COMPUTER SCIENCE
Each county may submit 3 entries total from 50158, 50159, 50160, 50161, 50162, 50163, 50165; and 1 entry from 50164.

Exhibitors may bring computer equipment for demonstration purposes. Computers will not be furnished. Internet connections are not available for use by exhibitors. Any member found to be using computer software in a manner that infringes on copyright laws will be disqualified.

50158  Beginning Visual Programming: (Open to youth in Computer Science 1) Exhibit a simple program using Scratch (or other simple graphic programming language). The program should include 8 different commands including looping and getting input from the keyboard and mouse. All exhibits must include something visual, such as a poster or printed copy of a digital presentation, which will remain on display during the exhibition. Electronic equipment will only be used during your personal judging time and will not remain on display during the entire exhibit period.

50159  Intermediate Visual Programming: (Open to youth in Computer Science 1) Exhibit a program using Scratch (or other simple graphic programming) that you have downloaded from the internet and modified. Compare the two programs and demonstrate the changes you made to the original program; OR create an animated storybook using Scratch (or other simple graphical programming language). All exhibits must include something visual, such as a poster or printed copy of a digital presentation, which will remain on display during the exhibition. Electronic equipment will only be used during your personal judging time and will not remain on display during the entire exhibit period.

50160  Advance Visual Programming: (Open to youth in Computer Science 1) Exhibit a video game you have created in Scratch (or other simple graphic programming). All exhibits must include something visual, such as a poster or printed copy of a digital presentation, which will remain on display during the exhibition. Electronic equipment will only be used during your personal judging time and will not remain on display during the entire exhibit period.

50161  Website Design: (Open to youth in Computer Science 1 or Computer Science 2) Exhibit an original website that you have designed. Internet access will not be provided, so exhibitors must supply their own internet hot spot or the website must be hosted on the exhibitor’s computer. All exhibits must include something visual, such as a poster or printed copy of a digital presentation, which will remain on display during the exhibition. Electronic equipment will only be used during your personal judging time and will not remain on display during the entire exhibit period.

50162  Open Source Computer Science: (Open to youth enrolled in Computer Science 1, Computer Science 2, Robotics 1-2, Junk Drawer Robotics 1-3, Free Range Robotics) Exhibits in this class will demonstrate successful application of open source (publicly available) computing software and/or hardware, such as Raspberry Pi and Linux, to accomplish a task. All exhibits must include something visual, such as a poster or printed copy of a digital presentation or programing flowchart, which will remain on display during the exhibition. Exhibits in this area will be judged on the computer science programming. Youth enrolled in a robotics project should choose this class if you want the exhibit to be judged on the programming of the robot.

50163  360° Technology: (Open to youth in Computer Science 1 or 2 or Video Project) Exhibits in this class must create a 360° experience that can be viewed using Virtual Reality headsets or Google cardboard. These experiences include anything from virtual tours or experiences to 360° games. Exhibitors are expected to either program or create the experience using readily available 360° cameras or computer software. All experiences must be original and may not use existing 360° media. Each exhibit should come on a jump drive and MUST be preloaded to a VR headset or Google Cardboard to demonstrate for the judges. These exhibits are designed to demonstrate the process behind creating 360° experiences and the tech behind them, versus telling stories in 360° (As seen in the Video Section).
Criteria for judging shall include: (1) The immersiveness and scale of the 360 environment; (2) The complexity of the 360 experience (is the experience interactive? To what degree?); (3) Use of accompanying technologies to achieve goal; and (4) Quality of 360° experience including image and sound quality. In addition, participants will be judged based on the degree to which they accomplish the goal they sought out to achieve when beginning the process. All participants must document their work in a detailed notebook, and be able to explain their design and buildout process to the judges.

50165 Computer Innovation Class: (Open to youth who were at least 13 years of age on 9/1/17 and are enrolled in a computer science project). Demonstrate the skills and knowledge you have gained through the Computer project. The exhibit may include, but isn’t limited to, original works, objects, demonstrations, digital presentations, programs, websites, games, apps, performances, or posters which you have made. Choose whatever method best shows what you’ve learned. Your exhibit should not fit in the other exhibit options for this project. You must furnish any equipment you need for your exhibit. Internet service will not be provided for the exhibit. All exhibits must include something visual, such as a printed copy of a digital presentation, which will remain on display during the exhibition. Electronic equipment will only be used during your personal judging time and will not remain on display during the entire exhibit period.

50164 Computer Science Ready4Life Challenge: (Open to 11- to 18-year-olds enrolled in any Computer project) Exhibits in this category must include the following: a) a physical representation of the career or business product such as a model, prototype or display/portfolio that includes images of accomplished work; b) verbal or written explanations that demonstrate knowledge of the related career or business fields, potential careers, and the appropriate requirements for achievement in those fields. The judging criteria for this class values thoroughness of career and/or business exploration and pursuit above the workmanship of the physical specimen on display.