

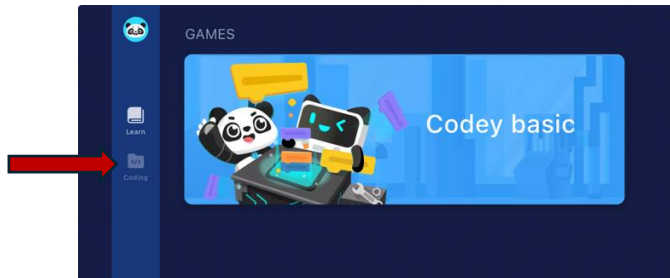
## Setup

### For Code

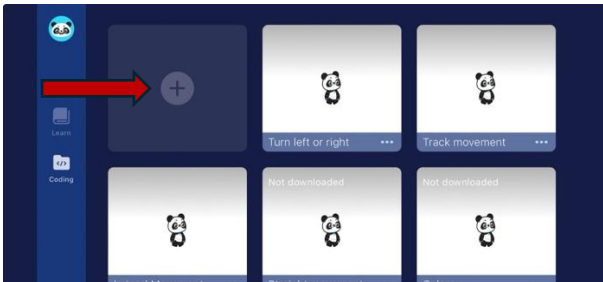
- Download mBlock from App Store



- Select the coding tab on the left-hand side.



- Tap the '+' button to create a new program



- Tap the mBot Mega

### Demo / Workshop instructions.

- Split the class into 3 groups and assign a station (RGB Lights, Turns, Speed and Distance)
- Do a brief overview of the important parts of the bots that are relevant to the station
  - o **RGB Lights** - Pins for the lights & RGB color values
  - o **Speed and Distance** - DC motors and location & Positive and negative power values
  - o **Turns and Side to Side movements** - DC motors and location & Positive and negative power values
- Select the program for the station you want to run (RGB Lights, Turns, Speed and Distance) **\*The code will be incorrect\***
- Let the students run the incorrect program

- Ask for feedback to see what they think is wrong with the program
- Allow students to fix the code with knowledge from the overview
- After 10-15 mins fixing the code for the station recombine class.
- Divide the students into the groups based on how many mBots are available. (Try to get an even amount of students from each station into the new mBot groups)
- Use the flowchart to explain the flow of the track code
- Open the Track program **\*this code will be incorrect\***
- Allow students to work together to correct the track code to complete the track
- If students finish early, challenge them to make code for the mBot to go back through the track or around it.