

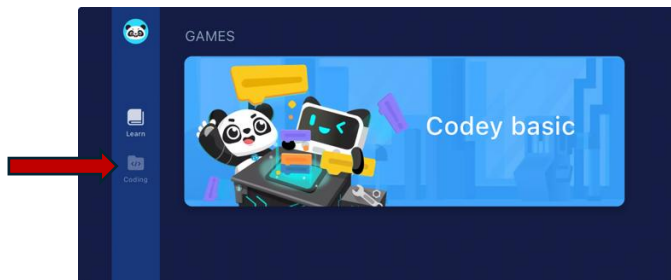
Setup

For Code

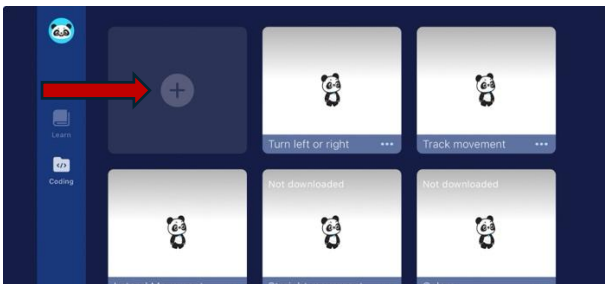
- Download mBlock from App Store



- 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.

NOTES:

If you have problems with sensors, or obstacle avoidance. switch the Mbot Mega to Online settings which is colors and movement only as sensors are not needed for this workshop

Mbot Help Website:

<https://support.makeblock.com/hc/en-us/articles/1500009873422-How-to-use-mBot-Mega>