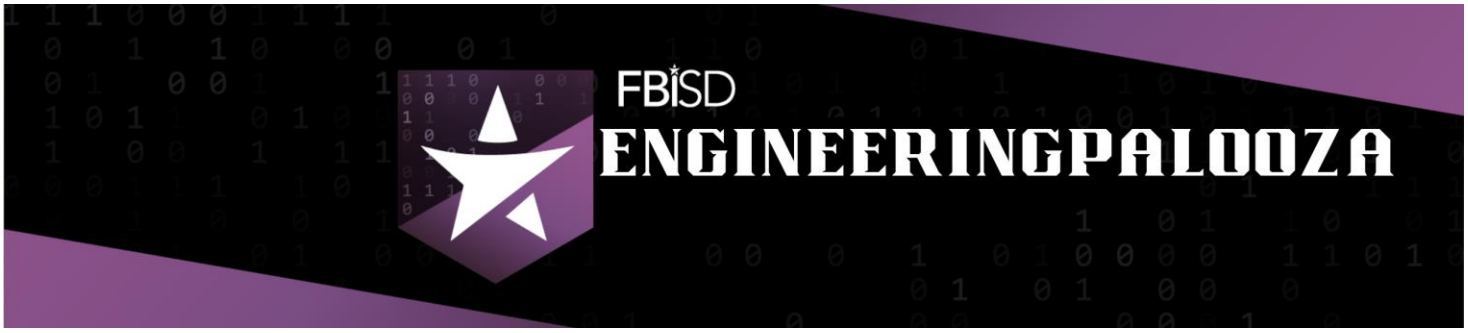


The FBISD Engineeringpalooza allows campus teams to show their creativity with a design opportunity that integrates coding, robotics, and engineering into a final prototype.

Below are the general guidelines for the prototype. Please see the district Robotics Competition website for information related to the theme and deadlines for Engineeringpalooza.

Teams will design and build a prototype around a theme or topic. They are allowed to be as creative with the design as they would like and use a variety of materials that are outlined below.

This is not a formal competition in that 1st, 2nd or 3rd place will be awarded. Instead, each campus that wishes to participate may select a prototype to represent them at the STEM Showcase. Visitors to the STEM Showcase will then vote on the prototypes and awards such as "Best Use of LED's" or "Best Use of Servo Motors" will be awarded.

Materials

Materials that may be used will fall into two categories. Please pay close attention so that your prototype does not get disqualified from the STEM Showcase.

If you are not representing your campus in the competition, you may use more than the listed limited materials to build a prototype. Your project will not be part of the audience voting but you may display it at your campus table for the STEM Showcase.

Unlimited Materials

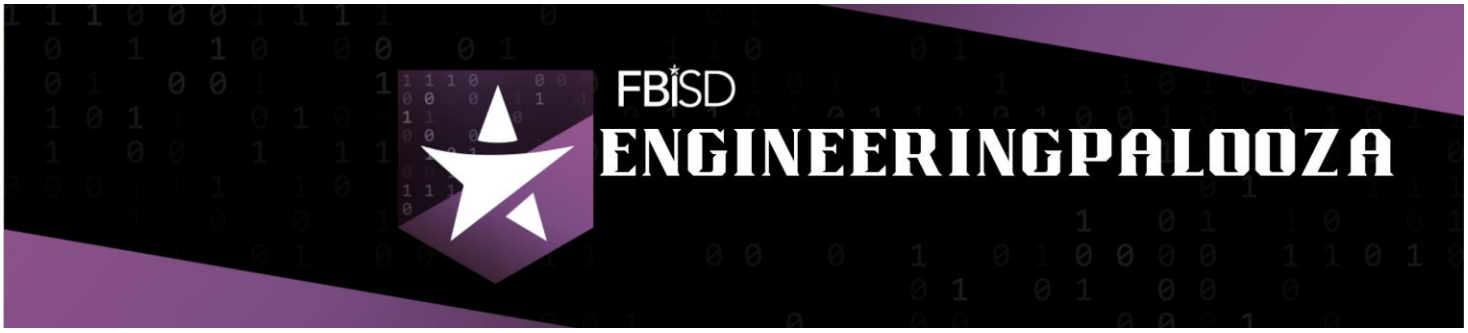
- These items may be used in any quantity for the building.
- You may combine kits, equipment, motors, lights, and any hardware for your prototype.
- A campus may not have all items listed in this category but should have some items that will allow for the design of a prototype.

Limited Materials

- This will be where the bulk of the body of the prototype should be made from.
- There is a limit to how much of these materials you may use, so designing and planning out the prototype is vital.

Prohibited Material

- These items will be an automatic disqualification, if in doubt, please check with your coding club sponsor.

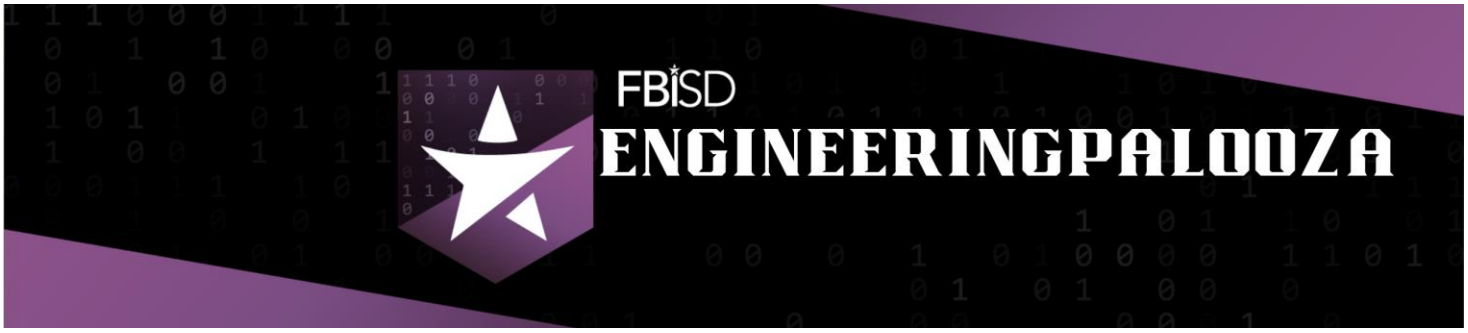


Unlimited Materials	Limited Materials	Prohibited Material
• Lego Spike Kit (including expansion kits) • Hummingbird Bit Kits • Lego EV3 Kits • CoDrone EDU • Strawbee components (straws, connectors, servos, etc. • Micro:bits • Software: Scratch, Birdbrain Snap, MakeCode, etc. • Paint, crayons, markers for adding color • Tape, glue, sticky tack • Batteries	• Cardboard from 1 box, including lid, of xerographic copy paper. The standard 10 ream box, used throughout the district. • 2160 square inches of construction paper. This is equivalent to 20 sheets of 9 by 12-inch paper. • 15 feet of string, yarn, rope or other similar type binding material. • 20 Popsicle sticks • 50 Toothpicks • 5 Wood skewers or dowels • 10 rubber bands	• Anything flammable • Live animals • Projectiles • Glass or sharp objects

Reminder, as you design your prototype, projects that are inappropriate, undermining or vulgar in nature do not adhere to the guidelines set in the FBISD Student Code of Conduct and will be disqualified.

General Rules

1. Students may be part of an Engineeringpalooza team while also participating in the Coding or Robotics competition.
2. Teams may display at their campus STEM Showcase table, but each campus may only nominate one prototype to advance to the audience level of the STEM Showcase event.
3. Teams may be comprised of any number of students, but a recommendation is for no more than **THREE** students.
   a. This activity should be considered for students once they have completed the coding or robotics competitions or once they have learned the basic concepts of the various tools they wish to integrate into their prototype.
4. Teams **must** include a physical logbook that shows the progress and planning for their prototype. During the judging portion by the audience, they will be made aware of the importance of a logbook in the design process and encouraged to view the logbooks as part of the judging process.
5. During the district STEM Showcase, engineers should be prepared to answer questions and demonstrate their prototype to audience members that will be judging.
6. The role of the sponsor and parent is vital, but the prototype should be designed and created by the students with minimal intervention by adults.
7. Prototypes will be inspected before the district STEM Showcase event for confirmation of no use of prohibited materials.
8. There is limited access to electricity at the STEM Showcase, students should bring their prototype fully charged and, as necessary, consider how their prototype will be powered.



Judging

This event is an audience-centered event and thus they will be selecting prototypes that they feel are the best in several categories. The voting by the audience will be open to all participants at the STEM Showcase during a set window of time.