

What is a Coding Belt

Our first coding belt (White) is usually awarded after 15 hours of camp time but sometimes we award them early so they can save their daily projects and perhaps work on them at home. Return campers work on their next Coding belt which requires additional 20-25 hours of our guided projects. Each belt is actually a **wrist band with built in 8GB USB drive** where they can save their coding projects, enhance them at home and incorporate them in the **Daily Presentation to the class. We love it when kids get to show off their coding creations to the whole class & parents on last day - great way to acquire public speaking experience.**

After the initial White belt (15 hours camp time,) Campers advance towards their next level Coding Belt (Yellow, Orange, Brown etc.) We have **12 levels of coding belts (White to Black)**. It should take 2 weeks of half day Summer Camps (around 25-30 summer hours beyond the last level) or every 15 to 20 hours during School year (at YMCA, HOA's etc.) to earn the next belt.

Belt Levels 1-4: Visual Coding Mastery to code video games and robots using Scratch, ScratchJr, Blockly, TickleApp, Fools, Kodable and a dozen other coding apps, basic Javascript

Belt Level 5-8: Partial text and Block Coding for **Smart Phone Apps** (they can publish their games/apps to Google Store, if parents permit) and 3D animation and 3D Printing plus advanced robotics, Minecraft Coding

Belt Level 9-12 : Full Text coding with **Python, JavaScript, Arduino, Raspberry Pi** etc

One hour per week over 3 to four years plus 2 to 4 camps / summer should prepare the kids to earn Coding Black Belt (level 12) and become very self confident problem solvers with Coding & Robotics. The notion is not to train them to be future software engineers, it is to make them become Confident Creators and Problem Solvers using the DNA of Technology (Coding.)

How to download MIT Scratch (Pc/Mac) to Access GameCoding on the Belt

Important: Kids have been instructed never to save any non-coding projects, or personal information or ever saving inappropriate content on the drive. Their band will be confiscated if found with personal or inappropriate content.

Please back up the projects from the belt daily to a home computer as kids sometimes lose their belt. This way at least they can transfer their projects to another flash drive. Replacement cost for any belt is \$10 cash.

Kids can open their saved project using one of these options:

Option 1- Preferred Method for Privacy reasons (we teach this offline method in class)

- * go to <https://scratch.mit.edu/scratch2download/>
- * Follow offline download instructions to install Scratch on your computer
- * Launch Scratch2 > go to File > Open and load the project from USB drive
- * Resave after modification

Option 2- we don't recommend due to privacy reasons (We prefer minimum internet use in class, so we don't teach this method. Please monitor their activity while online)

- * Go to www.scratch.mit.edu >>> Click Create (from top) >>> Click File > Upload from your computer
- * Please teach them how to navigate to the USB drive to upload

* If they want to save, please teach them how to download their project to USB drive