

Cub Scout Nova Program: Cub Scouts Can Code!

Did you ever wonder how computers know what to do? This module is designed to help you explore how people instruct computers and how they affect your everyday life.

- Complete the following requirements.
 - When finished fill out the @ Home Certificate of Completion and email to support@samoset.org. The Council support staff will add your competed Nova achievement to Scoutbook and add your Nova patch to your units purchase order.

Requirement 1A:

Watch an episode or episodes (not less than one-hour total) of science-related shows or documentaries that involve computers, programming, and careers that involve computers. Then do the following: 1. Make a list of at least two questions or ideas from each show. 2. Discuss two of the questions or ideas with your counselor.

Requirement 2A:

Do all of the following. (a) Define what a computer is and research how computers have changed over time. (b) Create a timeline of important dates and include images to show the different computer designs. (c) Talk to your parent, counselor, or other adult about the changes they have seen in computers over their lifetime. (d) Record at least 10 devices in your home that use some kind of computer to operate.

Requirement 3B:

Creative Conditionals 1. Use a deck of playing cards to create a new game based on conditions or create your own deck with paper and markers. Use four different colors and put the numbers 1-10 on separate cards in each color. 2. Create and record actions for each number and suit/color. These are called conditions. For example: For a 5, clap your hands over your head. For a heart, hop on one foot, etc. 3. Mix up your cards and practice playing on your own. What TWO actions do you have to perform for each card? In this example, for a 5 of hearts you would have to clap your hands over your head while hopping on one foot. 4. Invite others to play your game with you. See if they can add more conditions to your game. 5. Research how computers use conditional statements to work. Discuss what you learn with your counselor.

Requirement 4:

Be a programmer! With your parent's permission and using proper internet safety, explore the world of coding using a tablet or computer. Make sure that your Cyber Chip is up to date. Complete ALL the requirements. A. Spend at least one hour creating instructions for a computer to execute, then testing and debugging them. There are many free applications for computers, tablets, and smartphones. B. Discuss with your counselor what you were able to create. Explain what you liked best about it and what was difficult.

Requirement 5:

Discuss with your counselor what you have learned about how computers affect your everyday life, and how they work.

