LEAVENWORTH COUNTY FAIR 2026
4-H COMPUTER SCIENCE
Superintendent: Open
Exhibit Judging: Monday, July 27th from 5pm – 8pm; 4-H Building (consultation)

The Kansas 4-H Computer Science project is designed to allow 4-H members to explore how information is moved from one part of the computer to the other; how information is moved between two or more computer systems (networking); how information is stored; or how information is acted on (programming).

Rules

1. Read General Rules. Violation of any of the following rules may result in disqualification. All decisions will be made by a county agent and their decision is final.
2. The actual construction of computer hardware (For example, building a computer, which would include computer components plugged into a motherboard, discrete circuitry soldered on a printed circuit board, or wire-wrapped circuitry) will be entered in the Electronics Division., except for exhibits entered in Class 5594.
3. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor's exhibit, at the judge's discretion, may receive a reduced ribbon placement or disqualification. A safety violation could include Malware, a virus, or any similar program that potentially is harmful.

Exhibit Requirements

1. All exhibits in the Computer Science division must be entered on a USB drive containing all supporting documents as listed below for each class.
   a. The USB drive should be included in a manilla envelope with the Computer Exhibit Form (found at https://computers.engtech4ks.com or your local extension office) attached to the front.
   b. The USB drive should be labeled with the 4-H member's name and county.
2. Source code must be included on the USB drive for all computer programming projects coded by the 4-H member. This could include a .txt file, python Script (.py), Scratch URL, etc. Failure to include the source code will result in one ribbon deduction.
3. Each exhibit must include written operating instructions including how to locate, run, and use the project. Operating instructions should be printed and placed in the manilla envelope and included digitally on the USB drive.
4. Each exhibit must be accompanied by a typed requirements document included on the USB drive. See [https://computers.engtech4ks.com/] for a template that can be used for documenting requirements.
   a. The requirements document should be started at the beginning of the project. It will include a list of goals and requirements that the 4-H member wants to include or achieve in their final project.
   b. The project requirements section is formatted as a checklist, with the 4-Her checking off what they accomplished, making adjustments throughout their work on the project as needed.

     c.   Flow charts, designs, or other diagrams may be included for computer programs to show the logical flow of the program as needed.
5. For coded computer programs, screenshots of the program will be displayed digitally at the state fair. A display screenshot must be included electronically on the USB drive. For county fairs, it is recommended to print screenshots for display at fairs that don't have electronic displays available.
6. <u>All electric components of micro controlled devices must be adequately covered or concealed with a protective enclosure</u>, specifically circuit board<u>. Paper is NOT considered an adequate enclosure or covering for electrical components.</u>

Judging

1. Judge(s) in the computer system division will have a physical computer with the following minimum configuration to test exhibits with and view files:
   a. Microsoft Windows® 11
   b. Microsoft Office® 365 (Excel, Power Point, & Word)
   c. Microsoft Visual Studio®
   d. Microsoft Edge Browser®
   e. Mozilla Firefox® Browser
   f. Google Chrome® Browser
   g. Adobe Acrobat Reader®
   h. Apache Open Office®
   i. Scratch Desktop editor (offline version)
2. Judging of micro controlled devices is based on the code, not the hardware.
3. Judging will be based on a score sheet that can be found at http://computers.engtech4ks.com/. There are three (3) areas each exhibit will be judged on. They are:
   a. Requirements document
   b. Operating Instructions
   c. Functionality (how well did the project meet project objectives)

Scoresheets, Forms, and Contest Study Materials:
- [Computer Science Scoresheet](#)
- [Computer Science Exhibit Form](#)
- [Educational Display, Notebook, or Poster Scoresheet](#)

Classes

Computer System Division
- **5590** Computer program, application, app, script, or coded system that is new and unique (not merely a file run in a program, such as a 'word document' or a picture drawn in 'Microsoft Paint').
- **5591** Coded website built entirely by the 4-H Member (not using a pre-made template generator such as Wix or Squarespace). Items in this class could be coded in HTML, CSS, JavaScript, WordPress, or other web-based programming languages or platforms.

- **5594** Microcontroller or microcomputer application - a small circuit board that is programmed to accomplish a specific task (projects built and programmed using Raspberry Pi, Arduino, etc.)

Educational Exhibits Rules

1. For notebooks, display boards, and posters, no additional exhibit information is required; no manila envelope is needed for these exhibits.
2. Exhibits shall have a clear link to the Engineering and Technology area of computers
3. Exhibits in posters, notebooks and display boards must contain substantial supporting educational materials.
4. Educational display boards, posters and notebooks should be creative and showcase details about the knowledge learned in the project during the current 4-H year. Value is placed on youth who can demonstrate how their skills have increased while completing the project. Each exhibit will be judged on uniqueness, creativity, neatness, accuracy of material, knowledge gained, and content. An exhibit judging score sheet available at https://computers.engtech4ks.com/ .
5. Follow copyright laws, citing all sources of information in a standard notation Sources of information must be cited on the front of your exhibit, including all posters and educational display boards. Example citation: "Make a Star Finder" https://spaceplace.nasa.gov/starfinder/en
6. Educational displays are not to exceed a standard commercial 4' high X 3' wide X 2' deep. No card table exhibits will be allowed. Care should be taken to use durable materials that will withstand Kansas State Fair conditions.
7. Posters are limited to commercial 3' X 4' tri-fold display boards.
8. "Construction Kits" that are part of educational displays must be contained in cases (tackle boxes, sealable containers, etc.) no larger than 2' x 2' x 2' and must have a latch which securely keeps all components contained in the "Construction Kits". Other components are to adhere to appropriate dimensions as stated elsewhere.
9. Educational Project notebooks must be organized in a 3-ring binder or similar book.
10. Any three-dimensional poster or display board exhibits may not be thicker than 2 inches.
11. Exhibitor's name, county, age, and year(s) in project must be tagged or labeled on the back of the exhibit. Exhibit cards are not sufficient as they may be removed or repositioned for display. Failure to label an exhibit may result in one ribbon placing deduction.
12. Exhibits should possess the following qualities (in no particular order):
    a. A central theme
    b. What you want others to learn
    c. Be designed and constructed in a manner befitting the exhibit
    d. Be something you are interested in
    e. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor's exhibit, at the judge's discretion, may receive a ribbon placement or disqualification.

Computers - Novice – Ages 7-8
5765   Novice Computers Science Educational Display
5769   Novice Computers Science Educational Notebook
5770   Novice Computers Science Educational Poster

Computers - Intermediate Division – Ages 9-13
5771   Intermediate Computer Science Educational Poster
5772   Intermediate Computer Science Display Board
5773   Intermediate Computer Science Notebook

Computers - Senior Division – 14 years and older
5776   Senior Computer Science Educational Poster
5777   Senior Computer Science Display Board
5778   Senior Computer Science Notebook

Resources: Project Area –Computer Systems