

- CLASS 4** **Level 3 Rocket** – Any skill level 3 rocket with wooden fins painted by hand or air brush.
- CLASS 5** **Level 3 Display** – Display exemplifying one of the principles learned in the *Reaching New Heights* project. Examples include: airplane instrumentation, kite flying, or radio-controlled planes. Display can be any size up to 28" x 22".
- CLASS 6** **Level 3 Rocket** – Any skill level 3 rocket with wooden fins painted using commercial application (example: commercial spray paint).
- CLASS 7** **Level 4 Rocket** – Any skill level 4 rocket with wooden fins or any self-designed rocket.
- CLASS 8** **Level 4 Display** – Display exemplifying one of the principles learned in the *Pilot in Command* project. Examples include: flying lessons, or careers in aerospace. Display can be up to 28" x 22".
- CLASS 9** **Level 5 Drone Poster** – Exhibit must be designed to educate yourself and others on one or more of the following topics: drone technologies, uses of drones, the different types of drones, types of training needed to operate drones, and the laws and regulations users must follow. Posters can be any size up to 28" x 22".
- CLASS 20** **Careers Interview** – Interview someone who is working in the field of aerospace and research that career. Interviews can either be written or in a multimedia format (CD/DVD). Written interviews should be in a notebook. Written reports should be three to five pages, double-spaced, 12-point font, and 1" margins. Multimedia reports should be between three and five minutes in length.

COMPUTERS

COMPUTER RULES

- GENERAL RULES** – See GENERAL RULES – SCIENCE, ENGINEERING & TECHNOLOGY
- TOP EXHIBIT** – A top exhibit will be selected from those exhibits receiving purple ribbons in the computer division.
- MANUALS** – Printed materials are available from the Johnson County Extension Office for all currently enrolled 4-H members in Johnson County.

DEPARTMENT H	DIVISION 860			COMPUTERS
PREMIUM	Purple \$2.50	Blue \$2.00	Red \$1.50	White \$1.00

COMPUTER MYSTERIES UNIT 1

- CLASS 901** **Computer Hardware Poster** – Should exemplify something learned about computer hardware in Computer Mysteries Unit 1. Poster can be any size up to 28" x 22".
- CLASS 902** **Computer Software Poster** – Should exemplify something learned about computer software in Computer Mysteries Unit 1. Poster can be any size up to 28" x 22".

COMPUTER MYSTERIES UNIT 2

- CLASS 1** **Computer Application Demonstration** – 4-H exhibitor should use computer applications to create a graphic notebook utilizing computer technology. 4-H'er may create any of the following: greeting cards (five different cards, birthday, wedding, anniversary, sympathy, get well, or other); business cards (three cards for three different individuals/businesses); menu (minimum of two pages including short description of foods and pricing); book layout (I-book); promotional flyer (three flyers promoting three different events); newsletter (minimum two pages); or others (example: precision farming, family business logo, etc.) This exhibit consists of a notebook (8 1/2" x 11" which should include: a detailed report describing: the task to be completed, the computer application software necessary to complete the task, specific features of the computer application software necessary for completing the task, and a print out of your project (in color or black and white).
- CLASS 2** **Produce a Computer Slideshow Presentation** – Using presentation software. The slideshow should include a minimum of 10 slides and not more than 25. Incorporate appropriate slide layouts, graphics, animations, and audio (music or voice and transition sounds do not count. Each slide should include notes for a presenter. The exhibit includes a copy of the presentation saved to a flash drive along with a printout of the notes pages in a clear plastic cover. Slide presentation should relate to one topic.

COMPUTER MYSTERIES UNIT 3

- CLASS 4** **Produce an Audio/Video Computer Presentation** – Using presentation software a 4-H exhibitor designs a multimedia computer presentation on one topic related to youth. The presentation should be at least two minutes in length and no more than five minutes in length, appropriate graphics, sound and either a video clip, animation or voice over and/or original video clip. The presentation must be able to be played and viewed on a PC using Windows Media Player, Real Player, iTunes, or QuickTime.
- CLASS 5** **How to STEM (Science, Technology, Engineering and Math) Presentation** – Youth design a fully automated two to five minute 4-H "how to" video. Submissions should incorporate a picture or video of the 4-H member, as well as their name (first name only), age (as of January 1st of the current year), years in 4-H, and their personal interests or hobbies. Videos should be designed for web viewing. Any of the following formats will be accepted: .mpeg, .rm, .wmv, .mp4, .ov, .ppt, or .avi.
- CLASS 6** **Create a Web Site/Blog or App** – Design a simple web site/blog or app for providing information about a topic related to youth using either software programs such as an HTML editor like Microsoft's FrontPage or Macromedia's Dreamweaver, and image editor like IrfanView or GIMP OR online using a WIKI such as Google Sites. If the web site, blog, or app isn't live include all files comprising the web site on a CD-ROM in a plastic case along with the explanation of why the site was created. If developed using a WIKI or other online tool include a link to the website in the explanation of why the site was created.
- CLASS 7** **3D Printing Unique Item** – 3D printing uses plastic or other materials to build a three-dimensional object from a digital design. Youth may use original designs or someone else's they have re-designed in a unique way. Exhibits will be judged based on the motivation and/or problem identified. For example, 3D object printed as part of the design process for robot or other engineering project or cookie cutter. Must include design notebook with motivation or problem statement the prototype was 3D printing. Notebook will also include: defined motivation/problem statement, software used, document purpose of material and print settings, material choice (PLA, PVA, ABS, etc.), in-fill density, and moving parts.
- CLASS 8** **3D Pen Creation** – 3D pens rapidly melt and cool plastic filament allowing the 4-H member to draw in 3D. Youth may use original designs or use a template to create their 3D item. Exhibits will be judged based on the complexity of the design and shape. 3D pen creations will include a notebook with the following: copy of the template (if used) and description of any changes created; if no template used – an explanation of how the creation was built; must include a paragraph of what you learned while creating the project (i.e. ways to improve your next creation); and a paragraph on how 3D pens impact science, engineering, and technology.
- CLASS 9** **Digital Fabrication** – This project is a computer-generated project created using a laser cutter, vinyl cutter, heat press, or CNC router. Vector or 3D based software such as Corel Draw or Fusion 360 would be an example of an appropriate software used to create your finished project. Projects should include a notebook with the following: what motivated you to create this project, software and equipment used, directions on how to create the project, prototype of plans, cost of creating the project, iterations or modifications made to original plans, and changes you would make if you remade the project.
- CLASS 901** **Careers Interview** – Interview someone who is working in the field of computers and research that career. Interviews can either be written or in a multimedia format (CD/DVD). Written interviews should be in a notebook. Written reports should be three to five pages, double-spaced, 12-point font, and 1" margins. Multimedia reports should be between three to five minutes in length.