must** be displayed vertically on the display board in the upper left corner or in a document frame near the display.**
- **The student's name, address, or photograph may not be visible on the project board, logbook or other materials.**

The following items are not permitted on the project board or at the student's display:

- 1) Living organisms, including plants
- 2) Soil, sand, rock, and/or waste samples, even if permanently encased in a slab of acrylic
- 3) Taxidermy specimens or parts
- 4) Preserved vertebrate or invertebrate animals
- 5) Human or animal food **as well as food wrappers**
- 6) Human/animal parts or body fluids (for example, blood, urine)
- 7) Plant materials (living, dead, or preserved) that are in their raw, unprocessed, or non-manufactured state (Exception: manufactured construction materials used in building the project or display)
- 8) All chemicals including water (Projects may not use water in any form in a demonstration.)
- 9) All hazardous substances or devices, for example, poisons, drugs, firearms, weapons, ammunition, reloading devices, and lasers
- 10) Items that may have contained or been in contact with hazardous chemicals
- 11) Dry ice or other sublimating solids
- 12) Sharp items (for example, syringes, needles, pipettes, knives)
- 13) Flames or highly flammable materials
- 14) Batteries with open-top cells or wet cells
- 15) Drones or any flight-capable apparatus must have the propulsion power source removed
- 16) Glass or glass objects unless deemed by the Display and Safety Committee to be an integral and necessary part of the project
- 17) Any apparatus deemed unsafe by the Scientific Review Committee, the Display and Safety Committee, or Society for Science & the Public (for example, large vacuum tubes etc.)

Research Plan

Name _____

Grade _____

A. The Problem: The question guiding this science fair experiment is:

B. The Hypothesis (helps to write in "if...then..." format)

C. Why are you interested in this question?

D. The Materials that will be used for this project

Research Plan; continued

- E. The Procedure: Describe what you plan to do.
For grade 5: What is your independent variable (the factor that will be purposefully changed)? What is your dependent variable?
- F. What are the expected results of your experiment? How will you measure or record the results of your experiment?
- G. Resources (please name at least 2)

(highlighted writing is an example only)

- A. The Problem: The question guiding this science fair experiment is:
What brand of fertilizer will make plants grow the tallest?
- B. The Hypothesis (helps to write in “if...then...” format)
If Miracle Grow, Target brand and Frank brand fertilizer are used, then Miracle Grow will make the plants grow the tallest because it has better ingredients.
- C. Why are you interested in this question? Why is this research important?
One example of why this research is interesting is because if the best fertilizer is found farmers could maximize their harvests and their profit by picking the best one for their crops.
- D. The Materials that will be used for this project
3 brands of fertilizer
40 ferns
heat lamps
soil
watering can/water
Eyedropper
- E. The Procedure: Describe what you plan to do.
For grade 5: What is your independent variable (the factor that will be purposefully changed)? What is your dependent variable?
40 total plants will be divided into 4 groups; a Miracle Gro group, a Target brand group, a Frank’s brand fertilizer group and a control group (no fertilizer).
Fertilizer will be added every 2 days and growth recorded every 2 days (height in centimeters).

The dependent variable is the height of the plants. The independent variable is the brand of fertilizer.
- F. What are the expected results of your experiment? How will you measure or record the results of your experiment?
I expect the results to show that Miracle Gro fed plants will grow taller than any of the other groups. I will show this by comparing the heights of the different groups of plants, measured with a ruler.
- G. Resources (please name at least 2)
www.imaginaryfertilizerreference.com
Imaginary fertilizer handbook, by Emma Gardner. 1996.