



# Digital Technology

## Shoemaker

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Requirements were REVISED effective January 1, 2025

1. View the [Personal Safety Awareness "Digital Safety" video](#) (with your parent or guardian's permission). **Bring a copy of the certificate to MBC.**
2. Do the following:
  - a. Give a brief history of the changes in digital technology over time. Discuss with your counselor how digital technology in your lifetime compares with that of your parent's, grandparent's, or other adult's lifetime.

*Resources:* [Technology Evolution - 100,000 BCE to 2020 \(video\)](#)  
[Past & Present Technology, Then & Now \(video\)](#)  
[Past and Present | Technology Then and Now \(video\)](#)

- b. Describe the kinds of computers or devices you imagine might be available when you are an adult.

*Resource:* [Technologies of the Future \(video\)](#)

3. Do the following:
  - a. Explain to your counselor how text, sound, and pictures are digitized for storage.

*Resources:* [What Is ASCII? \(video\)](#)  
[How Images and Sound are Represented in a Computer \(video\)](#)

- b. Describe the difference between lossy and lossless data compression and give an example where each might be used.

*Resource:* [Lossy vs Lossless Data Compression \(video\)](#)

- c. Describe two digital devices and how they are made more useful by their programming.

*Resource:* [Types of Digital Devices \(video\)](#)

- d. Discuss the similarities and differences between computers, mobile devices, and gaming consoles.

*Resources:* [Comparing PC to Gaming Consoles. \(video\)](#)  
[Mobile vs Pc vs Console Gaming \(website\)](#)

- e. Explain what a computer network is and the difference between a local area network (LAN) versus a wide area network (WAN).

*Resource:* [Difference Between LAN and WAN \(video\)](#)

4. Do the following:

- a. Explain what a program or software application or “app” is and how a computer uses a CPU and memory to execute it.

*Resources:* [How Computers Work \(video\)](#)  
[What Is an App? \(video\)](#)  
[How Computer Memory Works \(video\)](#)

- b. Name four software programs or mobile apps you or your family use and explain how each one helps you.

*Resource:* [Understanding Software Applications \(video\)](#)

- c. Describe what malware is and explain how to protect your digital devices and the information stored on them.

*Resource:* [What Is Malware? \(video\)](#)

5. Do the following:

- a. Describe at least two different ways data can be transferred through the Internet.

*Resources:* [How the Internet ACTUALLY Works ? \(video\)](#)  
[This Is How Data Is Transferred in the Internet \(video\)](#)  
[Data Transfer Via the Internet Explained \(video\)](#)

- b. **Using an Internet search engine (with your parent’s permission), find ideas from three different websites about how to conduct a troop court of honor or campfire program. Present the ideas to your counselor and explain how you used the search engine to find this information. -Bring ideas found to discuss at MBC.**

- c. Use a Web browser to connect to an HTTPS (secure) website (with your parent's permission). Explain to your counselor how to tell whether the site's security certificate can be trusted, and what it means to use this kind of connection. **-Bring URL/website address of the HTTPS website to MBC.**

Resource: [What Is HTTPS? \(video\)](#)

6. Do **THREE** of the following. For each project you complete, copy the files to a backup device and share the finished projects with your counselor. **- Email 3 files or a zip file of the 3 files to counselor a week before MBC.**

- a. Using a spreadsheet or database program, develop a food budget for a patrol weekend campout OR create a troop roster that includes the name, rank, patrol, and telephone number of each Scout. Show your counselor that you can sort the roster by each of the following categories: rank, patrol, and alphabetically by name.

Resource: [Introduction to Spreadsheets \(video\)](#)

- b. Using a word processor, write a draft letter to the parents of your troop's Scouts, inviting them to a troop event.

Resource: [Word Processing Tutorial \(video\)](#)

- c. Using a graphics program, design and draw a campsite plan for your troop OR create a flier for an upcoming troop event, incorporating text and some type of visual such as a photograph or an illustration.

Resource: [Google Drawing Basics \(video\)](#)

- d. Using a presentation software program, develop a report about a topic **approved by your counselor**. For your presentation, create at least five slides, with each one incorporating text and some type of visual such as a photograph or an illustration. **-If picking this option, email counselor for topic approval before creating the presentation.**

Resource: [Google Slides for Presentations \(video\)](#)

- e. Using a digital device, take a picture of a troop activity. Send or transfer this image to a device where it can be shared with your counselor.

Resource: [Sending Photos on a Smartphone \(video\)](#)

- f. **Make a digital recording of your voice, transfer the file to a different device, and have your counselor play back the recording.**

*Resource:* [How to Make an Audio File With a Smartphone \(video\)](#)

- g. **Create a blog and use it as an online journal of your Scouting activities, including group discussions and meetings, campouts, and other events. Include at least five entries and two photographs or illustrations. Share your blog with your counselor. You need not post the blog to the Internet; however, if you choose to go live with your blog, you must first share it with your parents AND counselor AND get their approval. -Do NOT post to Internet. Use a word processing program or a webpage file to create the blog and submit this file.**

*Resource:* [How to Write a Blog Post for Beginners: From Start to End \(video\)](#)

- h. **Create a Web page for your troop, patrol, school, or place of worship. Include at least three articles and two photographs or illustrations. Include at least one link to a website of interest to your audience. You need not post the page to the Internet; however, if you decide to do so, you must first share the Web page with your parents AND counselor AND get their approval. - Do NOT post to the Internet. Submit webpage file.**

*Resource:* [How to Create a Simple Webpage \(video\)](#)

7. Do the following:

- a. Explain to your counselor each of these protections and why they exist: copyright, patents, trademarks, trade secrets.

*Resource:* [Explanations of Copyrights, Patents, Trademarks, Trade Secrets \(video\)](#)

- b. Explain when it is permissible to accept a free copy of a program from a friend.

*Resource:* [Digital Etiquette for Teenagers \(video\)](#)

- c. Discuss with your counselor an article or (with your parent or guardian's permission) a report on the Internet about a recent legal case involving an intellectual property dispute.

*Resource:* [Intellectual Property \(website\)](#)

8. Do TWO of the following:

- a. **Describe why it is important to properly dispose of digital technology. List at least three dangerous chemicals that could be**

**used to create digital devices or used inside a digital device. - Research and be prepared to discuss 3 dangerous chemicals at MBC.**

*Resources:* [What Are the Risks of Not Properly Disposing of Technology? \(video\)](#)

[3 Simple Tips for Recycling Old Electronics \(video\)](#)

- b. Explain to your counselor why it is important to use a certified recycler of digital technology hardware or devices. -Research and be prepared to discuss at MBC.**

*Resource:* [How to \(Properly\) Get Rid of Your E-Waste \(video\)](#)

- c. Do an Internet search for an organization that collects discarded digital technology hardware or devices for repurposing or recycling. Find out what happens to that waste. Share with your counselor what you found. -Research and be prepared to discuss at MBC.**

*Resource:* [How E-Wastes Are Recycled \(video\)](#)

- d. Visit a recycling center that disposes of digital technology hardware or devices. Find out what happens to that waste. Share what you learned with your counselor. -Create a page with the name and address of the recycling center and the name of a person that you talked to. Get their signature and date on the page. Bring to MBC and be prepared to discuss.**

*Resource:* [Finding an E-Waste Recycler \(website\)](#)

- e. Find a battery recycling center near you and find out what it does to recycle batteries. Share what you have learned with your counselor about the proper methods for recycling batteries. -Bring the name and address of the business and the name of a person you talked to, if you visited the center. Be prepared to discuss the recycling process at MBC.**

*Resource:* [Finding a Battery Recycler \(website\)](#)

9. Do ONE of the following:

- a. Investigate three career opportunities that involve digital technology. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor and explain why this profession might interest you.

*Resource:* [Digital Technology Careers \(video\)](#)

- b. Visit a business or an industrial facility that uses digital technology. Describe four ways digital technology is being used there. Share what you learned with your counselor. -Create a page with the name and address of the business or industry and the name of a person that you talked to. Get their signature and date on the page. Bring to MBC and be prepared to discuss.**

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