Learn more at **playpiper.com** and **make.playpiper.com**

Jon Prove – Director, Channel Management
Piper Learning

Google for Education

Partner

Piper allows kids to **build, tinker and explore** in the **physical and digital** space.

To become **creators** rather than consumers of technology.

WHERE DOES PIPER FIT IN?

COMPUTER SCIENCE FOR ALL

GRADES 3 - 8

PIPER

STANDARDS-ALIGNED

K12 COMPUTER SCIENCE

NEXT GENERATION SCIENCE STANDARDS

ISTE Standards

And selected state standards:

Texas Essential Knowledge and Skills

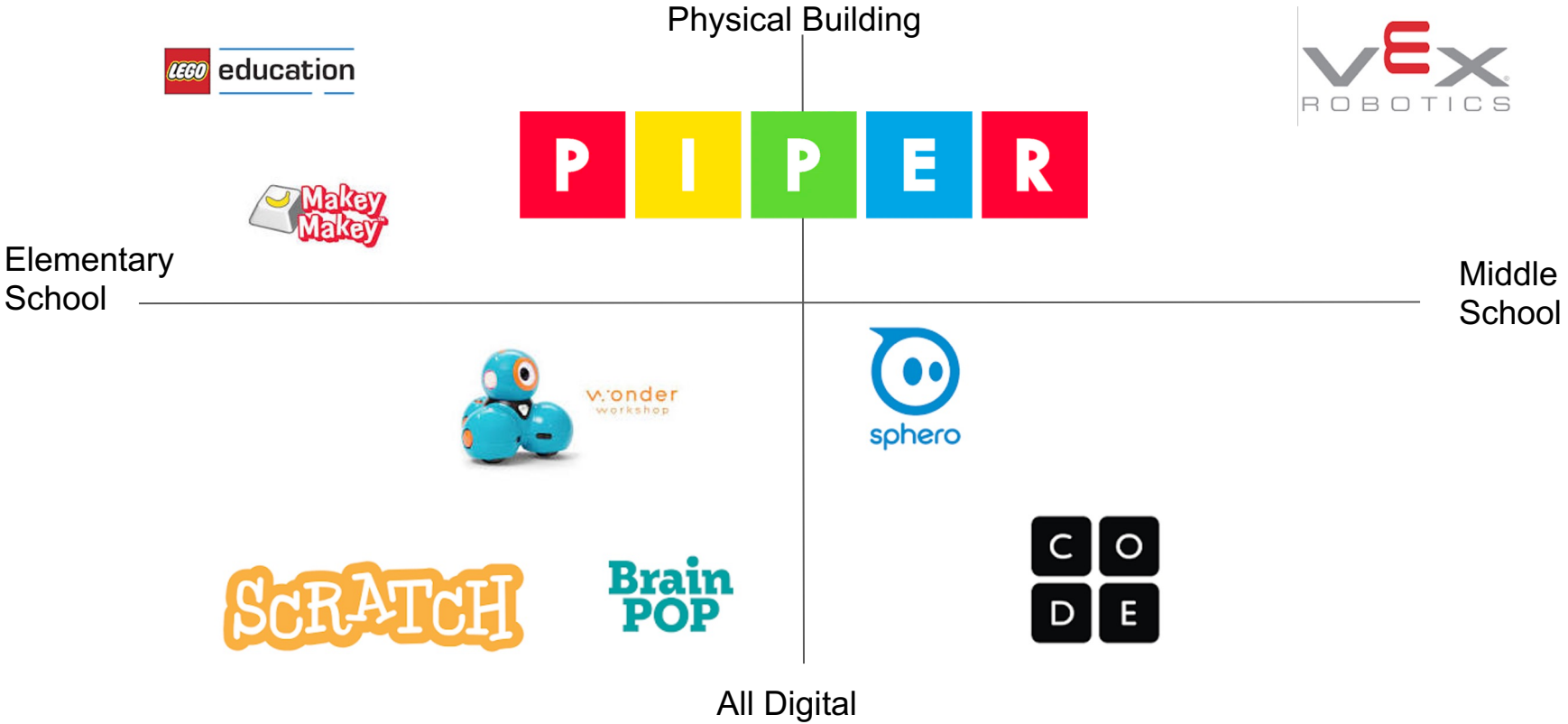
California Department of Education

Michigan Integrated Technology Competencies for Students

And Piper will develop **state standards alignment** to make my life easier!

PIPER

COMPETITIVE ANALYSIS



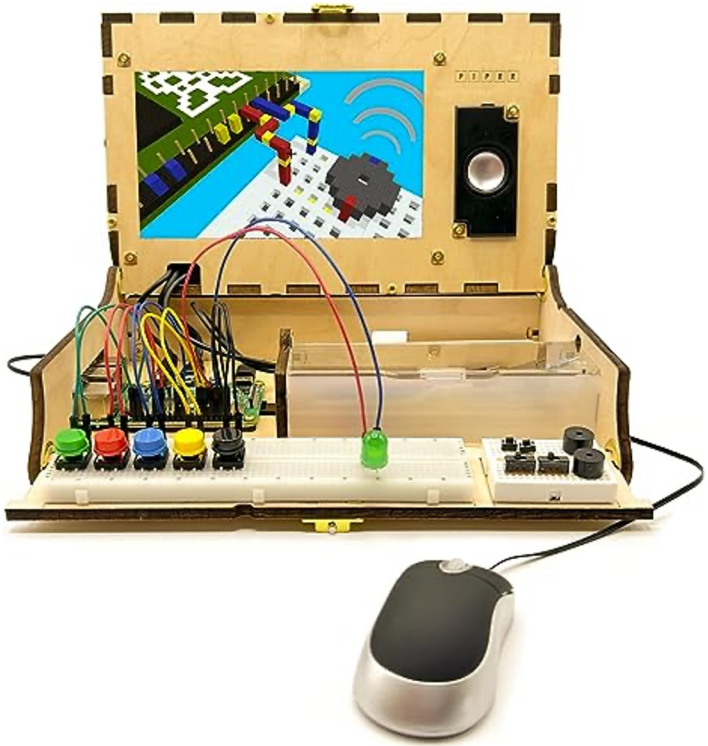
WHERE DOES PIPER FIT IN?

Expanded Learning

Bell-to-Bell

Camps & Club Organizations

PIPER COMPUTER KIT



MISSION ZERO

Build Your Piper Computer Kit V4

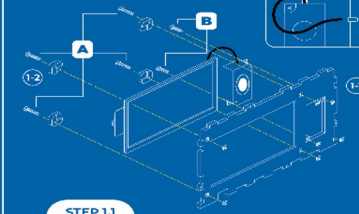
PREP

Use the USB-A to USB-C Cable and Charger to **charge the Battery** before building your Piper Computer Kit. This may take several hours.

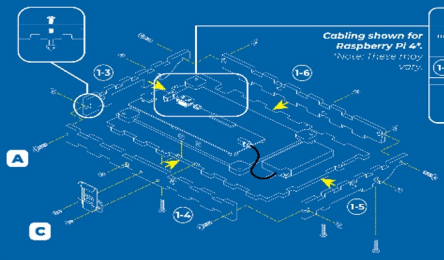
*Note: USB type of Cable and Charger May Vary.

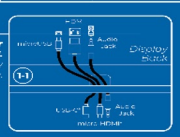
USB to USB* | Charger*

1

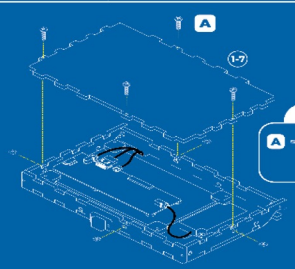


STEP 1.1

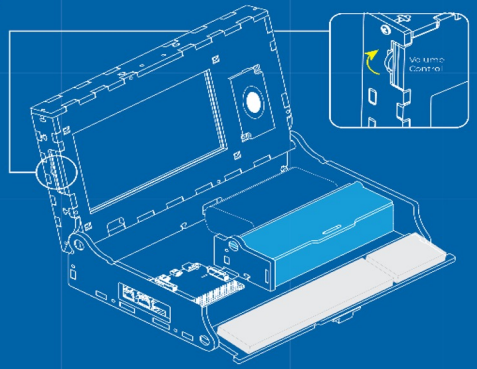




STEP 1.2

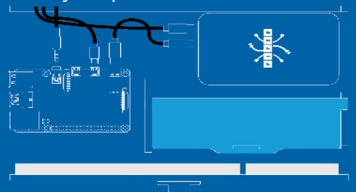


STEP 1.3

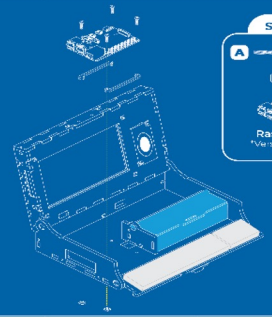


4

Connections from screen assembly in Step 1



Cabling shown for Raspberry Pi 4.*
*Note: For Piper Computer Kit (B, HDMI and Power Cables Vary.

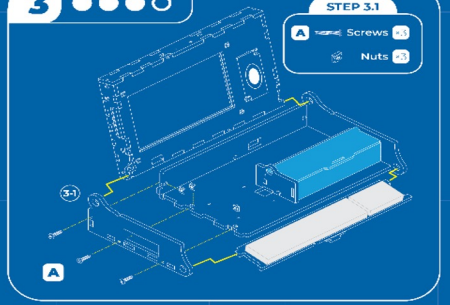


STEP 4.1

ELECTRONIC INVENTORY

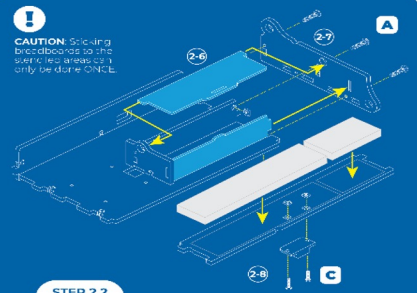
MECHANICAL INVENTORY

3



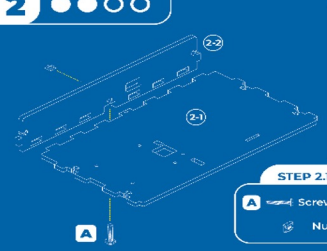
STEP 3.1

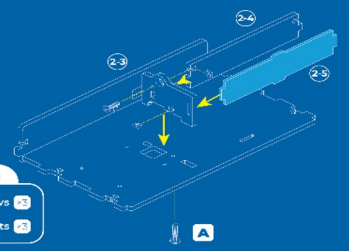
CAUTION: Sticking breadboards to the switches already only be done ONCE.



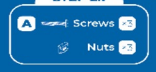
STEP 2.2

2





STEP 2.1



PC04 Blueprint (V1.2, August 2022)

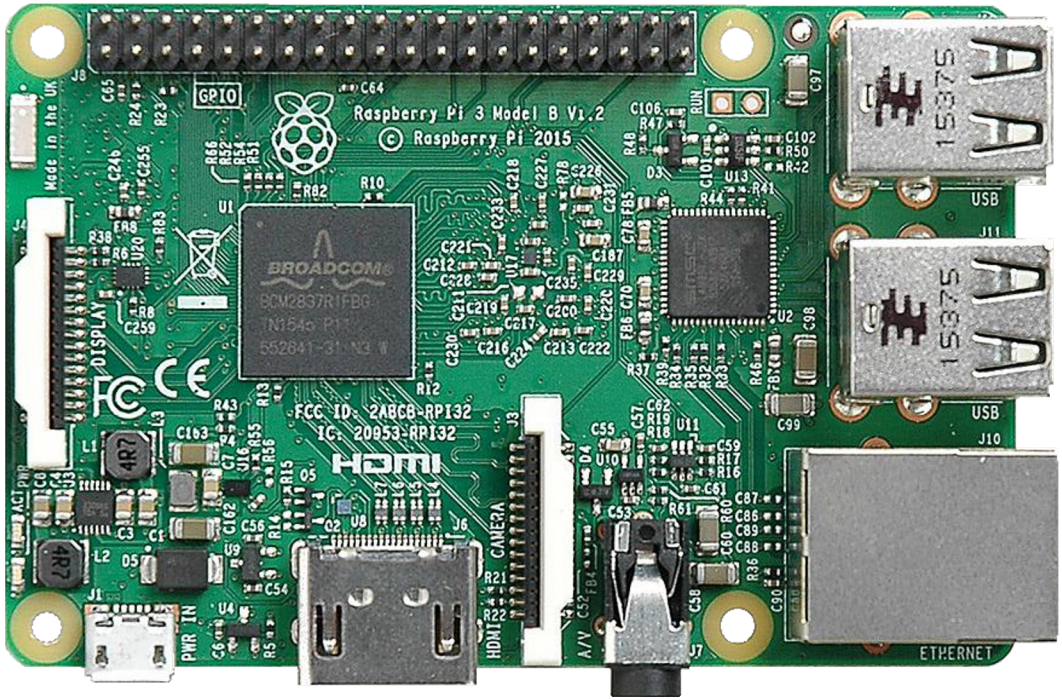
CURRICULUM OVERVIEW

	Build Your Computer	Discover Electronics in StoryMode	Learn to Code in PiperCode	Explore w/ art and sensors	Invent w/ Learned Skills
PHASE	1	2	3	4	5

But what's the **timeline** to complete this program in the classroom?

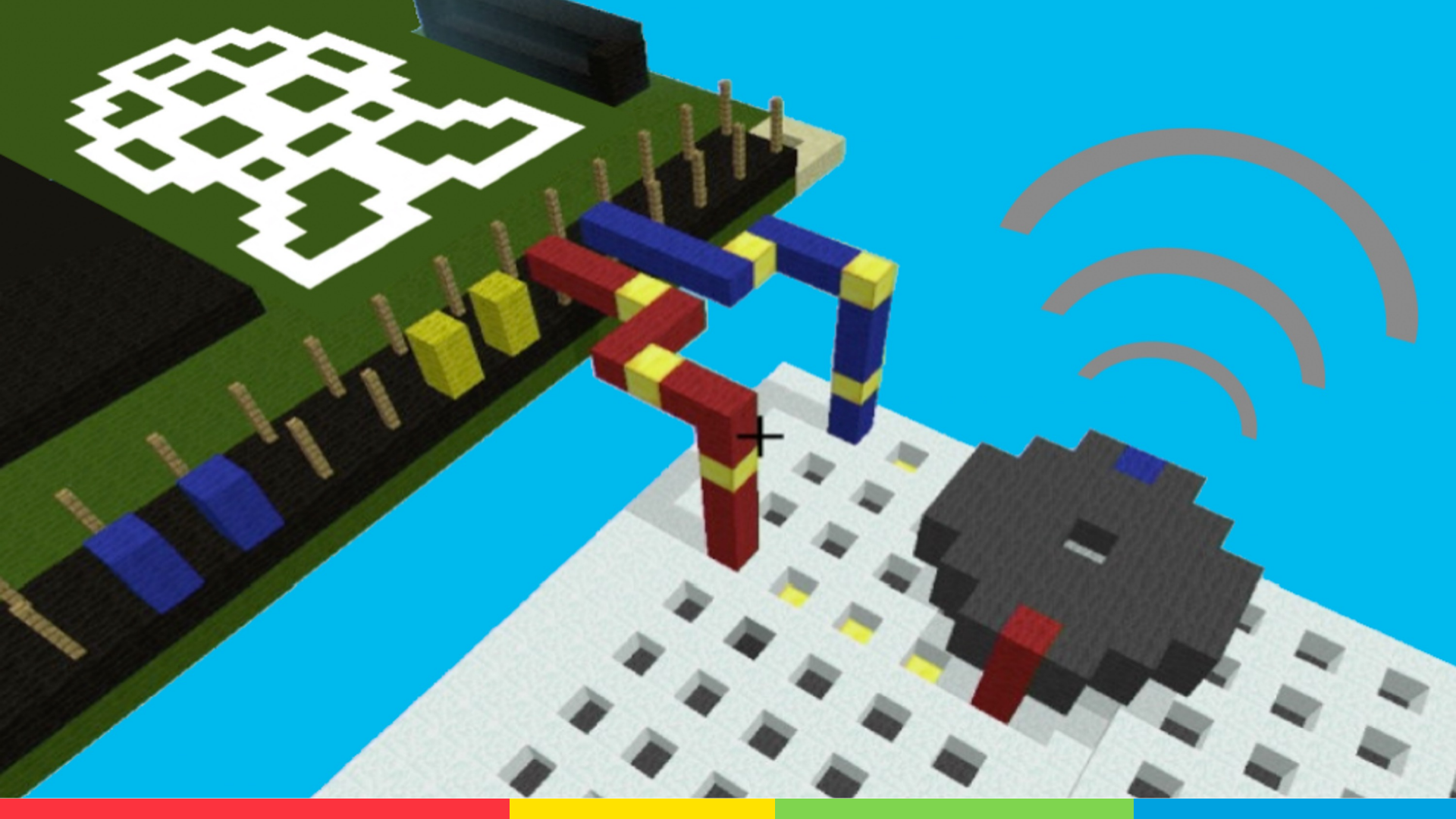
WEEK 1	WEEK 2	WEEK 3	WEEK 4/5	WEEK 6

PIPER



POWERED BY Raspberry Pi

SanDisk Ultra 16GB microSDHC I



Piper Computer Kits are designed to be re-used up to

20×

2 Students to 1 Piper Computer Kit

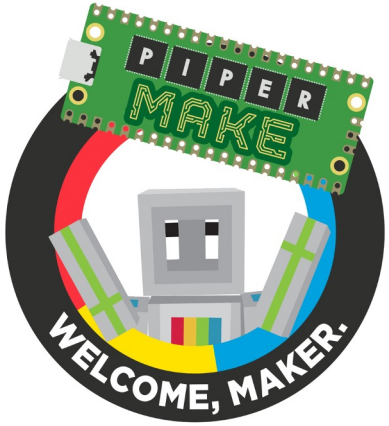
20 x Disassemble and Rebuild

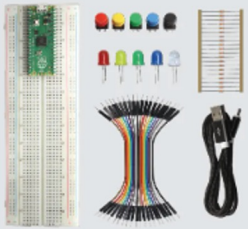
Up to 40 children over the liftime of the Computer

COST PER STUDENT: $9.98

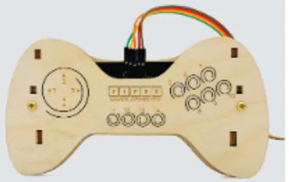
works with chromebook

Google for Education
Partner

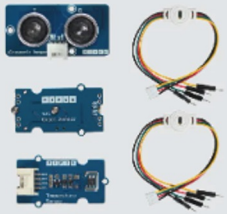




STARTER KIT



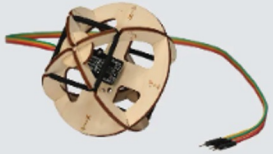
GAME CONTROLLER



SENSOR EXPLORER

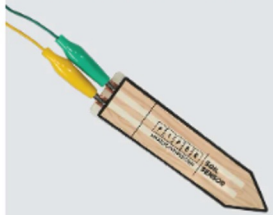
LIGHT SHOW

BEAM BREAK

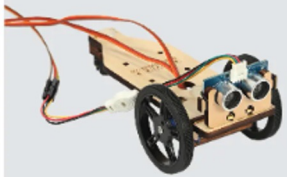


MOTION BALL

SOLAR HOUSE

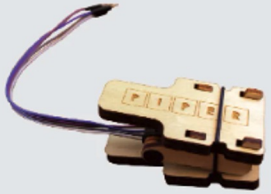


SOIL SENSOR



ROBOTIC ROVER

ROBOTIC WALKER



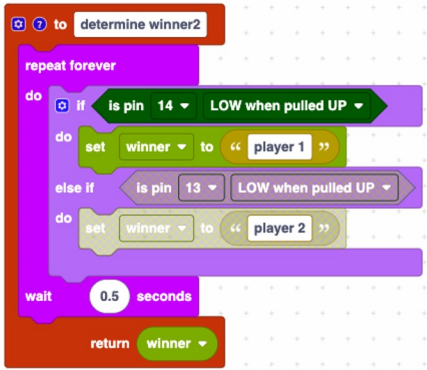
HEART RATE SENSOR


PIPER MAKE
HELP
HOME
STORE
WELCOME, MAKER
SETTINGS
SIGN IN
GETTING STARTED
START MISSION
BLINK
START MISSION
SCROLL DOWN OR RIGHT ARROW FOR MORE
C LIGHT
SETUP MY PICO
YOU ARE HERE.
STARTER EXPEDITION
EXPEDITION TELEPORT MENU
SHOW ALL
STARTER ROBOTICS GAMING SENSORS MOTION ENERGY DESIGN
MISSIONS
GETTING STARTED
BLINK
TRAFFIC LIGHT
REACTION GAME
SILLY STORIES
TALLY
GUESS MY NUMBER
BOUNCY NUMBERS
SPEAK LIKE A MACHINE
CREATIVE MODE
STORY
PRIVACY
TERMS OF USE
© 2021 Piper Learning, Inc.

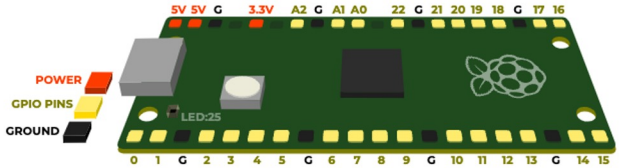
START

- Chip
- Logic
- Loops
- Variables
- Values
- Lists
- Functions
- Sensing
- Actions
- Sounds

CONNECT



Raspberry Pi Pico



DIGITAL VIEW | CONSOLE | DATA | PYTHON | EXPLORE

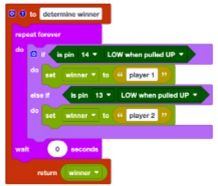
TUTORIAL | LIBRARY

Reaction Game

Step 14: Keep Checking

I know how to make the code keep repeating! We just need a loop function!

Let's add a loop function to the check steps. Drag out **repeat forever** block and change the **wait** time to **0**.



Wait how come I'm second in the code? Doesn't that mean the code will check for your button before it checks for mine?? Not fair!

Technically you'd be right, Pip! But since that wait time is set to zero, the loop happens so quickly that any tiny differences in our reaction times get picked

PREVIOUS NEXT

Piper Make Kits are designed to be re-used up to

10×

1 -1 Student to Piper Make

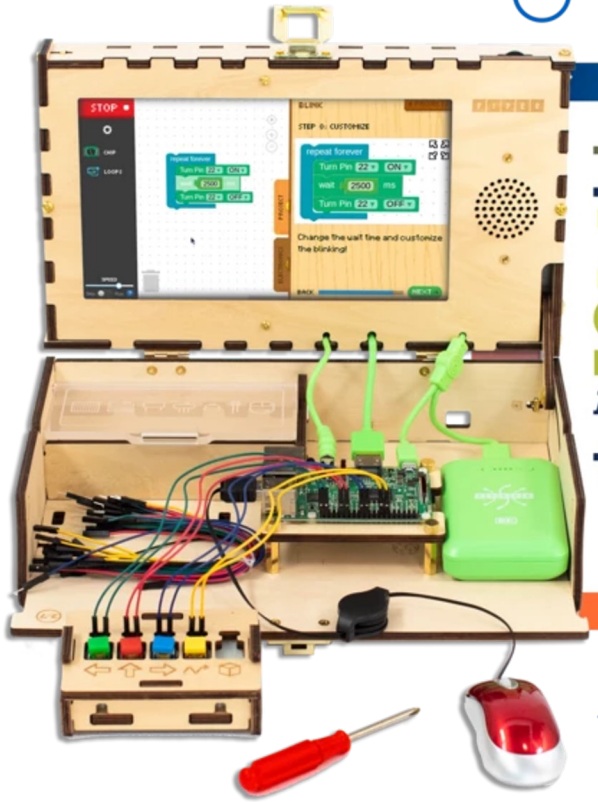
10 x Students/ Piper Make

100 Students/ Bundle

COST PER STUDENT: <$10

“Top one percentile of over 1,100 STEM items reviewed since 2014”

PIPER



TECH & LEARNING

BEST of SHOW AT ISTE 2019

WINNER

PIPER

Kids Judge Bett

2024 WINNER

PIPER

Play Piper's winning entry captivated students from Reedings Junior School, Sawbridgeworth, Hertfordshire, UK.

The award recognizes Piper's commitment to sustainability, utilizing wood and recyclable materials in its interactive computer kit.

The pitch

The **Piper Computer Kit** is our flagship product. It's a computer that kids build themselves. We provide blueprints with every product bc each has a build component. It can be disassembled and built up to 20 times so with a 2-1 ratio you're looking at serving 40 children with one computer kit over its lifetime.

Once it is assembled, there is a game within Minecraft **for Raspberry Pi** whereby the kids must stop a giant cheese asteroid from crashing into earth. To do that they will have to complete a series of **physical computing** challenges to progress through the game and to ultimately save the world.

Piper Code is included in the Computer Kit which is a series of missions that incorporate coding for physical computing.

There are 32, standards aligned, lesson plans and over 60 hours worth of content on each computer kit.

The **Piper Make** product line is a series of individual project kits, all under $100, that have career centric Missions/ lessons. They work seamlessly with Chromebooks but will work on any computer that runs Edge or Chrome browsers. All make products run via **make.playpiper.com –** again we're coding for physical Computing. Make Products are recommended as 1 to 1 and can be disassembled and reassembled up to 10 times.

Important Links:

1. Piper Booklet - January 2024 | PDF to Flipbook (heyzine.com)
2. Piper Computer Kit Playbook (Teacher Guide)
3. Piper Make Playbook (Teacher Guide)
4. www.PlayPiper.com
5. Make.PlayPiper.com

Jon Prove

Director, Channel Management

jon@playpiper.com
512.745.7456

Additional Information

INSPIRATION HAS NO BOUNDARIES

Build, Learn, Invent With Piper

Introducing the **Piper Make Starter Robotics Expedition Kits** - a hands-on experience with building and coding to create the next thing at home.

Piper Make empowers your child with **STEM* education opportunities**, inspiring them to build, learn, and invent with technology.

SHREE BOSE

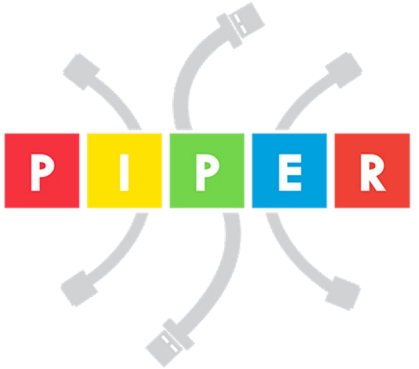
CEO, Piper Learning, Inc.
(San Francisco, California)

PIPER

BUILD. LEARN. INVENT.

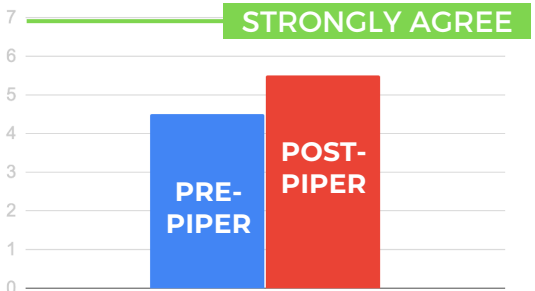
Kids need a better, more engaging way to play and build with technology.

So, we created



PIPER BOOSTS FOR STUDENTS

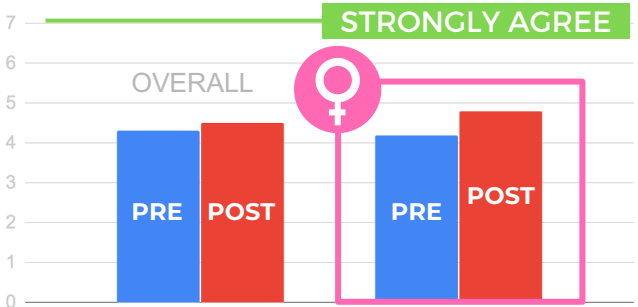
DIGITAL FLUENCY



"I Am Able to Build a Working Computer"

Student's self-scoring on understanding of electronics, reading visuals to build, and technological troubleshooting.
(1=Strongly Disagree, 7=Strongly Agree)

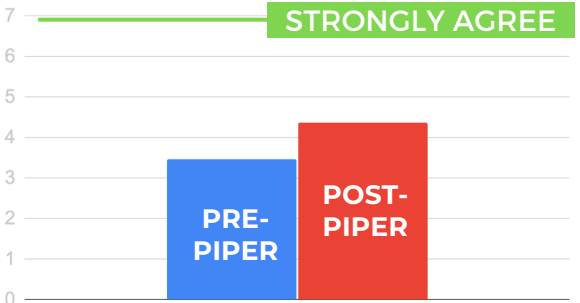
GIRLS' PROBLEM SOLVING CONFIDENCE



"I Like to Solve Difficult Problems"

Girls who participated in the Piper Computer Kit self-reported a greater comfort with cognitive dissonance in approaching challenges in the classroom when problem-solving
(1=Strongly Disagree, 7=Strongly Agree)

EXPLAINING CRITICAL THINKING



"I Am Good At Explaining How I Do My Work"

A 26.4% increase was reported for metacognition while solving a computer science problem.
(1=Strongly Disagree, 7=Strongly Agree)

Kings Canyon Summer Learning

Goal was to improve STEAM learning outcomes for high-needs students—all while limiting the impact on teachers and staff.

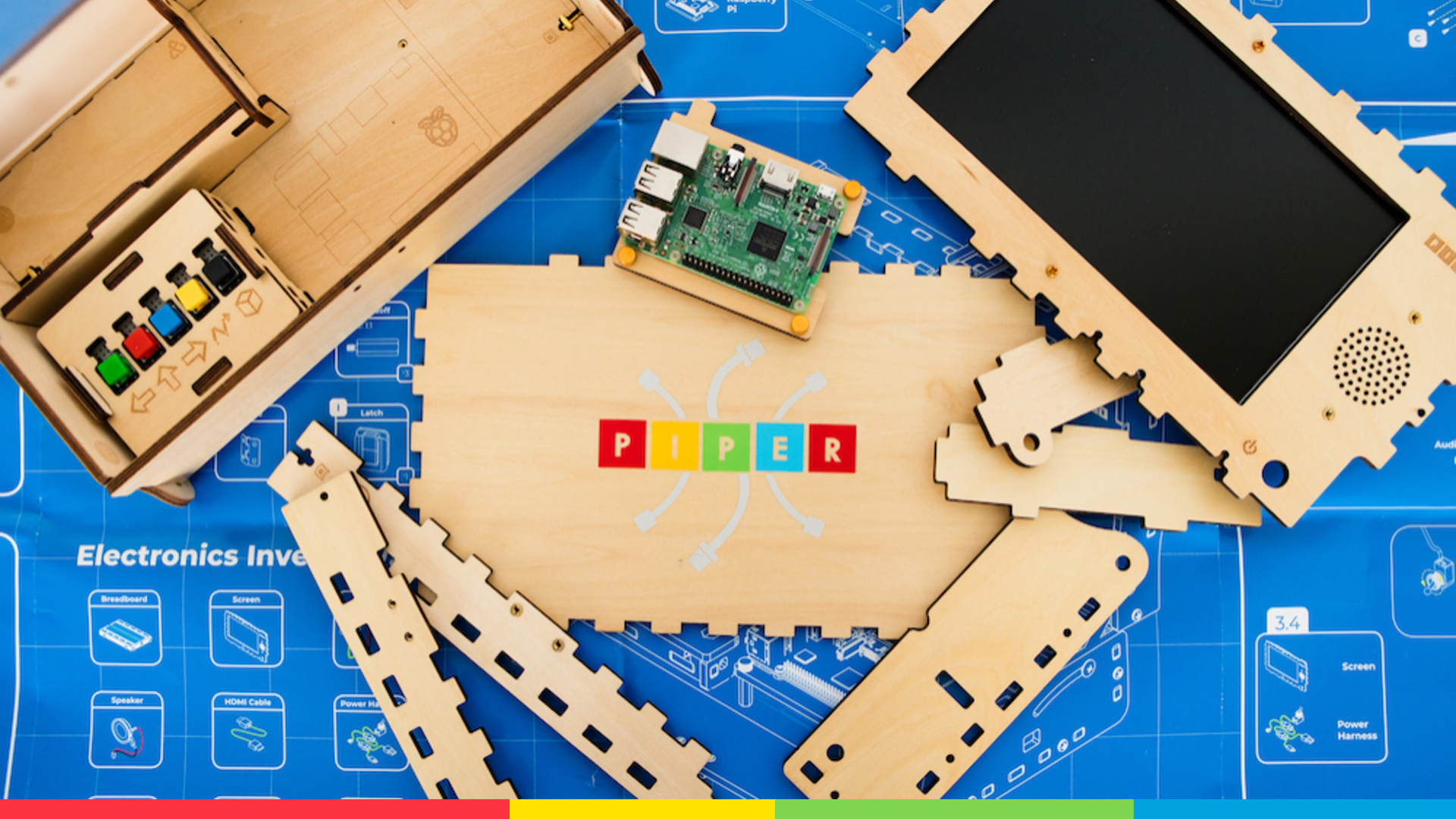
"I was able to just turn the kids loose."

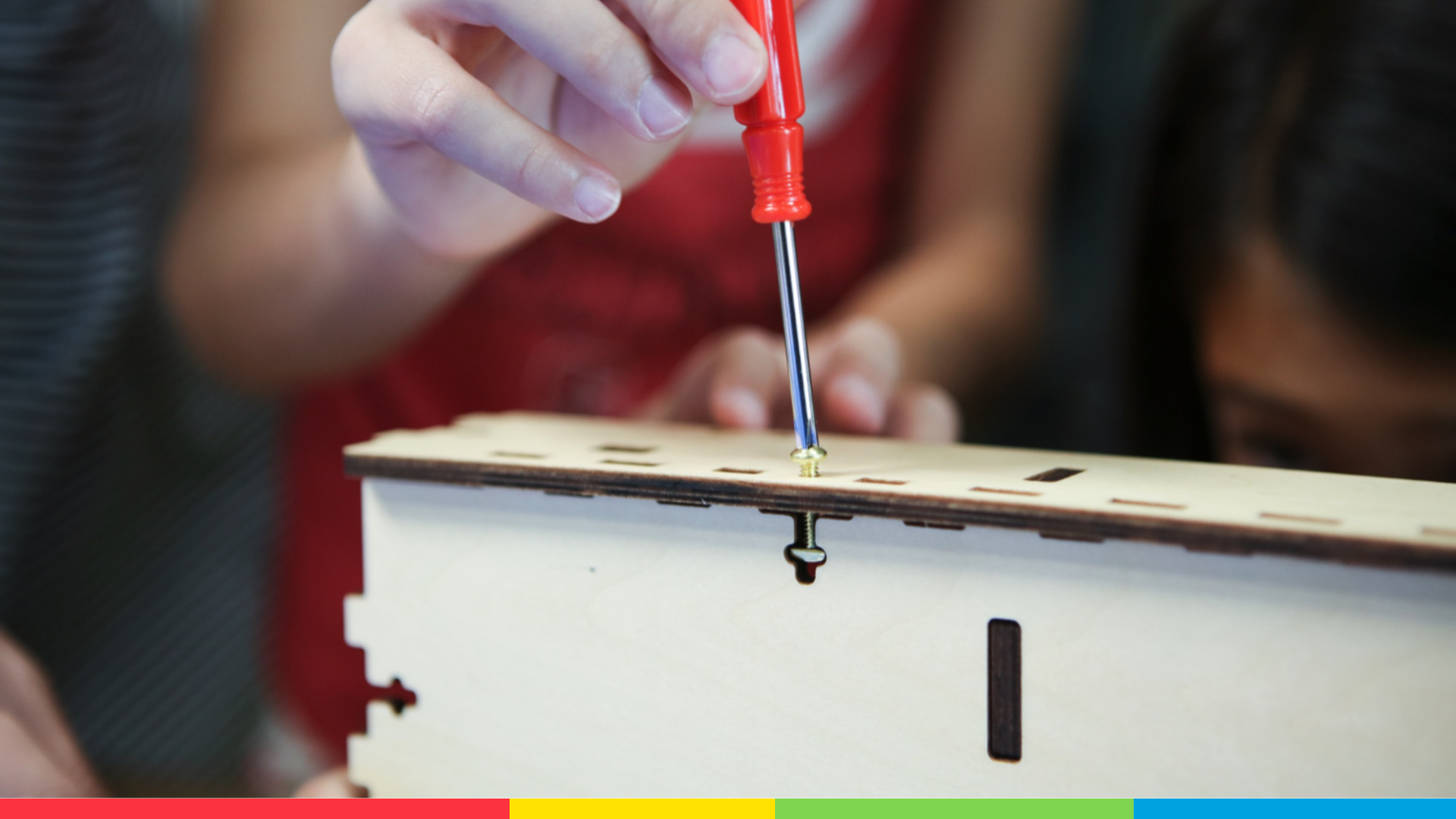
- Felicia Loera

"The kids loved it. Absolutely loved it. They told their friends that they need to come to summer school."

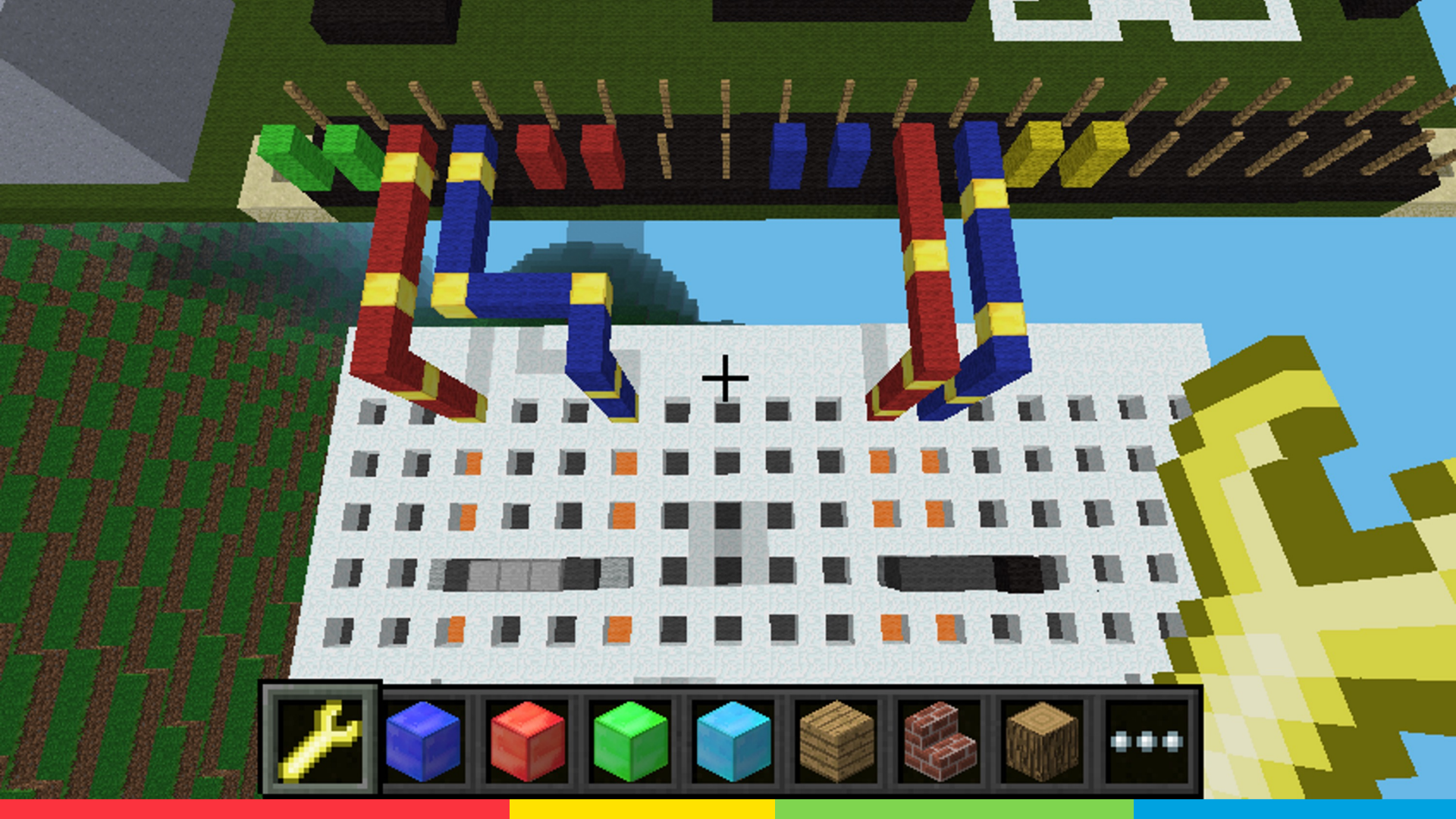
- Gwenn Southerland

PIPER


PIPER
Electronics Inve
Breadboard
Screen
Speaker
HDMI Cable
Latch
3.4
Screen
Power Harness




GO
CARDINAL




PIPER MAKE
Settings
Sign In
START
Chip
Logic
Loops
Variables
Values
Lists
Functions
Sensing
Actions
Sounds
CONNECT
TUTORIAL
LIBRARY
Reaction Game
Step 2: Ready to Play?
Warm up your fingers my friends, because in this project, we'll be testing your lightning fast reflexes!
Let's build a game where Piperbot and I will see who has the fastest reaction time!
Click NEXT to get started.
PREVIOUS
NEXT
DIGITAL VIEW
CONSOLE
DATA
PYTHON
EXPLORE


MINECRAFT
PI EDITION