



Brownie Cybersecurity Basics

Pillar: STEAM

Outcomes: Positive Values, Community Problem Solving

Brownies will earn their badge by learning the basics of cybersecurity and understand the role technology plays in their life. We use technology to work, shop, and play. In this badge, you'll find out more about how you use technology and how you can keep your technology safe. Cybersecurity is the way we protect computers – and ourselves – from crime. Note: This is the first of three sequential Cybersecurity badges and this is all about learning some basics. The other badges help put these concepts into practice.

1. Find out how you use technology
 - a. The first step in understanding cybersecurity is realizing that technology is all around us and that we use it every day – even in surprising ways! Once you know how you use technology, you can learn more about how to keep yourself and your information safe. Do you think computers are a big or small part of your life? Circle all the ways you use your computer, mobile phone, or tablet:

Play games	Do homework	Talk to family or friends
Watch a video, TV show	Listen to music	Learn about something I'm interested in
Take a photo or video	Other: _____	
 - b. Did you know that computers are also used in these places: Banks, schools, hospitals, police stations, fire stations, trains, planes, homes, cars, and more!
 - c. Learn more about [The Internet of Things](#): The network of connected devices is called the Internet of Things. It allows objects to be controlled remotely and is getting bigger every day. Take a look around your home. Do you have any appliances connected to your computer or the internet, like a garage door, or home heating and cooling, alarms, televisions, or refrigerators? Billions of connected devices can make life easier for people but can also make those devices less secure. Cybersecurity experts are working to make the Internet of Things as safe as possible.
2. Discover what your technology can do
 - a. Now you know how often you use technology and where you use it. In this step, you will find out how many everyday tasks you can do using your digital devices. Your devices hold all your important information and do important tasks for you. What are some ways you can keep your devices safe?
 - b. It is important to know about computer parts so you can understand which parts need protection. Identify all the computer parts in the [picture](#) and add-ons, then complete [this activity](#). You will need to match the numbers with the picture it corresponds to.
3. Find out how to create layers of security



- a. When you want to keep something safe, you need to **protect** it. When it comes to cybersecurity, many layers are better than one. What is a **layer of security**? Imagine that you were asked to protect an egg so that it does not break if it falls off a table. You might put the egg in a small box filled with cotton balls. To be even safer, you could seal the box with lots of tape. Then you could wrap the box in bubble wrap and put it in a larger box. That is five layers of protection: cotton balls, small box, tape, bubble wrap, and large box. The egg would be much better protected inside all those layers; in cybersecurity many layers work better than one as well.

4. Find out how to use real-life safety rules when you go online
 - a. In real life, you have rules that you follow so you do not get hurt or lost. For examples, you might have to stay close when in public, so you do not get lost in a crowd, or look both ways before crossing a street. It is the same when you go online. The safety rules we follow in real life can be used in the digital world too. See these [rules for internet safety](#).

5. Find out how message travel on the internet
 - a. Every message, text, or picture that is sent on [the internet](#) is broken down into pieces called **packets**. Imagine you are shipping a large object, like a jungle gym. If the jungle gym is put together, it will be too large to ship – unless you had a very big box! So you would probably decide to ship all the pieces separately. That is how it works on the internet too. When you send information on your computer, like an email, photo, meme or text – it is too big to send in one piece. It is broken into smaller packets of information that can ship from computer to computer.
 - b. A **network** is a group of people or objects that are connected. For example, your Brownie troop is a network – and you are also a part of a network that includes all Girl Scouts around the country and around the world!

Additional online resources:

- [Brownie Cybersecurity Pinterest Board](#)
- Learn more about how the size and power of computers have changed over the years. Learn about one of the first computers, [ENIAC](#), and now the computer [microchips](#), which are way more powerful than the huge ENIAC!!!

When you're finished: Congratulations, you have earned your badge! You can purchase by emailing shopdept@gksmo.org or at <https://www.girlscoutshop.com/Brownie-Cybersecurity-Basics-Badge>

No shipping charges apply at this time.

