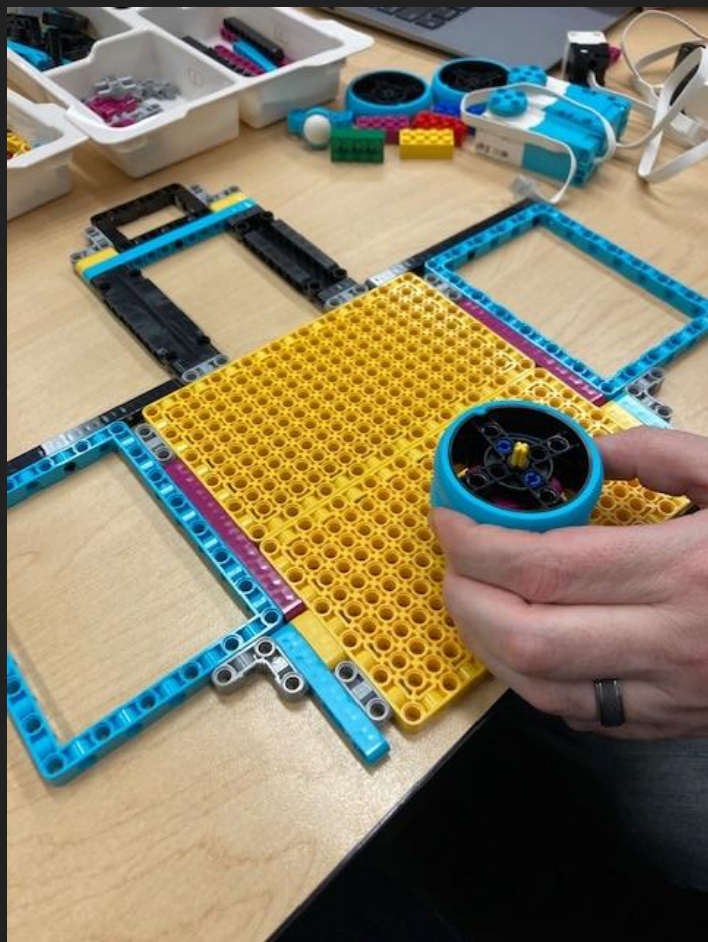


Kilgore

The Gyroscopic and
Computer Numerically
Controlled
Industrial Robot Arm

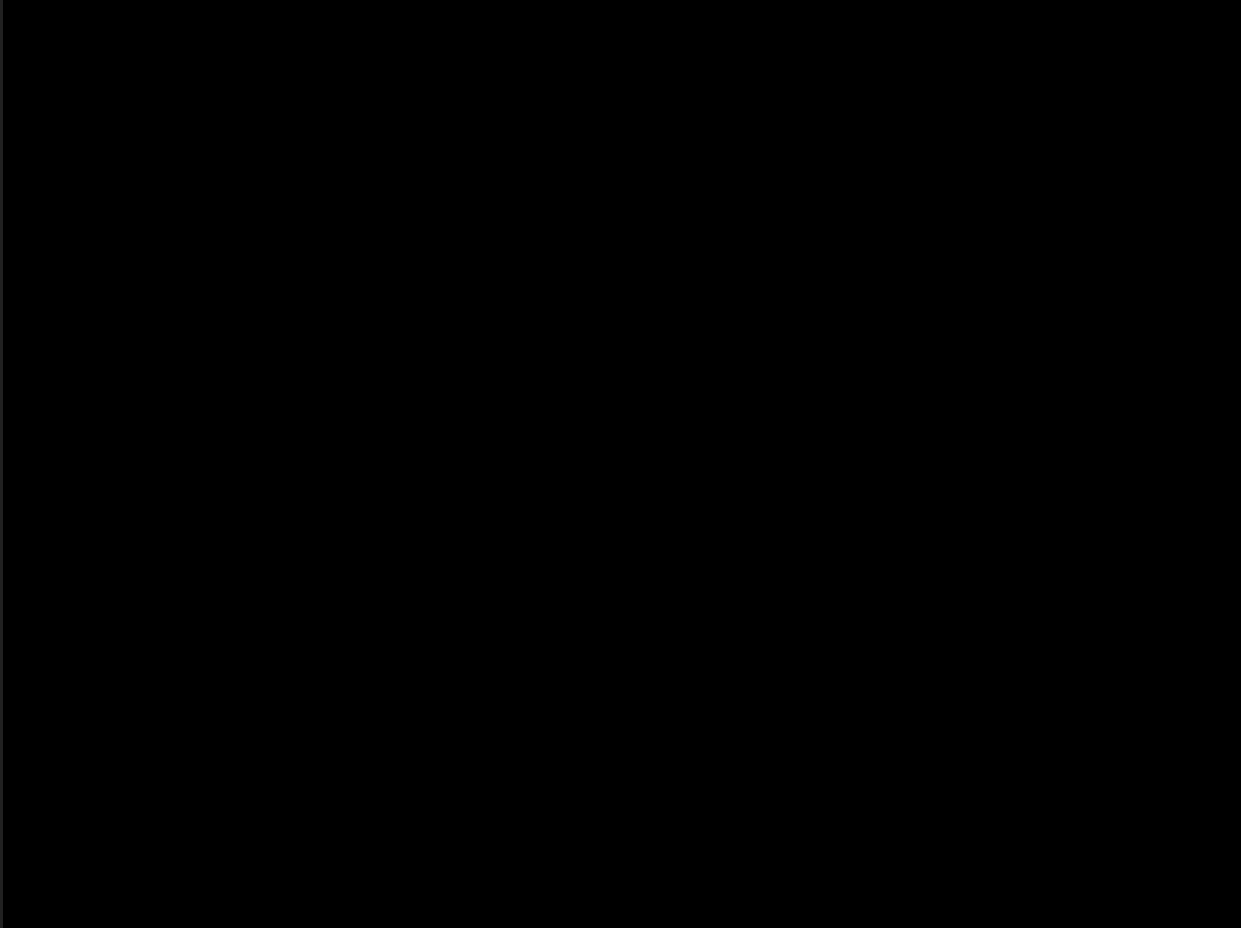
Created by Steve and Aaron



Left: Initial construction of the stage

Right: After construction, the claw picks up it's first object—a wheel

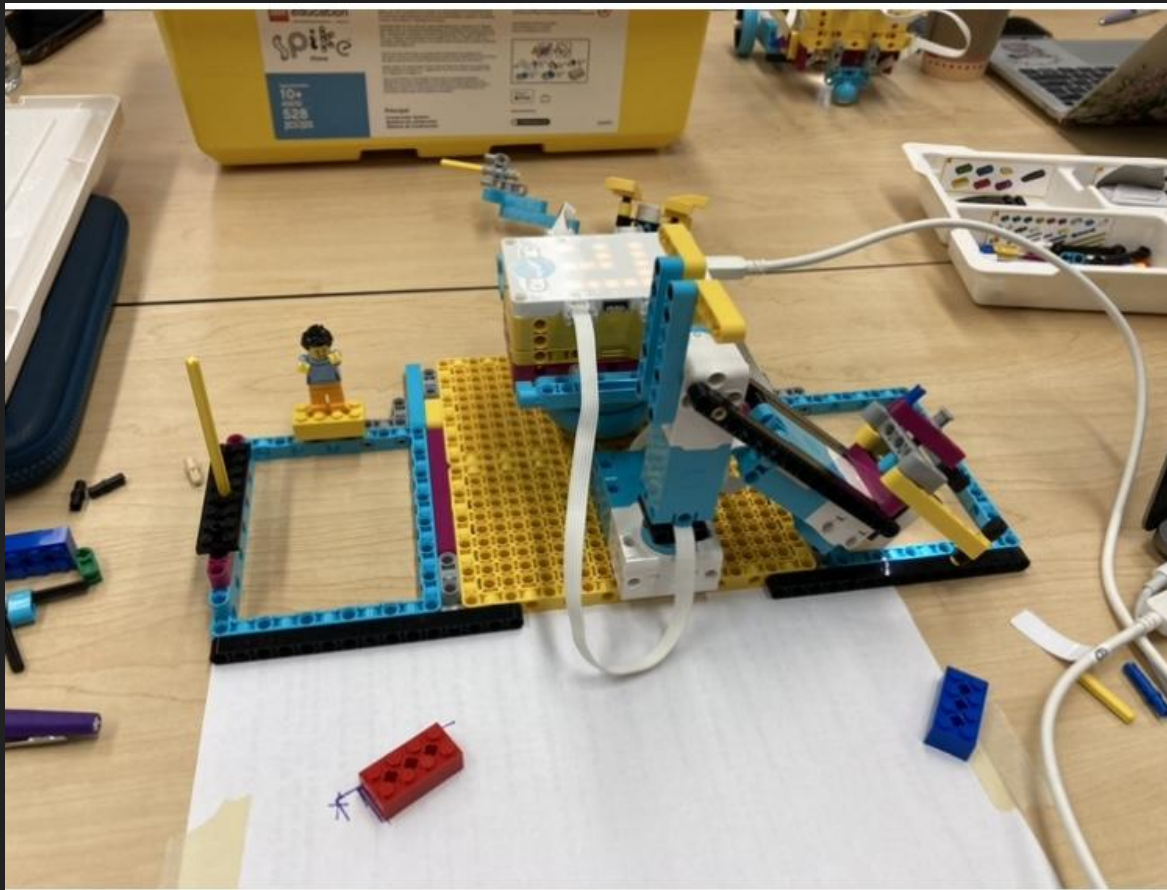




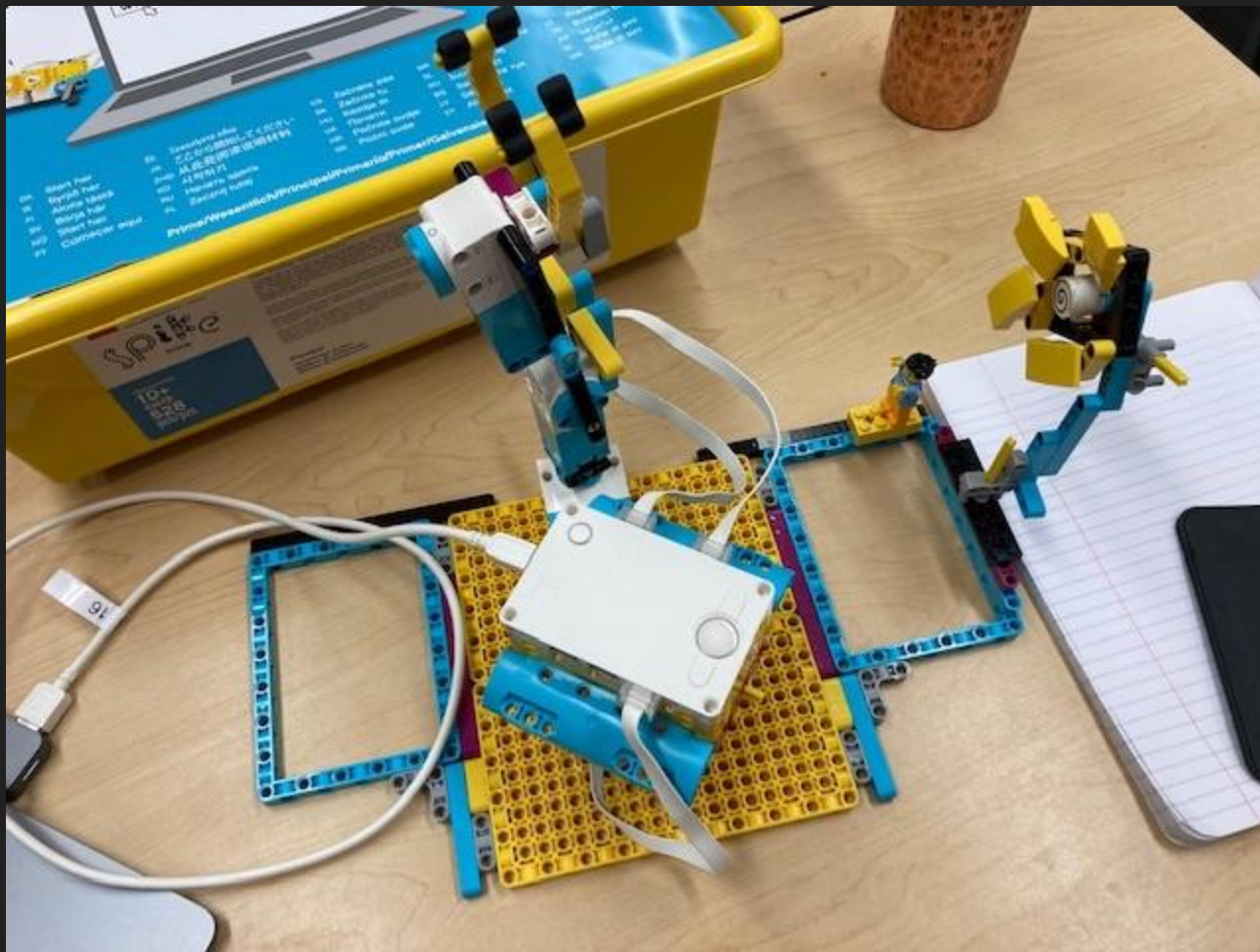
Video: Picking
up the Wheel
with the
Industrial
Claw—our first
successful
attempt.



Our idea was to have Kilgore use a light sensor to detect blue, and with varying degrees of positioning and speed, to place blue legos in a designated area.



This photo is of our attempt to position the legos for pick up. Because of the weight of the light sensor, the degrees to which we changed the positioning produced inconsistent results. We tried fixing the problem with counterweights and changing the speed—but to no avail. We decided to change course and use the gyroscope to control the behavior of the claw, only using a sequence of programmed code to pick up of the flower

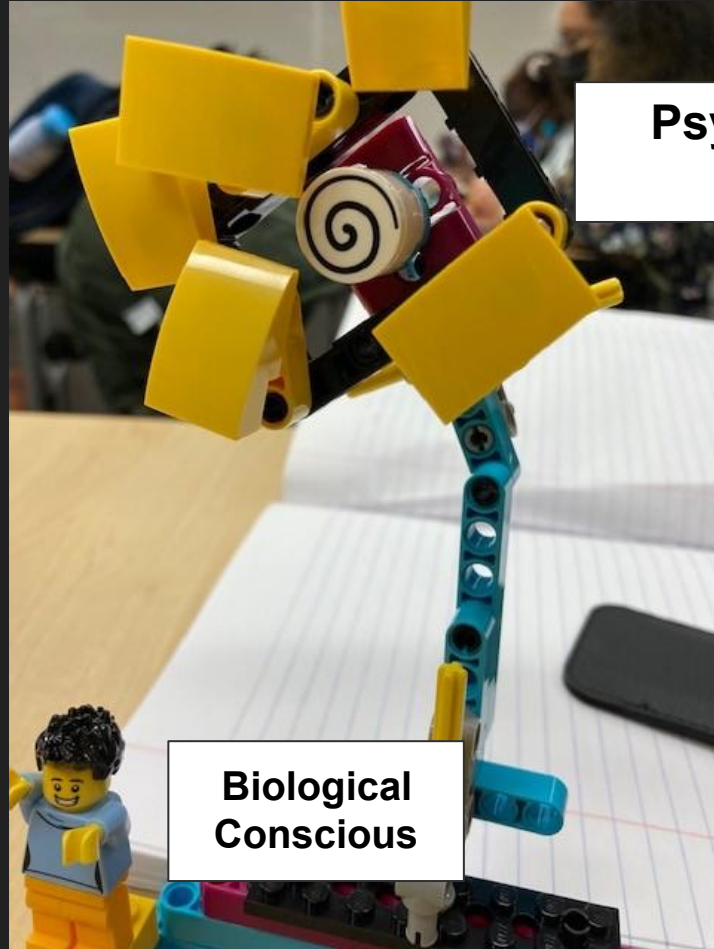


Premise of the Presentation: Kilgore The Industrial Claw plays an insecure garbage man. His biological conscious is tasked with boosting his self esteem in order to ask out S-Money, the Go-Go Dancing Robot. The act culminates with Kilgore presenting S-Money with a psychedelic flower.

Kilgore (Garbage Man)



Psychedelic Flower



Biological Conscious

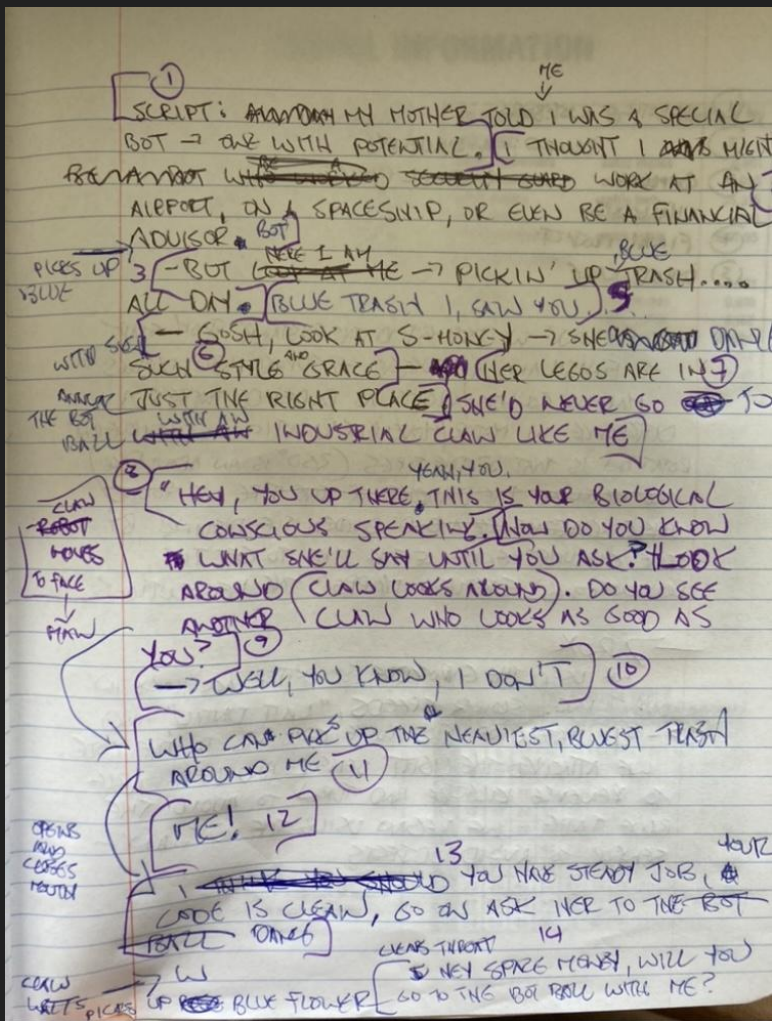
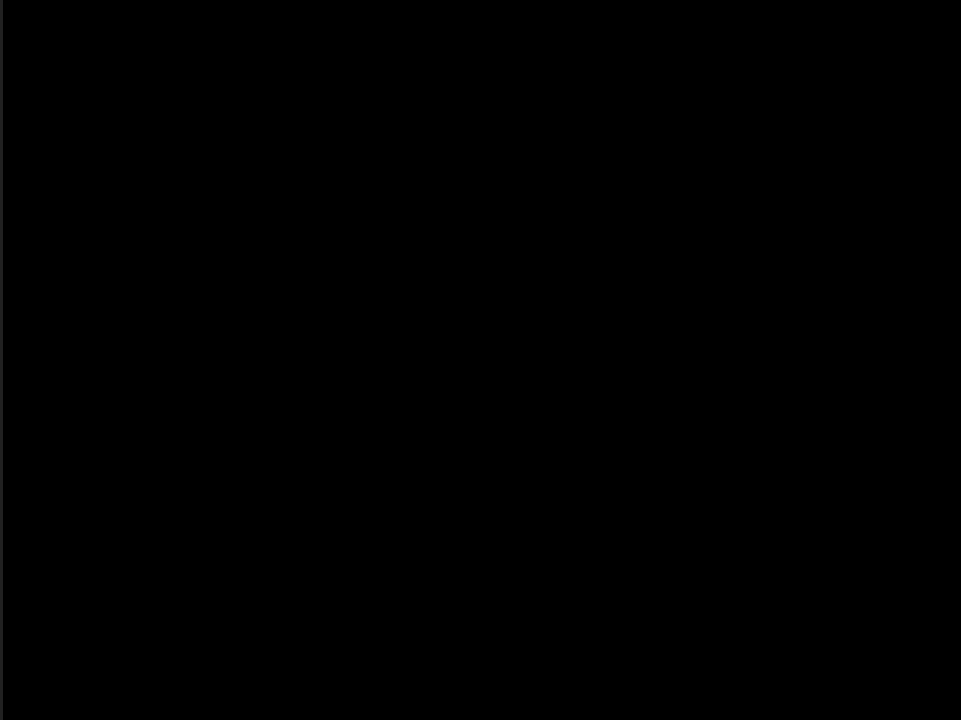


Photo taken of the original script!
Each number represents a separate
audio recording.



Video of the Presentation.
Kilgore successfully places
two pieces of trash in the
“bin” and presents S Money
with the psychedelic flower,
albeit clumsily. We
concluded that Kilgore’s
throwing of the flower was
either due to an error in
coding, or simply because
he was nervous.

Apple SPIKE File Edit View Window Help Wed May 11 11:47 AM

Control

MOTORS

- wait 1 seconds

MOVEMENT

- repeat 10

LIGHT

- forever

SOUND

- if then

EVENTS

- if then

CONTROL

- if then
- else

SENSORS

- wait until

OPERATORS

- repeat until

VARIABLES

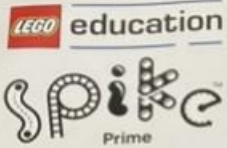
- stop other stacks

MY BLOCKS

- SPIKETM Prime

Scripts:

- Script 1:** Connect → Reset arm to start position
- Script 2:** when program starts → E set speed to 20% → E go shortest path to position 0 → F set speed to 20% → F go clockwise to position 0
- Script 3:** when right Button pressed → if flag = 1 then → B go counterclockwise to position 0 → set flag to 0 → else → B go clockwise to position 10 → set flag to 1
- Script 4:** when program starts → E go shortest path to position yaw angle → if is tilted then → F set speed to 5% → F start motor → if is tilted then → F set speed to 5% → F start motor → if is tilted then → F stop motor
- Script 5:** when program starts → Gyroscope control of the shoulder (E) → Flashing orange operational caution light →
- Script 6:** when program starts → forever loop: set Center Button light to → wait 1 seconds → set Center Button light to → wait 1 seconds
- Script 7:** when left Button pressed → stop other stacks → play sound Line 14 until done → F go counterclockwise to position 130 → E set speed to 10% → F set speed to 10% → E go clockwise to position 203 → B go clockwise to position 10 → F set speed to 15% → F go clockwise to position 55
- Script 8:** when program starts → wait 5 seconds → set volume to 100% → play sound Line 1 until done → play sound Line 2 until done → play sound Line 3 until done → wait 20 seconds → play sound Line 5 Blue until done → play sound Line 6 until done → play sound Line 7 until done → wait 4 seconds → play sound Line 8 until done → play sound Line 9 until done → play sound Line 10 until done → play sound Line 11 until done → play sound Line 12 until done → play sound Line 13 until done
- Script 9:** when program starts → *CNC flower pick up and throw



Start here

www.LEGOeducation.com/start

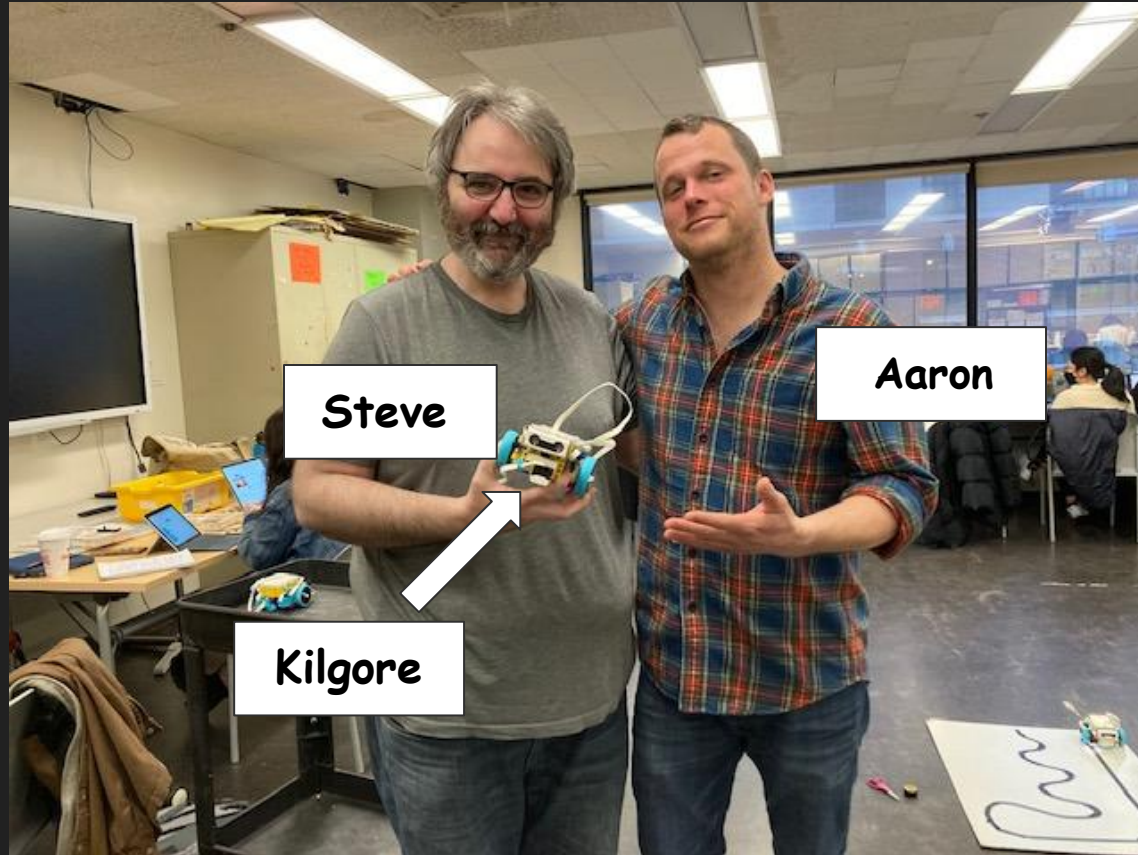


EN Start here	DA Start her	EL Ξεκινάτε εδώ	CS Začnete zde	MK Започнете од тука	LT Pradėti č
DE Hier geht's los	IS Byrjið hér	JA ここから開始してください	SK Začnite tu	SL Začnite tukaj	TR Buradan
FR Commencez ici	FI Aloita tästä	ZH 从此处阅读说明材料	HU Kezdje itt	RO Începe aici	AR ابدأ من هنا
IT Comincia qui	SV Börja här	KO 시작하기	UA Почати	BG Започнете тук	ID Mulai di
NL Begin hier	NO Start her	RU Начать здесь	HR Počnite ovdje	LV Sākt šeit	MS Mula di
ES Empezar aquí	PT Começar aqui	PL Zaczniij tutaj	SR Počni ovde	ET Alusta siit	

Prime/Wesentlich/Principal/Primario/Primer/Galvenais

As parts and potential you entered our world, Kilgore; and as parts and potential you have left it. At least you knew love, buddy. For that we are grateful.

The Proud Parents





Steve



Aaron

