CYBERHACKING

Mondays, September 13-December 13 (no class Oct 11, Nov 22; 12 weeks)
9:30am-11:00am
Ages 11+

Students learn about their digital presence, computer ethics, and programming techniques through online and offline activities as they learn how to apply their skills towards completing a Hackathon where they work together to create a functioning software program.

Instructor: Candra Umunna, BSc
Location: STEM Lab (suite 21)
Course fee: $275 OR $25/lab
10% sibling discount beginning August 7
Register for full semester or individual labs.

LAB SCHEDULE:

Cybersecurity Tools - Monday, September 13
Students are introduced to the basics of cybersecurity, work on strengthening typing skills and deconstruct electronics to investigate computer components.

Computer Communication - Monday, September 20
Today, students explore how computers communicate with each other as we work through offline computer networking activities and practice typing skills.

Arduino Uno - Monday, September 27
We investigate how Arduino Uno boards are able to interpret and analyze inputs while we look at the relationship between hardware and software.

Computer Languages - Monday, October 4
Kids are introduced to the basics of coding and learn about different coding languages as they work through programming challenges using Bitsbox.

Digital Presence - Monday, October 18
Students learn about their digital online presence and create code for a digital self-portrait using Bitsbox.

Complex Coding - Monday, October 25
This week, we examine more complex codes and try new challenges as kids work through the Codepen platform.

Web Page Design - Monday, November 1
Students explore other coding languages, learn about tools used to design a website and start designing their own person web page.

Encryption and Cryptography - Monday, November 8
Kids learn about passwords and how they are used to protect private information and how encryption keeps data safe through offline decoding challenges.

Anatomy of an Attack - Monday, November 15
Today, we discuss the anatomy of a cyberattack as we investigate methods to reduce the impact of cyber threats.

Malware and Phishing - Monday, November 29
Students explore ways to identify and prevent phishing attempts and malware downloads as they continue to investigate different types of cyberattacks.

Hackathon I - Monday, December 6
Students work together in this social coding event to design and build a new software program.

Hackathon II - Monday, December 13
Hacking teams troubleshoot, complete and share their software program with the other hackers.