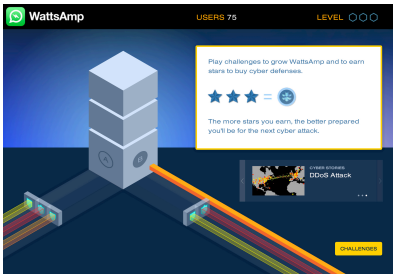
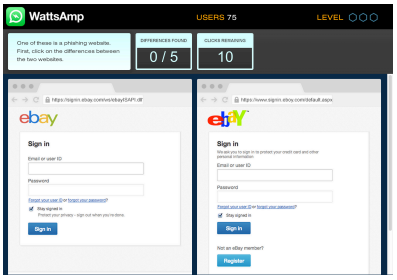
NOVA LABS

CYBERSECURITY LAB

The **Cybersecurity Lab** is a game designed to teach people how to keep their digital lives safe, spot cyber scams, learn the basics of coding, and defend against cyber attacks. Players assume the role of chief technology officer of a start-up social network company that is the target of increasingly sophisticated cyber attacks. In the game, players must complete challenges to strengthen their cyber defenses and thwart their attackers.

There are four major gameplay components of the Lab:





- **Coding Challenge:** An introduction to basic coding skills. Players program a robot to navigate a maze using drag-and-drop commands.
- **Password Cracking Challenge:** A series of "password duels" teach players the basics of how attackers might try to crack their passwords and how they can make better, more secure passwords.
- **Social Engineering Challenge:** Players are presented with two apparently similar emails, websites, or calls. They first have to identify the differences between them and then select which is a scam attempting to steal information or money.
- **Network Attacks:** As their companies grow, players must buy defenses to protect themselves against a series of cyber attacks. The better players do in the three challenges, the more resources they'll have to buy defenses.

The Cybersecurity Lab is a great resource for STEM educators who want to teach their students best practices for staying safe online and introduce them to computer science principles and the architecture of online networks. English and social studies educators can also use the Cybersecurity Lab to reinforce textual analysis skills as students must find textual evidence, draw inferences, and make judgments about the validity of sources in the Social Engineering Challenge.

Follow us on **Twitter** and like us on **Facebook** for updates on new Labs and resources!

Support for the Cybersecurity Lab is provided by Lockheed Martin.
NOVA is produced for PBS by WGBH in Boston.

LOCKHEED MARTIN

PBS
WGBH

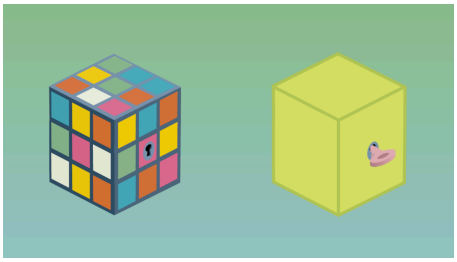
NOVA LABS

CYBERSECURITY LAB

The **Cybersecurity Lab** also features stories of real-world cyber attacks, a glossary of cyber terms, and short animated videos that explain the need for cybersecurity, privacy versus security, cryptography (cyber codes), and what exactly hackers are. Below are summaries and links to the videos:

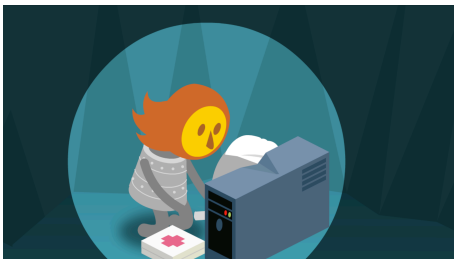
Cybersecurity 101

The Internet is fundamentally insecure. However, there are simple things you can do to protect yourself and your information. This video also provides an introduction to the activities in the Cybersecurity Lab.



Cyber Codes

Do you trust the security of your email, text messages, and browser history? Learn how trustworthy online communication actually is, and how encryption can protect your privacy. Sometimes.



The Secret Lives of Hackers

Hackers may not be who we think they are. In fact, you might be a hacker and not even know it. Learn the true meaning of hacking and some of the many reasons hackers hack.

A Cyber Privacy Parable

Follow the trials and tribulations of Tim as a seemingly innocent piece of information threatens to ruin his life when it falls into the wrong hands.

Follow us on **Twitter** and like us on **Facebook** for updates on new Labs and resources!

Support for the Cybersecurity Lab is provided by Lockheed Martin.
NOVA is produced for PBS by WGBH in Boston.

LOCKHEED MARTIN

PBS WGBH