Camp Code Jumper: Hands-On Activities

American Printing House for the Blind (APH)

Center for Assistive Technology Training (CATT)

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AGENDA

- Introductions & Objectives
- Computer Coding
- Founding Principals
- CJ App & HUB
- Pause & Play Pods
- Loop Pod
- CATT & Training Students
- Constants & Variables
- Wrap Up

Computer Coding is…

Coding with Code Jumper

- Address barriers for students w/ VI
- Physically join command pods
- Create a sequence of code
- Build songs and stories

Coding with Code Jumper

- Collaborate with peers
- Learn about
  - Computer Programs
  - Algorithms
  - Threads
  - Variable
  - Selection

Coding with Code Jumper

- Self Efficacy
- Self Advocacy
- Limited AT Knowledge Needed
- Equity
- Collaboration

Founding Principals of Code Jumper

- Low Floor High Ceiling
- Liveness
- Collaboration
- Equity
- Access to Coding Sequence

Teaching with Code Jumper

- Little experience needed
- Gain skills to guide students
- Step by Step lessons
- Vocabulary
- Links to outside resources

VIDEO: Code Jumper App

[Code Jumper Tutorial: The App (YouTube)](#)

SUMMARY: Code Jumper App

App Compatibility

- Windows 10,
- Google Smart Device
- Google Chrome

Six Icons:

- Bluetooth symbol
- Musical note and gear
- Lowercase i
- Right arrow
- Megaphone
- Square

VIDEO: Hub

[Code Jumper Tutorial: The Hub (YouTube)](#)

SUMMARY: Hub

- Bluetooth Connectivity
- Powered by 4 AA Batteries
- Buttons
  - Play
  - Stop
  - Play + Stop
- Speaker

COMMAND POD: Play & Pause

[Code Jumper Tutorial: Play and Pause Pod (YouTube)](#)

SUMMARY: Play & Pause Pod

Play Pod – Blue and White

- 2 Dials

- Doughnut Shape – 8 Sounds

- Tall Ridge – .5x to 2x speed

Pause Pod – Orange and White

- 1 Dial

- Tall and Ridged

- ¼ to 2 Beats

Exercise 1

Build 1 sequence of code with 4 Play Pods

(Row Your Boat)

Build 1 sequence of code with 8 Play Pods

(Use any sound set)

Build 2 sequences of code. Use all 8 Play Pods and 2 Pause Pods

(Use any sound set)

Training Teachers and Students

- Spend time on foundations and build slowly.
- Be creative!
  - Unplugged Activities.
  - Exploratory Activities.
  - Clever Computer Science Journals.
  - Create relevant sound sets.
- Allow time for processing and exploration.
- Use CJ with other STEM products.

Center of Assistive Technology Training (CATT)

- Created in 2019, federally funded program via an appropriation

- Collaboration between The Alabama Institute for Deaf and Blind (AIDB) and The American Printing House for the Blind (APH).

- Region of nine states in the Southeast and two U.S. territories

- www.aidb.org/catt

- Power Partnerships: Exploring the CATT
    - Friday, Feb 03, 1:00 PM - 2:00 PM ET

COMMAND Pod: Loop Pod

Code Jumper Tutorial: Loop Pod (YouTube)

SUMMARY: Loop Pod

Loop Pod – Yellow and White

- One Dial – Numbers 1 to 8

Two Cords

- Shorter - Sequence

- Longer - Loop

Exercise 2

Build a sequence of code using the Play and Loop Pods (Row Your Boat)

Build a sequence of code using the Play and Loop Pods (Any Song or Story)

VIDEO: Constant & Variables

Code Jumper Tutorial: Plugs (YouTube)

SUMMARY: Constant & Variables

- Plugs act as variable or constants
- Numbers 1 to 8 – Play, Loop, and Selection
- Random – Play, Loop, and Selection
- Infinity – Loop
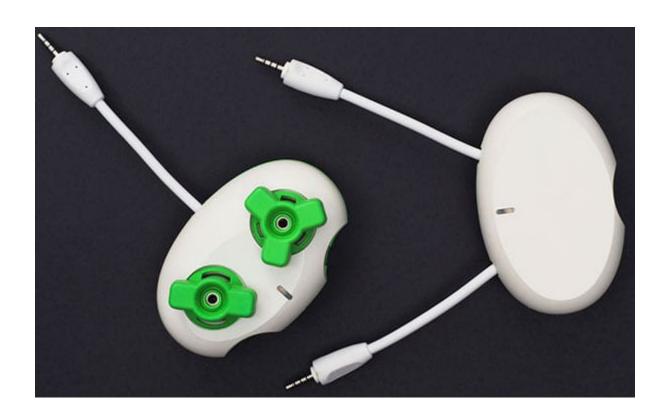- Counter (+ & -) - Play
- Variable

Exercise 3

Build a sequence of code using the Play Pods, Loop Pods and the plus or minus counter

(Row Your Boat)

BONUS: Selection and Merge

Code Jumper Tutorial: Selection and Merge Pods (YouTube)

SUMMARY: Selection and Merge

Create conditional statements

Selection – Program takes one of two paths

- Two dials
- 2 spoke (True)
- 3 spoke (False)
- 8 sounds for each dial

Merge

- Rejoin the path of the program

Wrap Up

Preparing for the Escape Room

Code Jumper Design Principals