



THE DISTRICT

YSLETA INDEPENDENT SCHOOL DISTRICT

DIVISION OF ACADEMICS

PARENT AND STUDENT SCIENCE FAIR PACKET 2018-2019

SECONDARY SCIENCE FAIR



FORWARD

Everything is science!

Every student represents a voice of tomorrow. By completing science fair projects, students learn how to share that voice in a way that can be clearly heard and understood.

The annual science fair gives students the chance to answer the question:

“How can I use the scientific method (or engineering design process) outside of the classroom?”

These hands-on, student guided investigations allow students to gain, organize, apply, and convey knowledge about the world within which we live.

Science fair projects are integrated - meaning that students have to draw upon the skills they’ve learned in social studies, mathematics and English/Language Arts while completing the project.

These types of projects help students see how everything they learn in school is connected. The project also gives students the chance to understand the world around them, and to see how they can affect the world. Every great idea starts with wonder.

This handbook is designed to provide assistance and guidelines to teachers, students, and parents who are going to participate in the Ysleta ISD Secondary Science Fair. This handbook provides information on the rules/regulations, forms, and submission deadlines.





GOALS

The Ysleta ISD Secondary Science Fair's Goals are to:

- Demonstrate how science and investigation is part of our world.
- Motivate and stimulate interests of in the fields of science, technology, engineering, and mathematics, or unique applications of those fields (including the arts).
- Recognize outstanding effort and investigative achievement by through science fair projects.
- Provide guidance and an educational experience for all students.
- Foster a growth mindset within students as they confront challenges.

I have a **GROWTH MINDSET!**





District Task Timeline

- Jan. 11, 2019** **Deadline for YISD Secondary Science Fair Registration through Campus Science Fair coordinator.**
*Registration spreadsheet will be e-mailed to campus coordinators in December.
- Jan. 25, 2019** **YISD Science Fair Registration & Setup 4:30-6:30 P.M. on Friday, Mission Rm.**
All coordinators must attend to assist.
- Jan 26, 2019** **YISD District Science Fair: 8:00 A.M. – 1:00 P.M. YISD Ysleta Rm.**
Awards Ceremony 2:00-3:00 P.M. in the YISD Theater
All campus science fair coordinators must attend to assist.
- Feb. 8, 2019** **Sun Country Regional Science Fair Deadline**
Finalize your students advancing to the regional fair on ScienceFair (online).
Students may also make any necessary adjustments to the display board during this time and over the holiday break.
- Mar. 1, 2019** **Sun Country Regional Science Fair Registration & Setup 4:30-8:00 P.M.**
Pebble Hills High School
All campus science fair coordinators must attend to assist.
- Mar. 2, 2019** **Sun Country Regional Science Fair (Pebble Hills High School)**
All coordinators must attend.
- ! 3/12** **Texas Science and Engineering Fair Student/Parent Meeting at Ysleta ISD Central Office 9600 Sims.**
5:00 P.M. Students, parents, and coordinators must attend – will e-mail location.
- Mar. 29-30, 2019** **Texas Science and Engineering Fair Texas A&M College Station, Texas**
Kyle Field
- May 12-17, 2019** **Intel International Science and Engineering Fair in Phoenix, Arizona**



Campus Task Timeline

Oct. 1-5, 2018

Research! Get Ideas! Get Inspired! Get Creative!

Receive pertinent information on science fair project. Begin to research topic ideas. Choose a topic or ***problem** to investigate. Make a list of resources. Select your reading materials.

Collect research

Review books, articles for additional ideas. Begin preliminary **investigations**; complete initial research. Contact and interview experts for more information. Decide how to set up your investigation or experiment. Start a bound or digital notebook for data collection. Date each entry and each page. Locate **5 minimum references** for project.

Tasks:

1. Problem/Question
2. Research Materials
3. Hypothesis "If...then...because..."
4. **Science Fair Proposal Due October 5, 2018**

Oct. 8-19, 2018

Gather materials

Begin purchasing or acquiring the **materials** that you will need. Collect experiment materials and learn to use any equipment, apparatus you need. Keep progress current in your bound notebook. Decide if additional material from outside sources are needed. Check with experts contacted earlier as needed. Begin preparing signs, titles, and labels for display.

Begin Experimentation

Identify the **variables** in the investigation. Be able to identify your **independent variables**, **dependent variables** and **control variables**. Variables must be measurable. Set up your **experiment**. Make **observations** before, during, and after the experiment. Complete your experiment at least 3 TIMES or more; record the **data** from each **trial** in a **table** or **chart**. Be sure to take lots of photos of your experiment.

Organize your information.

Continue making observations, recording notes and entering data into your bound notebook. Begin **analysis** of the data collected. Begin designing charts, graphs, and other visual aids for your project paperwork and your display. Work on the Research Plan. Be sure to include the following along with the first 5 references.

Tasks:

1. Rationale
2. Hypothesis/Engineering
3. Materials
4. Procedure
5. **Teacher approval due October 19, 2018**

Oct. 22-Nov. 28, 2018

Complete Scienteer requirements, experimentation, and display board.

Plan the layout of your display board. Check spelling, grammar, and punctuation on display board.

Tasks:

1. Data analysis
2. Attachments
3. Bibliography
4. Research Location
5. Project Summary

Nov. 26-Dec. 17, 2018
Jan. 7 – Jan. 10, 2019

Campus Science Fair

Finalize submissions for Ysleta Secondary Science Fair. Submit to campus coordinators by January, 11, 2019

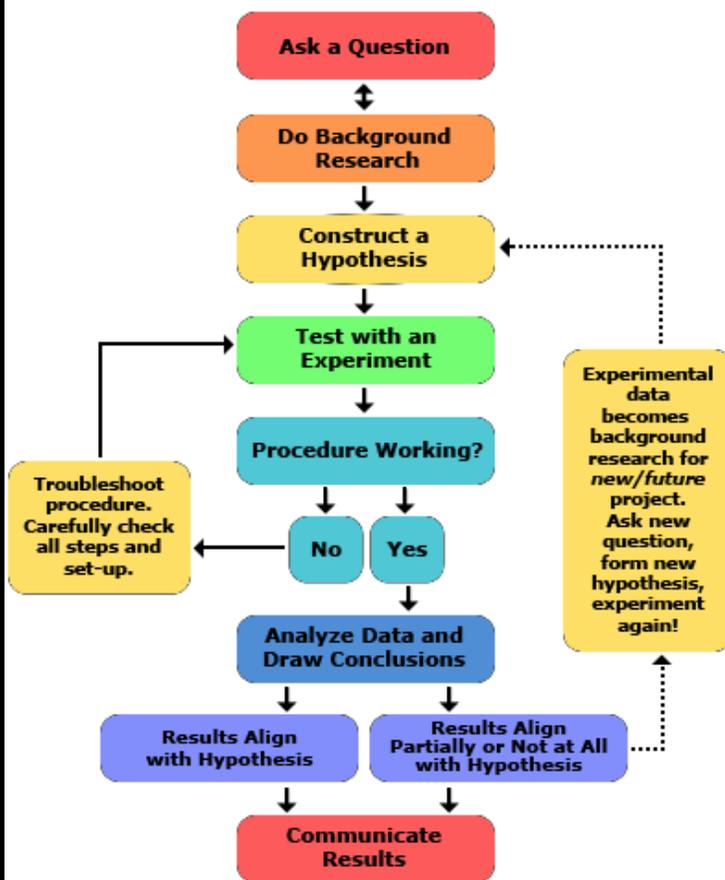
* **Underlined terms** are vocabulary essential to the science fair project. Students must become familiar with these terms and be comfortable using them throughout their presentations.



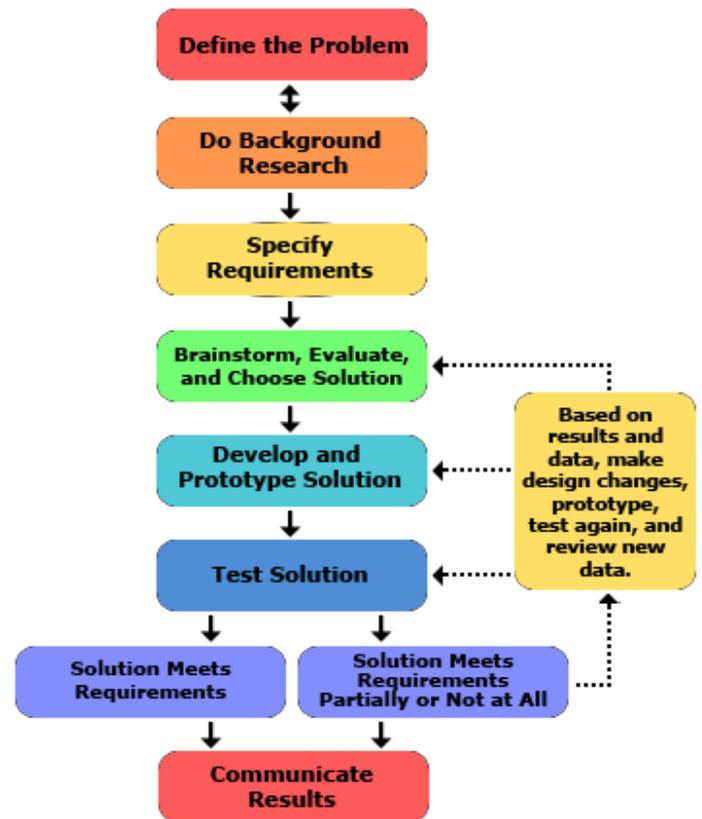
Scientific Method vs. Engineering Design Process

While scientists study how nature works, engineers create new things, such as products, websites, environments, and experiences. Because engineers and scientists have different objectives, they follow different processes in their work. Scientists perform experiments using the **scientific method**; whereas, engineers follow the creativity-based **engineering design process**. Both processes can be broken down into a series of steps, as seen in the diagram and table. Determine which process is best for your project.

Scientific Method



Engineering Method



Keep in mind that although the steps are listed in sequential order, you will likely return to previous steps multiple times throughout a project. It is often necessary to revisit stages or steps in order to improve that aspect of a project.

*Adapted from ScienceBuddies.org Comparing the Engineering Design Process and the Scientific Method.



RULES AND REGULATIONS

The Ysleta ISD Science Fair believes that all students have the right and opportunity to compete fairly for all awards. The following regulations will keep projects uniform for judging, ensure that they abide by federal, state, and local laws, and follow Sun Country Regional Science Fair regulations. For these reasons, the following will be strictly enforced:

In general, the display of anything that could be hazardous to the public is **PROHIBITED**, including the following:



- Anything that is ALIVE (animals, plants, molds, etc.).
- Plant materials in their raw state (living or dried) not secured in a sealed container.
- Taxidermy specimens or parts; preserved vertebrate or invertebrate animals (dead bugs, rabbit's foot); Human/animal parts or body fluids.
- Food items (people or pet food, etc.).
- Containers filled with water or any other kind of liquid.
- Sharp items (needles, knives, syringes) including glass or glass objects.
- Small, loose pieces sitting on the table that could be picked up by a child (choking hazard) or fall to the floor posing a tripping/slipping hazard to members of the public.
- Photos of people, including the student's family, without proper documentation.
- Soil, sand, or rock samples except in a sealed Petri dish or baggie, securely affixed to the display board.
- All chemicals (laboratory/household), cleaners, poisons, toxic substances
- Drugs or controlled substances; hazardous substances.
- No use of any type of weapon (i.e. firearms) to include tasers, bullets or ballistic testing.
- Dry ice.
- Flames, fire, highly flammable materials.
- Any apparatus deemed unsafe including empty tanks that previously contained combustible liquids or gases.
- Batteries with open top cells.
- Projects with moving parts that have unprotected belts and pulleys.
- Class 3 and 4 lasers which may produce eye, fire, and skin hazards from direct and indirect reflection; Class 2 lasers must follow rules in ISEF handbook.



Parent Frequently Asked Questions

Science Fair FAQs

- **Who can be a judge?**
 - All judges are volunteers from the local scientific community to include students attending local universities in the fields of science, math, and engineering, military personnel, and current and/or retired educators.
- **If I am unhappy with a decision, may I appeal?**
 - No. Any concerns must be put in writing and sent to the District Science Fair Coordinator.
- **What is my child allowed/not allowed to bring with him/her on the day of judging?**
 - Cell phones, food, drinks and gum are not allowed on the judging floor. In addition, electronic devices and project materials are not allowed on the judging floor unless needed for project presentation to include cell phones, PSPs, iPods, iPads, cameras or any other electronic device.
- **Can my child still compete if they are not present during judging?**
 - Participants do not have to be present to defend their projects during judging. However, there will be a 25-point deduction for not being present in the interview section of the judging form.
- **When can I pick up my child's science fair project?**
 - Project pick-up follows the award ceremony until 3:30 P.M. Unclaimed projects will be thrown away.
- **Which winners advance to compete at the State Science Fair?**
 - The District will only sponsor first place winners in each category to participate at the State Science Fair.
- **Who is allowed in the judging area?**
 - Only students and judges are allowed in the judging area. Administrators, teachers, parents and spectators must remain in the designated areas.
- **Are we allowed to photograph student projects?**
 - Photography from any device will not be permitted at any time.
- **Is a written report or abstract mandatory for the District Science Fair?**
 - A written report is not required for the District Science Fair.



DISPLAY BOARD RULES

1. All exhibits should be sturdily constructed and self-supporting.
2. Size limits are 30" deep front to back; 48" side to side; 108" floor to top
3. All electrical wiring must be of an approved, insulated type. Electric cords are the responsibility of the exhibitor.
4. Experiments are required. Models will be allowed.
5. Display must be self-standing of reinforced cardboard, plywood, or other materials. The project cannot lean on the table, wall, or other projects. Nails, glue, or tape cannot be used to secure the project to the tables.

*Although Ysleta ISD will take precautions to protect the exhibits, there will be no assumed responsibility for any items lost or damaged during the fair. Valuable material and equipment should be simulated or pictured. Note: It is advisable to have extra copies of notebooks and other printed materials.

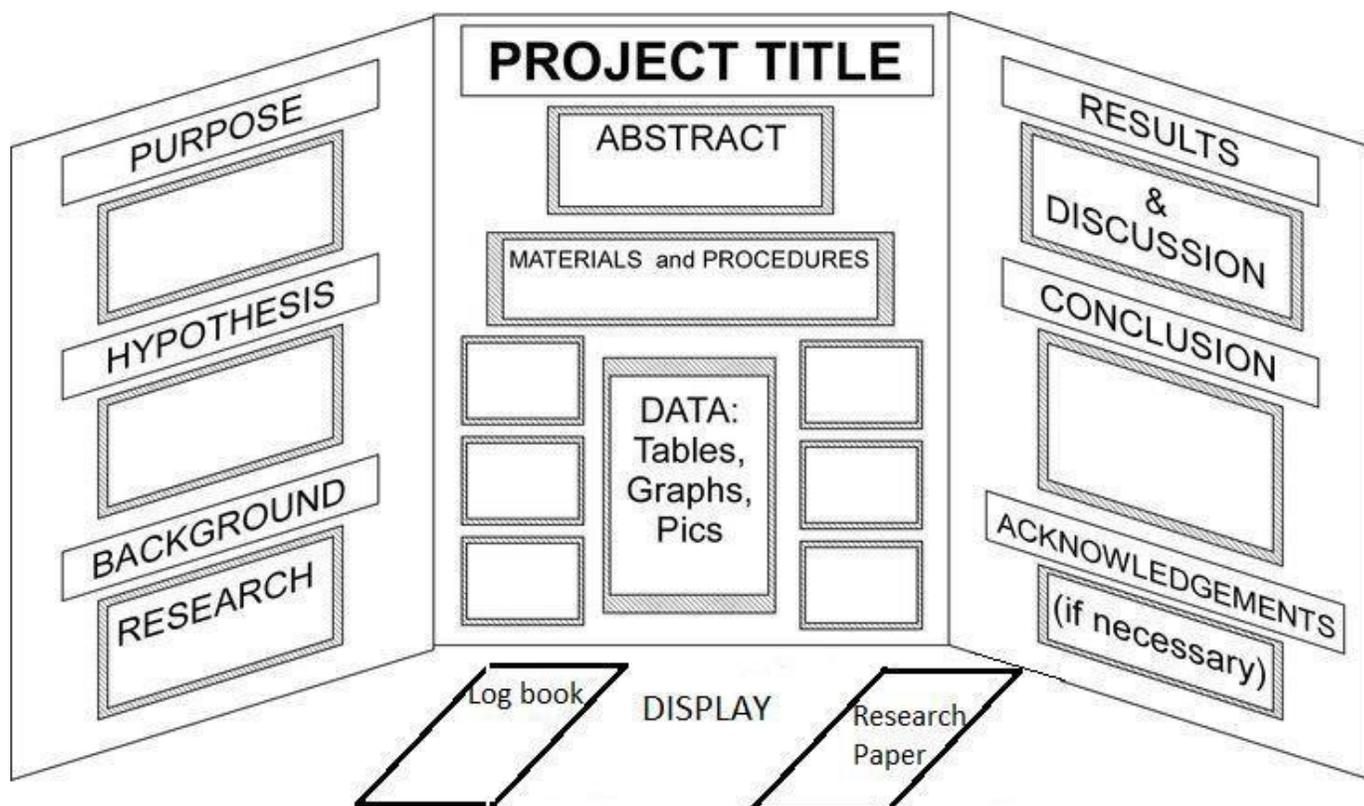
**Ethics Statement: Scientific fraud and misconduct is not condoned at any level of research or competition. Plagiarism use or presentation of another researcher's work as one's own, and fabrication or falsification of data will not be tolerated. Fraudulent projects will fail to qualify for competition.

Important Information!

1. If your science fair project involves human subjects or animals - - you MUST check with your teacher to make sure you are following the ethical guidelines provided by the Intel International Science and Engineering Fair Committee. These rules can be found at <https://student.societyforscience.org/international-rules-pre-college-science-research>.
2. If your project is chosen for the Regional Science Fair, you will need to continue your project forms on Scienteer and have all forms 100% complete by February 1, 2019.
3. If you would like to use photos of friends/relatives/helpers in your science fair project, you must fill out the "consent to have photos displayed" paper, have the people sign it, and affix it to the back of your display. The form is found at the end of this packet or from your science teachers.

Display Board

Your display board is kind of like an advertisement for all your hard work. HOWEVER, keep in mind a Science Fair Project is not an ART PROJECT. It should be neat and legible, but the emphasis should be on understanding and applying the scientific process. Below is the layout for the project display.



All displays and presentations will be judged on the following information:

- Did the student provide a clear introduction for the project?
- Did the student discuss the purpose (reason) for the project?
- Did the student detail the research question and hypothesis for the project?
- Did the student explain the design of the project and the methods of data collection? Did the student provide an analysis of the data collected?
- Did the student share a conclusion drawn from the project and an application of the research?
- Was the information organized in a logical and sequential order that the audience could follow? Did the student demonstrate full knowledge of the topic, answering all questions with explanation and elaboration?

Science Fair Tips for Parents



Here are some tips to keep your sanity, keep order in the house, and to help your would-be scientists do a good project, and perhaps even win an award. The goal is to have your willing and exuberant involvement to help your child have an exciting learning experience.

- Let your child find the project that he/she just cannot resist doing.
- Give him/her guidance, encouragement, and support whenever needed.
- Emphasize that the most important aspect of the entire exercise is discovery, excitement, and learning.
- Stress the importance of safety throughout their project. Avoid dangerous chemicals or unsafe practices.
- Make certain that your child allows enough time from start to finish. Six weeks is a good idea.
- Make sure that your child follows the “scientific method.” This will include such topics as research, problem, hypothesis, experiment, and conclusion.
- Encourage your child to practice his/her presentation with you.
- Make sure your child has a thorough understanding of his/her project.
- Give your child the help he/she needs in going to libraries, getting available computer time, and making funds available for materials.
- Instill a sense of pride and accomplishment to your child for his/her efforts.
- Provide constructive criticism when needed.
- Enjoy the learning experience with your child.

Photograph & Video Release Form

I hereby grant permission to the rights of my image, likeness and sound of my voice as recorded on audio or video tape without payment or any other consideration. I understand that my image may be edited, copied, exhibited, published or distributed and waive the right to inspect or approve the finished product wherein my likeness appears. Additionally, I waive any right to royalties or other compensation arising or related to the use of my image or recording. I also understand that this material may be used in diverse educational settings within an unrestricted geographic area.

Photographic, audio or video recordings may be used for the following purposes:
Ysleta ISD 2018-2019 Secondary Science Fair Project for

First Name Last Name and Grade of Student (Please Print)

By signing this release, I understand this permission signifies that photographic or video recordings of me may be electronically displayed via the Internet or in the public educational setting.

I will be consulted about the use of the photographs or video recording for any purpose other than those listed above.

There is no time limit on the validity of this release nor is there any geographic limitation on where these materials may be distributed.

This release applies to photographic, audio or video recordings collected as part of the sessions listed on this document only.

By signing this form, I acknowledge that I have completely read and fully understand the above release and agree to be bound thereby. I hereby release any and all claims against any person or organization utilizing this material for educational purposes.

Full Name _____

Street Address/P.O. Box _____

City _____ State & Zip Code _____

Phone _____ Email Address _____

Signature _____ Date _____

If this release is obtained from a participant under the age of 19, then the signature of that participant's parent or legal guardian is also required.

Parent's Signature _____ Date _____

*** Submit to Campus Science Fair Coordinator.**