MicroBlocks:
Live-coding the real world

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Goals

Make MicroBlocks the most intuitive and engaging tool for physical computing imaginable, and create a global community of learners and educators around it.

Inspire a wide range of learners, especially those who do not initially see themselves as potential technologists.

Testimonial

One of my elective STEM classes had several unenthusiastic young women enrolled... until I brought out the microprocessors and the programmable LEDs. You can see some of their smiling faces in the photos I uploaded.

These young women created moving art for the first trimester, with lights and motors reacting to sensors and input. In the second trimester, they all signed up for the extended coding class. For the third trimester, they brought along their friends.

Thank you so much for allowing me to show these young women that not only can they do STEM, they can enjoy it and do it well!

What makes MicroBlocks special?

How does it differ from other languages for physical computing?

What makes it easy for beginners?

Text vs. Blocks

```
void setup() {
    pinMode(13, OUTPUT);
}

void loop() {
    digitalWrite(13, HIGH);
    delay(500);
    digitalWrite(13, LOW);
    delay(500);
}
```
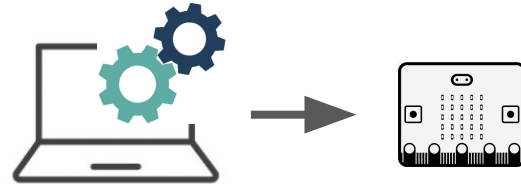
140 characters
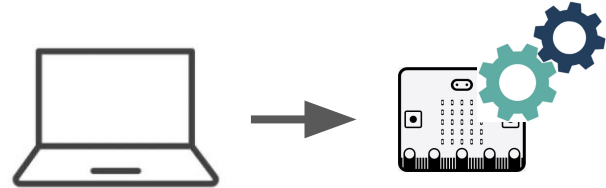

Six blocks

Liveness + Autonomy

Download (autonomous, not live):

Tethered (live, not autonomous):

MicroBocks (live + autonomous):

Demo Time!

OctoStudio

octostudio.org

Recap: What makes MicroBlocks special?

- Block-based
- Live + Autonomous
- Can read code from board
- Concurrent
- Portable

And, of course:

- Free and Open Source!

The Importance of Fun

Thank you!

https://microblocks.fun
https://bitbucket.org/john_maloney/smallvm
https://discord.com/invite/TCpHYbcvkS

Special thanks to SAP for allowing Bernat to spend half his time on MicroBlocks.