

Middle School Day 1: Electronics Workshop

Goal: Foster interest in participants to explore topics in the field of Computer Science.

Learning Objectives

- Introduce Students to topics in Computer Science and general Programming concepts
- Teach Students how various logic blocks function and how they can be used to build programs

Resources and Materials

Agenda Overview

1. [Brief History of Computers](#)
2. [Staying Safe Online](#)
3. [Hour of Code](#)

Time-permitting Activities

1. [Review Quiz](#)
2. [Parts of a Computer](#)

Agenda

Brief History of Computers

20 minutes

1. Brief engaging Slideshow Presentation with Active Engagement describing how computers originated and how we got to where we are today with modern technology.

Staying Safe Online + Nettiquitte

20 minutes

1. Describe common dangers of being online + how to mitigate them
 - Social Media Information
 - Malware
 - Phishing
 - Cyber Bullying
2. Short engaging verbal/ voluntary quiz

Hour of Code

60 minutes

1. Give Students options for which Hour of Code exercises from HourOfCode.org they would like to do and give them 60 minutes to complete them
2. If students finish their chosen exercise early, have them either pick a second one to complete or encourage them to explore a text-based language like js via the Khan Academy online js course or this [interpret python game](#).

Review Quiz

20+ minutes

Exercise where students can solve questions based on the material covered previously during the session. All students will earn a cookie, but those who perform especially well on the whiteboard jepordy-style quiz can recieve extra snacks!

Parts of a Computer

1. Show and explain the function of different common Computer components, including:
 - Motherboard
 - CPU
 - GPU?
 - RAM
 - SSD/ HDD
 - Also explain the differences between an SSD and HDD
 - Display
 - HID