

# SCIENCE FAIR

## 2022-23



### Purpose

The purpose of my experiment was to test for bias toward academics or athletics among middle school students, high school students, and parents of these students using the IAT (Implicit Association Test).

### Hypothesis

I hypothesized that students would have a bias towards athletics which would be strongest in the high school population. However, I predicted that adults would have a stronger academic bias.

### Background

The Implicit Association Test is a computer-based test to determine implicit bias, an automatic bias based on subconscious attitudes. The IAT is designed to detect biases unknown or unacknowledged by the subject. The IAT requires that the person taking the test make a series of rapid judgments. The IAT measures not only the correctness of the association but also the time necessary to make them. The IAT tests for implicit bias by comparing both the latency and correctness of association between 2 target concepts and attributes. The results are run through an algorithm called the Improved Scoring Algorithm to find the D value, which determines the level of bias on the IAT. The Improved Scoring Algorithm is included within the IAT and measures the D value for each subject. The IAT can be individualized to test for a variety of biases and has been used widely to test for racial bias. The IAT has also been used to detect bias between homo and heterosexuality, fat and thin people, and much more. The IAT was first developed at the University of Washington by Greenwald, et al. and is now available for research purposes.

### Abstract

Abstract text describing the experiment, including the purpose, hypothesis, background, and results. The text is partially obscured by the poster's design and other elements.

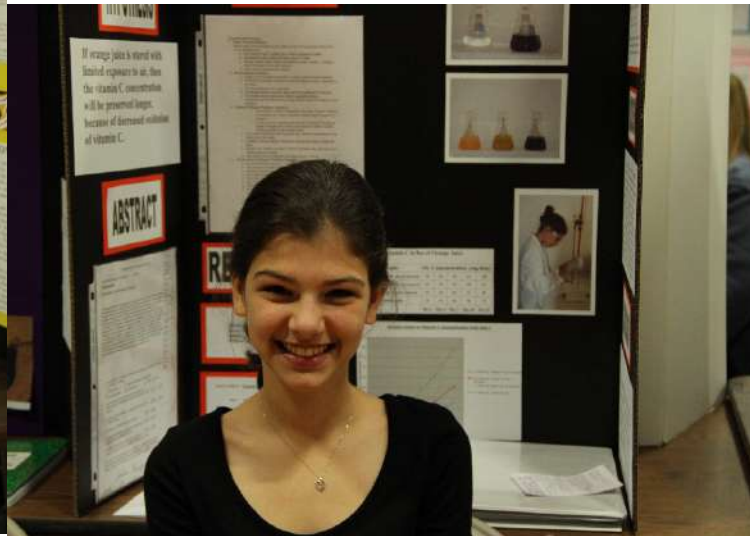
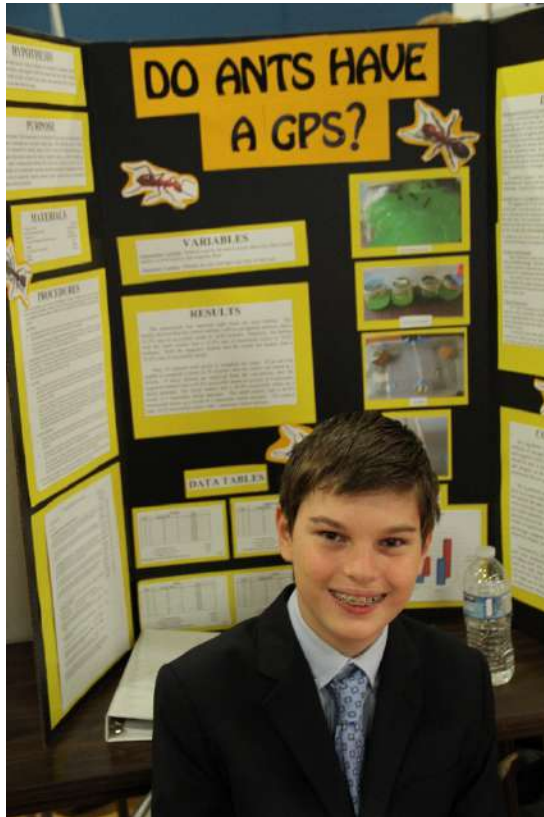


The Landrum Middle School Science Fair is affiliated with:

**The St. Johns County Science Fair**

**Florida State Science and Engineering Fair (SSEF)**

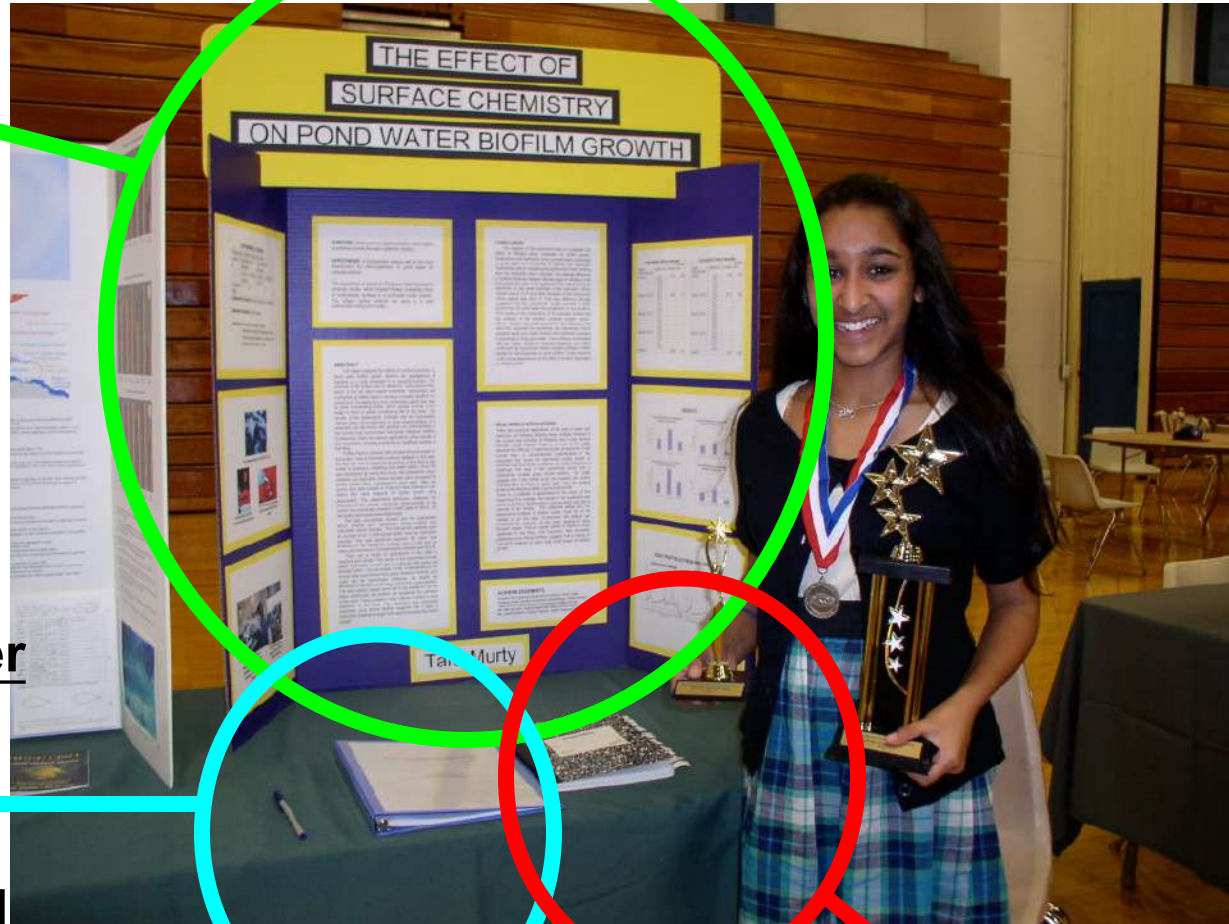
**Intel International Science and Engineering Fair (ISEF)**



# Parts of the Science Fair Project

Backboard –  
Presents  
your entire  
experiment

Project Binder  
Contains  
paperwork,  
background  
research, and  
project report.



Project Journal - A diary of your  
project. A record of everything you  
did.

# Project Journal

**EVERY** student needs to keep a project journal  
**EVERYTHING** you do should be recorded in  
your project journal (not just your  
experimental data).

**DATE** every entry – extremely important!!!

Do **NOT** tear out pages, use white out, or scribble out mistakes.

- Draw ONE line (~~mistack~~) through any mistakes.

Your journal should document the process of selecting a topic,  
background research, rough drafts of your Research Plan, your  
data – **EVERYTHING!** -- **START MAKING ENTRIES TODAY!**



# Sample Entry

08/23/22

**Attended first Science Fair meeting. Discussed project components and met Mr. Anzelmo.**

**Will need to visit science fair website:**

**<http://www.lms.stjohns.k12.fl.us/sciencefair/>**

**My first topic idea deals with methods to reduce plastic consumption by using...**

# What are the Judges Looking For?

Projects that:

- Are Meaningful
- Have real world applications
- Have a clear purpose
- Solve a real-world problem
- Address a issue in your community
- Are challenging

Steer clear of commonly-done projects with obvious outcomes (like ones you find on internet sites like [ScienceBuddies.com](http://ScienceBuddies.com))

Models and demonstrations, while educational, are *not* Science Fair projects!

**Students often develop projects in:**

**Animal Sciences**

**Behavioral and Social Sciences**

**Biochemistry**

**Medical and Health Sciences**

**Chemistry**

**Earth and Environmental Sciences**

**Engineering**

**Environmental Engineering**

**Materials Science**

**Mathematics**

**Microbiology**

**Physics and Astronomy**

**Plant Sciences**

# Where Do I Begin?

**Topic selection is the hardest part!**

**Use imagination, thoughtfulness, independence, and diligence.**

**Pursue topics that interest you.**

**Use current events to inspire you.**

**Address questions of local or regional concern.**

**Try to answer an unanswered question, solve a problem, invent something, or improve something.**



# Can I Start Experimenting?

**NO**

**You must first:**

- 1) Conduct background research and create a bibliography**
- 2) Create a detailed Research Plan**
- 3) Complete all of the Official ISEF forms needed for your project and receive project approval**

**These tasks must be completed BEFORE any experimentation can begin!!!**

**Winning students can advance to the St. Johns County Science fair and the Florida State Fair, and potentially win monetary awards and college scholarships!**

# What Next?

- 1. Get a Project Journal and start making entries.**
- 2. Visit the Landrum Science Fair website and familiarize yourself with upcoming due dates**
- 3. Start looking for sources of background information for your project, which is our topic next week!**

# What are the Judges Looking For?

Your project should:

Use quantifiable (measureable) variables.

Have measurable results (time, distance, capacity, temperature, frequency, changes in rates, scale rankings.....)

Product tests should be avoided unless you test the chemical or physical properties of specific ingredients.

\* Your project must address why there may be a difference in the effectiveness between products based on chemical or physical properties.