
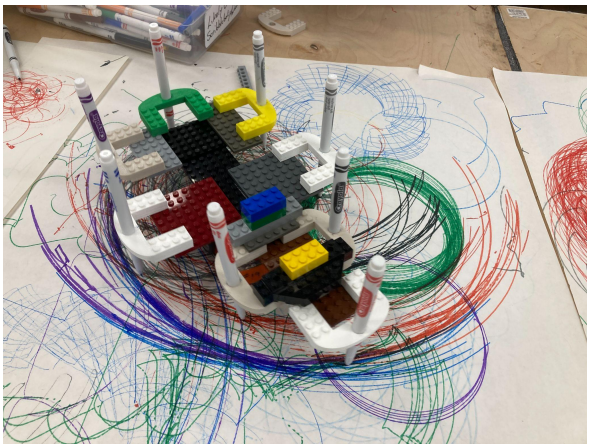

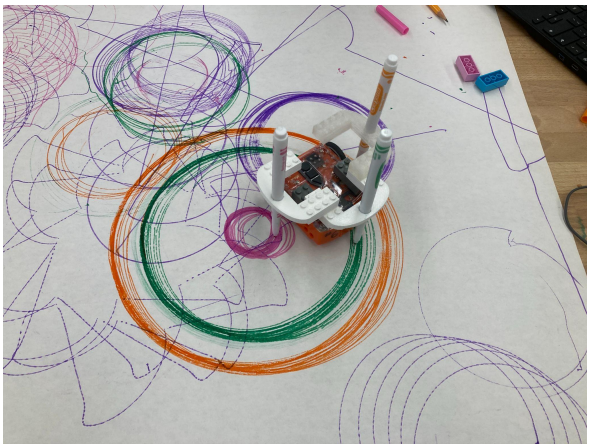

Creating Scribblebots with Edison Robots

Grade level(s) I use with: 3rd - 8th

Lesson Overview: This is a nice one day simple coding activity to introduce loops in the Edscratchapp.com coding platform and also assure that students are fully comfortable with the system for creating and downloading code to the Edison. I have about 50 3D printed pen adapters that are basically two lego blocks with a big U to hold a basic crayola marker - and students can create any repeating code to get the robot to create a piece of art. The complexity of the creation is totally flexible - can add multiple holders, use unique codes, repeat the code with different colors . . . rarely fails to engage even the most reluctant coder. I'll often have the class create a "group art piece" that can go back to hang in their classroom - works really well to share what's happening in Design Tech with our ¾ teachers. But works equally well with 7th / 8th or even with an adult workshop - pretty satisfying to see your art come together and predicting the outcome of the code is surprisingly complex due to the pen placement.

Materials and equipment I use:

- Edison Robots - 1 per person (at $40 per robot I use these since it's the only flexible platform that I can afford to go 1-1 with). Robotics is not a spectator sport (apologies to Lego Robotics).
- 3d printed penholders - lego compatible. File from thingiverse https://www.thingiverse.com/thing:2949946 Edison sells a commercial version that works but also requires their proprietary pens, a bit expensive
- Some 2 x 4 lego bricks - this allows you to put the marker holder in the front of the robot, works MUCH better here than on the back where the pen lifts up the wheels
- This holder is design for Crayola thin line markers - here is the amazon link: https://www.amazon.com/Crayola-BIN588211-Ultra-Clean-Washable-Classpack/dp/B0000AQOIV/ref=sr_1_10?crid=1H7OD5NPNP7YE&keywords=crayola%2Bthin%2Bline%2Bmarkers&qid=1691887290&sprefix=crayola%2Bthin%2Bline%2Bmarkers%2Caps%2C103&sr=8-10&ufe=app_do%3Aamzn1.fos.18ed3cb5-28d5-4975-8bc7-93deae8f9840&th=1 , sometimes I need to score the inside hole a bit with a pair of scissors but generally is nice tight fit. PLA does wear out and become loose, so I have to toss and reprint a set once a year. These markers are ever so slightly tapered - be careful trying to use a cheaper version as the fit is critical.

Related links:
I have a Scribit in my classroom, a specialized Italian drawing robot that can create really high quality dry erase marker images on my whiteboard. I love the model that students can see starting with a basic scribblebot that is uncontrollable, to this which is slightly and then see the complexity of the Scribit ot the Cricut in draw mode. Really shows the potential evolution of a technology from a basic idea.

Don't know the Edison Robot - check out https://meetedison.com/ I can't imagine trying to teach coding / robotics without these.