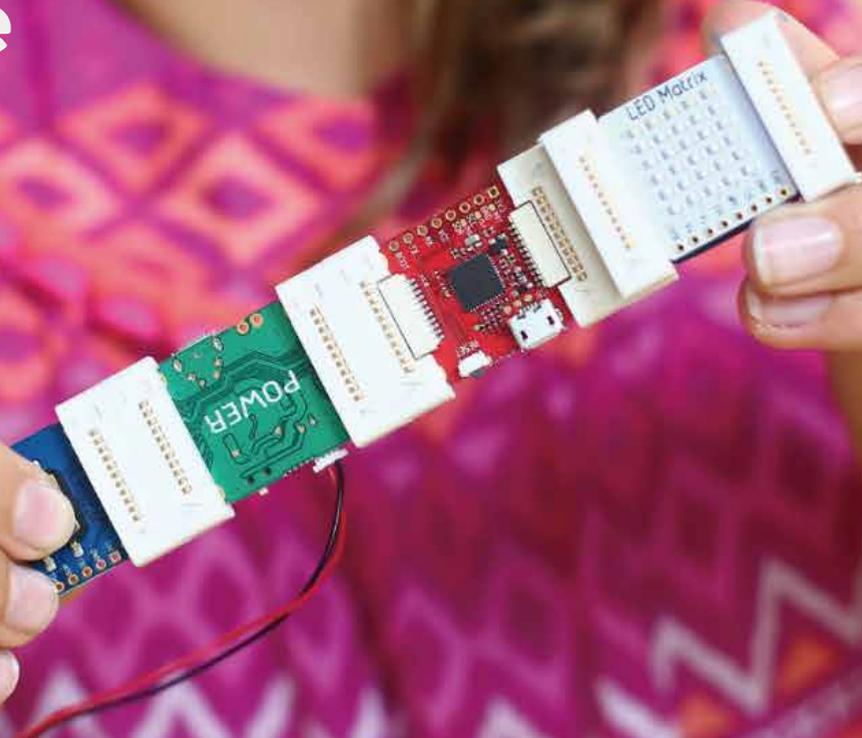


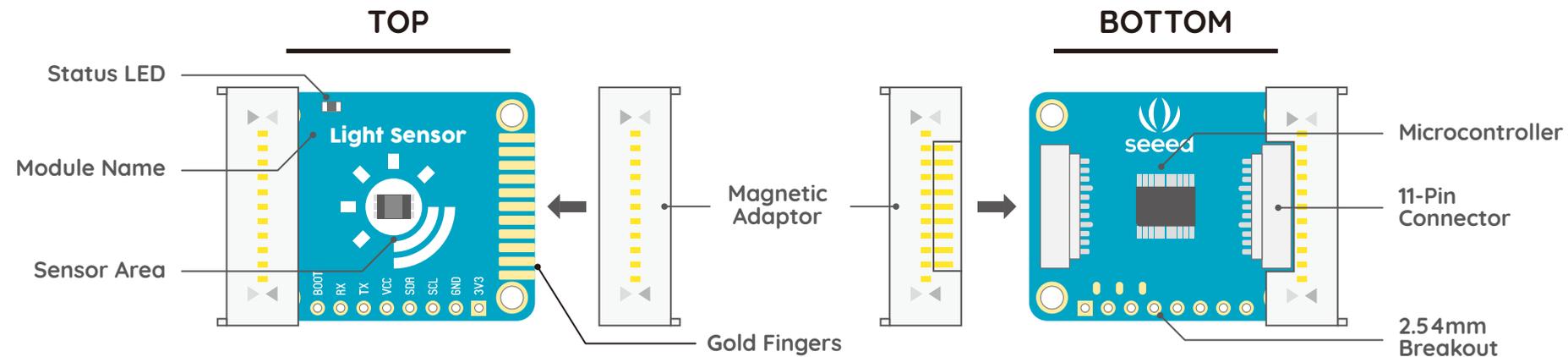
Your
**Invention Journey
Starts Here**



Grove Zero

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Status LED

The status LED flashes if your Input module is idle and not paired to an output.

Module Name

There are many different types of Grove Zero modules, but they are all labeled so you don't get confused.

Sensor Area

The main component of a Grove Zero module will always be placed in the centre so you can learn about it's electronics easier.

Magnetic Adaptor

A detachable magnetic adaptor that allows you to snap the modules together with the magnets. It works in different ways, regardless of the orders.

Gold Fingers

This is where you can connect the 3-way magnetic adaptors.

11-Pin Connector

Grove Zero modules always have at least two 11 pin connectors so that you can chain them together using wires.

Microcontroller

The on-board microcontroller stores a preset program that makes the module easier to use. It also allows you to update your modules with more rich functions in the future if there is a hardware update.

2.54mm (0.1") Breakout

Those small holes provide another way to connect your Grove Zero modules. Like jumper wires or headpins. **DO NOT use these if you don't know how to solder.**



Super flexible Magnetic Adaptor

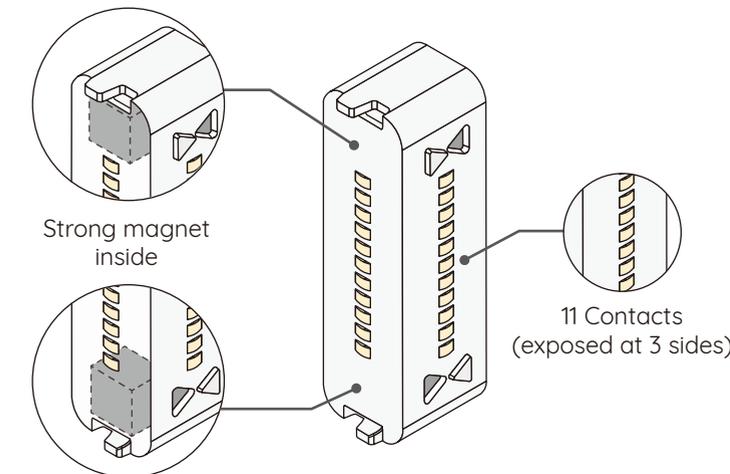
Inside each Magnetic Adaptor, there are a pair of strong magnets and 11 specially designed conductors that make it a super flexible connector which can be connected in many different ways, **without concerning about orders, directions, or having the modules all facing up.**



Side-to-side Connection



Stack



Remove the Magnetic Adaptor



Be extremely careful while detaching the magnetic adaptors from the Grove Zero modules, especially the first time. **Ask for help or use tools if needed. DO NOT** take the adaptors apart with force! You might hurt yourself or damage the board. Without the adaptor, you can use cables for connection, in case you need extra length for the circuit.

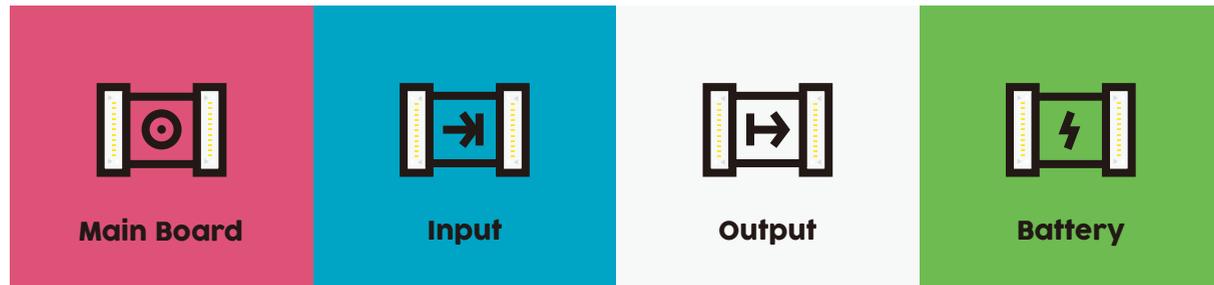
Short circuit hazards



The exposed 11 conductors of the adaptor might be subjected to an electrical short circuit. Shorting the circuit **will NOT hurt yourself** (as it's low voltage) but it will cause Grove Zero modules to malfunction. To avoid this please keep it clean and away from any conductive materials such as water, dirt, small piece of metal, etc.



Grove Zero modules are color-coded by functions



Pink Module is the Main Board which is like the brain to others. It receives signals from the Blue Module, and give instructions to the White Module.

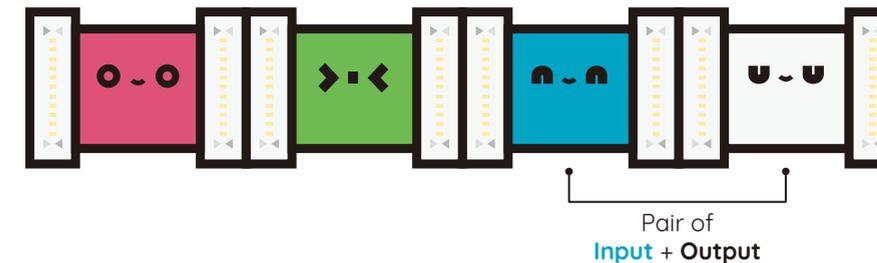
Blue Modules are the Input Modules. They tell the Pink Module (the brain) what is happening in the real world.

Green Module is the electrical power source for the other modules.

White Modules are the Output Modules, they just do things like make a sound, light up, and move, etc.



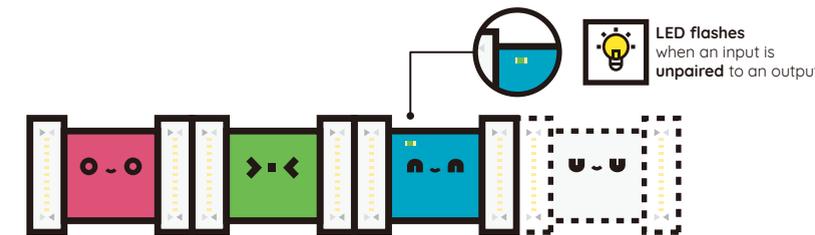
Plug and play by pairing up **Input** + **Output** combinations



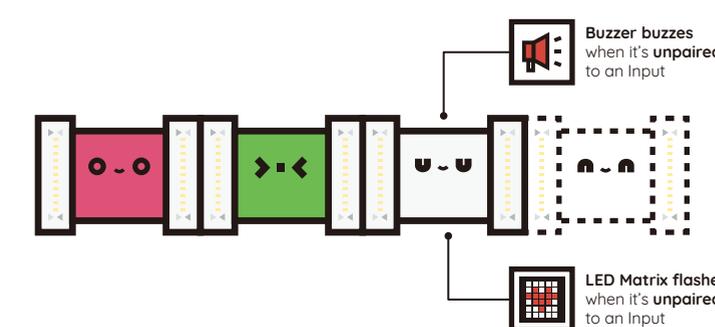
All the Grove Zero modules are programmed to be plug-and-play if you pair up **Input** and **Output** in the circuit. It helps you learn about the electronics very easily, as well as being able to make simple creative project out of it.

Do not worry about orders or directions, just power up the circuit and they will run immediately.

Unpaired **Input** in the circuit



Unpaired **Output** in the circuit





1



1. Connect with Magnets

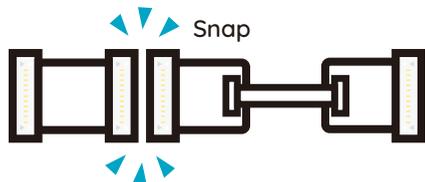
The easiest way to connect your Grove Zero modules is snapping them together with MAGNETS! Try it in stacks, arrays, or both. Do not worry about the module orders, they'll work as long as they can be snapped together.

2. Connect with Cables

A cable is useful when you need extra extensions. You can use the Grove Zero cables to chain the modules together in any orders or orientation.



3



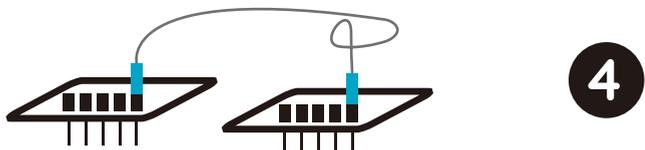
3. Connect with Magnets & Cables

As the 3-way adaptor is detachable, you can take one off and use a cable instead. In this way, you can have the other side for quick magnetic connection, while being able to extend your circuit to fit your project.

4. Connect with Breakout Holes

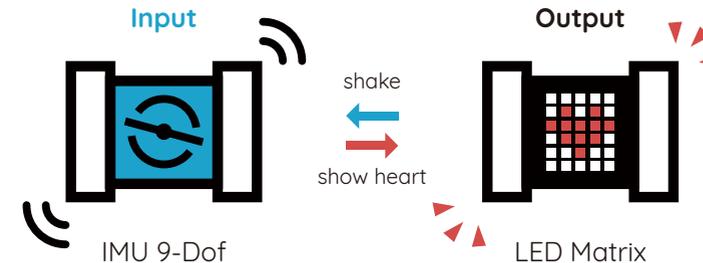
The breakout holes can come handy sometimes. Once you learned how to solder, you can use the breakout holes for jumper wires, conductive wires and head pins to make a firm connection.

Note: Soldering things on your module may have interference for the magnetic connections between the modules. And DO NOT use this way if you don't know how to solder.



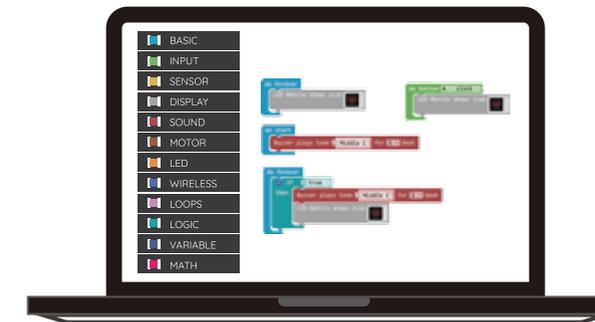
Module Matcher

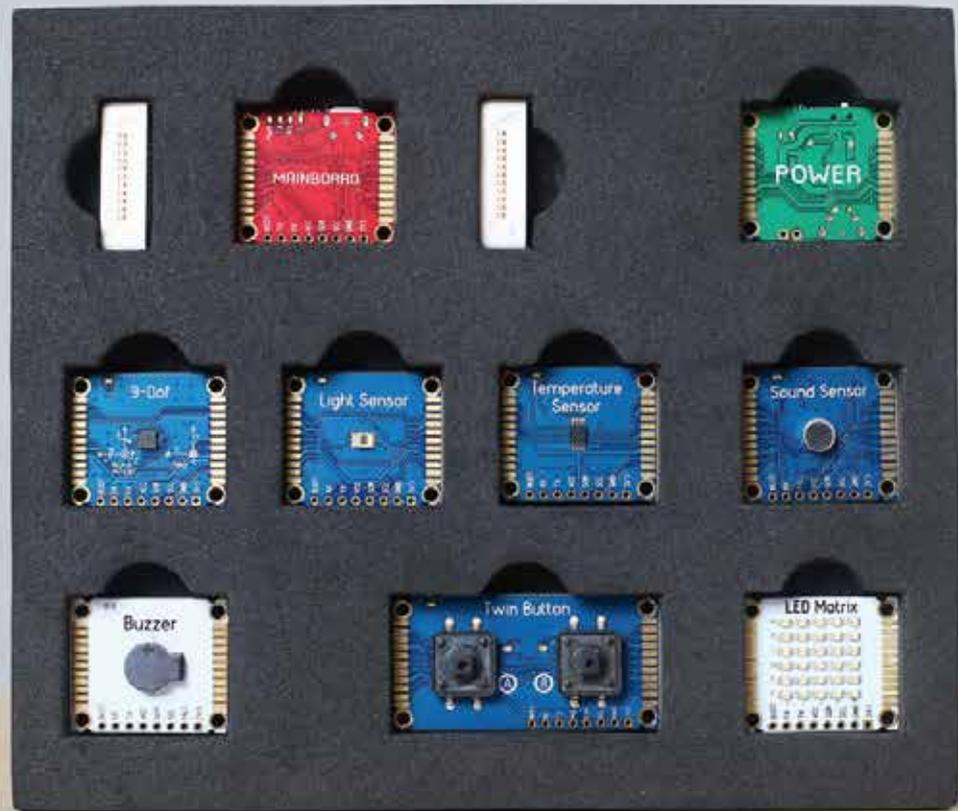
Module Matcher is a computer-based app for you quickly set up fun projects by pairing up the actions of input modules and reaction of output modules. Learn about this on **Page 45 - 46**.



MakeCode for Grove Zero

You can reprogram your Grove Zero Main Board using drop-and-drop blocks of Microsoft MakeCode for Grove Zero. And control other modules to accomplish more cool projects. Learn about this on **Page 47 - 52**.





Main Board

What is it

Main Board is the key to your creative projects. It has all the codes inside that can make your projects blink and buzz. Connect it with any combination of Input + Output module to start your inventions.

How it works

The Main Board has a pre-set plug-and-play Program to help you play and learn all the Modules quickly and easily. It can also provide 5 volts of electricity to the circuit using a micro-USB cable.

You can reprogram mainboard very easily with Module Matcher or drag-and-drop graphical programming to achieve more challenging projects.

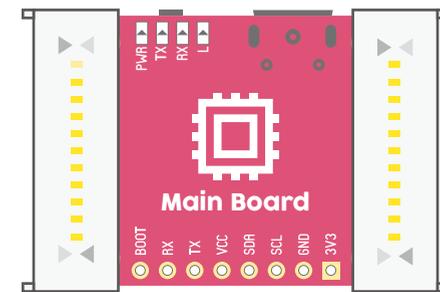
Real world analogy



Computer

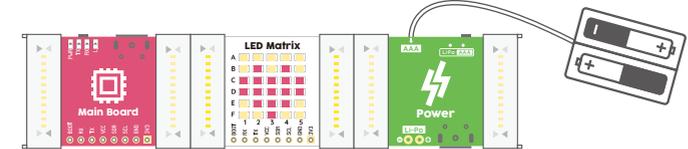


PC Host



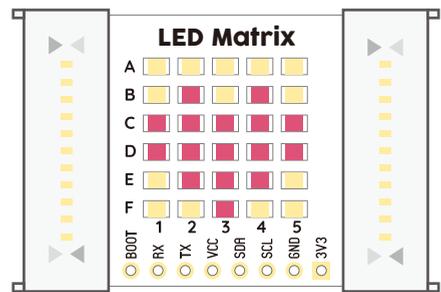
Try it

Power it up with the power module (or a micro-USB cable) and connect it to LED Matrix and see what will happen.





LED Matrix



Try it

Power it up with the Power module, connect it to the Main Board and a Twin Button, then click the buttons and see what happens.



What is it

The LED Matrix is composed of 5x6 blue LEDs. It can display numbers, letters, graph bars, and pixel images.

How it works

The LED Matrix is like a very small piece of screen. It displays information like words, numbers, and pictures through a combination of ON and OFF LEDs. LEDs in the matrix have coordinates, for example, the LED in row E and column 4. You can plot a smiley face by turning on the LEDs at specified coordinates while keep the others OFF.

Real world analogy



LED Screen

What is it

The Buzzer is usually used to make an annoying sound to catch people's attention, but you can also use it to make ring tones or play music.

How it works

Inside the Buzzer is a device that vibrates very quickly when electricity passes through it. The vibration generates a buzzing sound that moves through the air and into our ears. Change the frequency of electricity to change the frequency of vibration for generating different tones.

Real world analogy



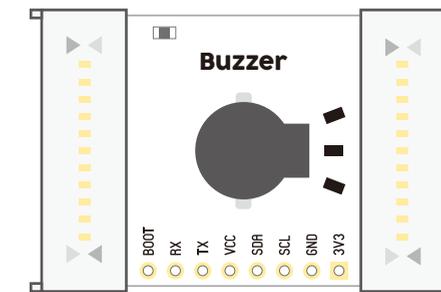
Door Bell



Alarm

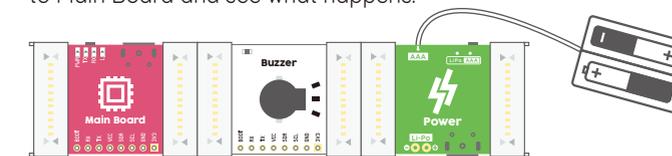


Buzzer



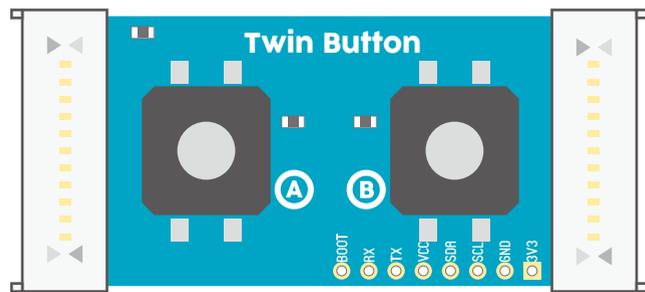
Try it

Power it up with the power module (or a micro-USB cable) and connect it to Main Board and see what happens.



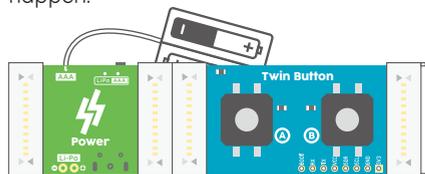


Twin Button



Try it

Power it up with the Power module, then click the buttons and see what will happen.



What is it

The Twin Button has two push-buttons on board - button A and button B. They can detect events such as a single click, a double click, and a long-pressing.

How it works

Push buttons are a form of simple input. When you press a button you actually close a circuit and let signals pass through. Single clicking a button is closing the circuit for a very short period of time and then open it, and double-click means rapidly repeating this process twice. Long-press or holding the button is closing the circuit for a bit longer before opening it.

Real world analogy



Keyboard



Controller

What is it

The IMU 9-DOF contains powerful motion sensors that can track motions like tilt, free fall and shake, detect objective orientation, and work as a compass to detect earth's magnetic field.

How it works

The IMU 9-DOF module combines a 3-axis accelerometer, a 3-axis gyroscope, and a 3-axis magnetometer, all packaged in a single microchip. They are complex micro-electromechanical systems (MEMS) that can detect the sensor speed, orientation and rotations, outputs information such as acceleration in milli-g(mg), compass heading (°), and rotation(°). The IMU 9-DOF is pre-programmed to detect a number of standard action like shake and tilt.

Real world analogy



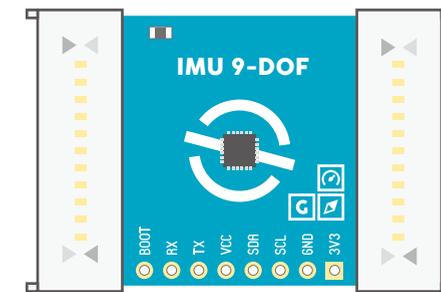
Robot



Drone

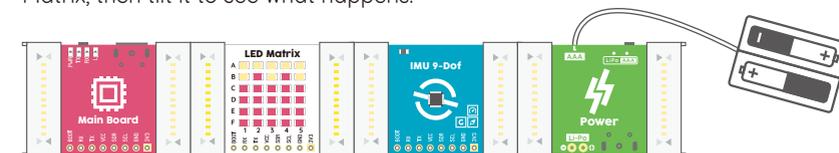


IMU 9-DOF



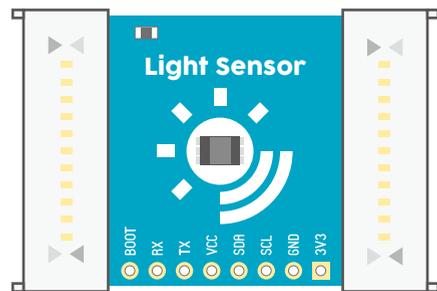
Try it

Power it up with the Power module, connect it to Main Board and LED Matrix, then tilt it to see what happens.



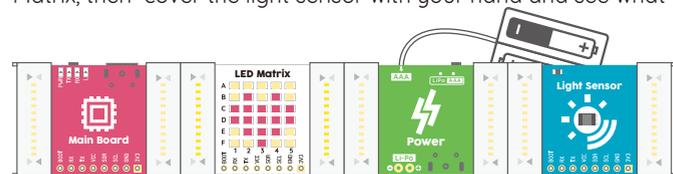


Light Sensor



Try it

Power it up with the Power module, connect it to Main Board and a LED Matrix, then cover the light sensor with your hand and see what will happen.



What is it

The Light Sensor measures the intensity of visible light and tells you how dark or light the the environment.

How it works

Light sensor transforms the ambient light level to voltage level that can be converted into digital signals and read by the microcontroller for calculating the illuminance in lux. When the light intensity is lower than a certain level, which is called 'the LOW Threshold', the sensor detects a 'dark environment'. When the light intensity is above a 'HIGH Threshold', it detects a 'light environment'.

Try to use the LOW/HIGH Threshold to trigger events like turn on the buzzer when there is no light.

Real world analogy



Burglar Alarm



Door Device

What is it

The Temperature Sensor measures the ambient temperature.

How it works

The Temperature Sensor transforms the temperature in the ambient environment into digital signals that can be read by the microcontroller for calculating the temperature. When the temperature is lower than a certain level, which is called 'the LOW Threshold', the sensor detects a 'Cold environment'. When the temperature is above a 'HIGH Threshold', it detects a 'Hot environment'.

Try to use the LOW/HIGH Threshold to trigger events like displaying the temperature on the LED matrix when then temperature is higher than 30 degrees.

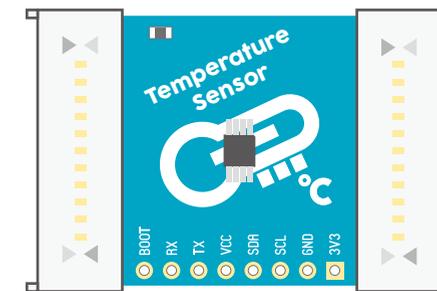
Real world analogy



Appliances

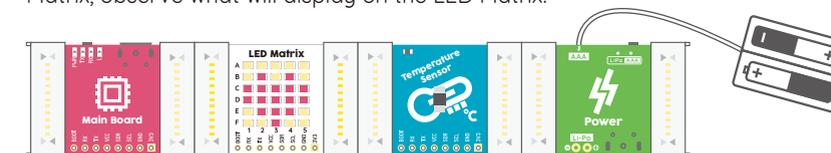


Temperature Sensor



Try it

Power it up with the Power module, connect it to the Main Board and LED Matrix, observe what will display on the LED Matrix.





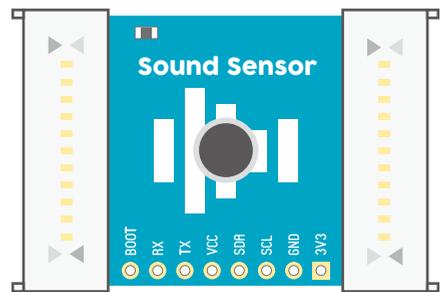
Introduction of Modules



Introduction of Modules

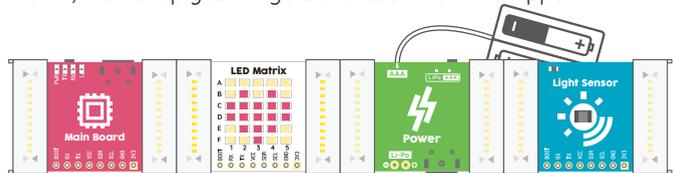


Sound Sensor



Try it

Power it up with the Power module, connect it to the Main Board and a LED Matrix, then snap your fingers and see what will happen.



What is it

The Sound Sensor listens to the sound around it. You can use it to visualize the sound level or as a sound trigger to control your circuit.

How it works

The Sound Sensor is a simple microphone. It measures the noises nearby and converts the sound waves to electrical signals. When the noise is lower than a certain level, which is called the LOW Threshold, the sensor detects a 'quiet environment'. When the noise is above a 'HIGH Threshold', it detects a 'loud environment'.

Try to use the LOW/HIGH Threshold to trigger events like display the temperature on LED matrix when then temperature is higher than 30 degrees.

Real world analogy



Security System



Smart Light

What is it

The Power board provides two ways to supply electrical power to your circuit: a 3.7V Li-ion battery or AAA Batteries.

How it works

The Power board can draw electrical power from either a 3.7V Li-ion battery or two AAA batteries and convert the voltages to the standard 5 volts that other modules run on. You can charge your Li-ion battery through the 5V micro-USB port. **But remember DO NOT use the USB port to charge your AAA batteries.**

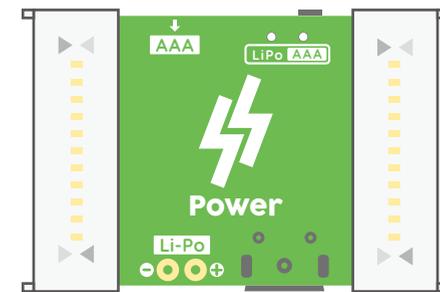
Real world analogy



Battery

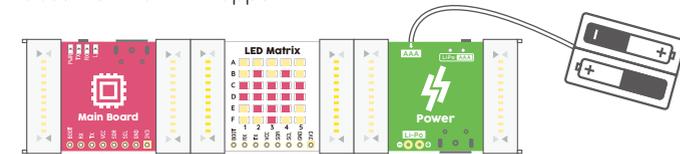


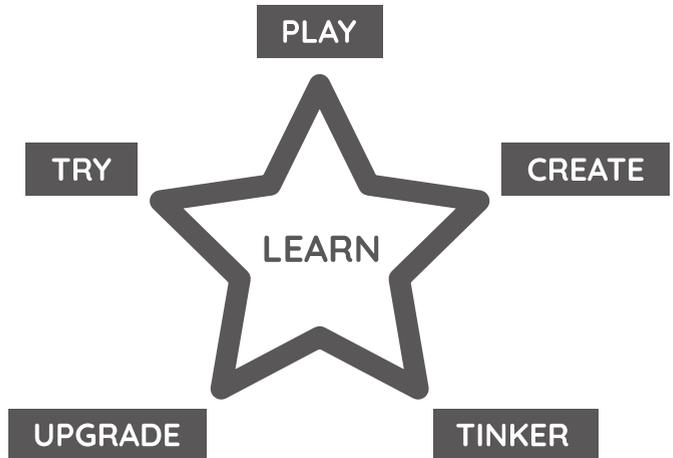
Power



Try it

Plug in the battery, connect it to the Main Board and LED Matrix, then observe what will happen.





What is the Grove Zero Invention Star?



The **Grove Zero Invention Star** lists the five stages you might go through on your invention journey. At each stage, there are many playful activities and questions that can help you learn different skills, foster creativity, and develop your logical thinking.

Play with it

Still not figuring out the module functions? Don't worry. Just play with it. Start with a simple input and an output, like the Twin Button and Buzzer. Then experiment with other combinations. You might just create your first project prototype out of it.

Create something

Big inventions start from a small project. Make a simple project that contains only one input and one output. Use your imaginations and take advantages of the Grove Zero's design. Connect them in different ways for different projects.

Tinker your creations

Use **module matcher** to tinker with your inventions, understand what are the actions of an input module and what are the reactions of an output module. Learn to use the events that happens on an input to affect the behavior of an output, this will help develop your logical thinking before learning to code.

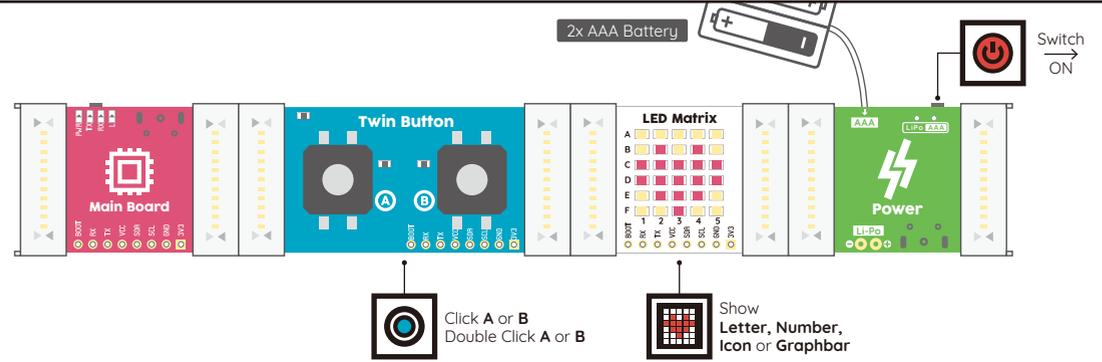
Upgrade your creations

The **MakeCode block-based programming** will allow you to upgrade your projects very easily. Add more modules to your circuit and program your Grove Zero mainboard to improve your creations, or even turn them into new projects. Make it more fun and more functional, solve real world problems with them.

Try something new

Keep trying. Explore your ideas and develop your own inventions. Remix the modules and the ways of connecting them. Use Module Matcher or graphical programming to realize your ideas. Don't worry if it doesn't work at the beginning. Keep experimenting. Discuss with your friends, your teacher, or your parents. Learn from the mistakes. Find the problem and solve it.

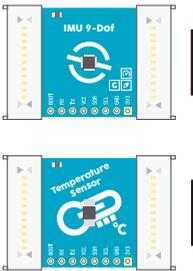
Start by playing with this circuit



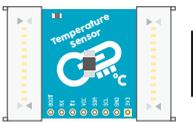
The best way to start with Grove Zero is by playing with it. All the modules are programmed to be used out-of-the-box.

Build your first circuit as instructed at left. Then explore what other modules can do by swapping the Twin Button and LED Matrix with different inputs and outputs. Do not worry about orders or directions, just power them up and they will run immediately.

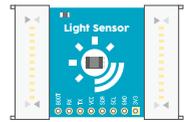
Explore other Input modules



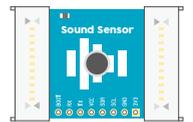
Tilt Left
Tilt Right



Detect Temperature

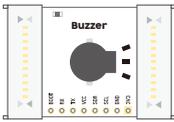


Detect Light Intensity



Detect Sound Intensity

Explore other Output modules



Play Tones (C4 to B6)

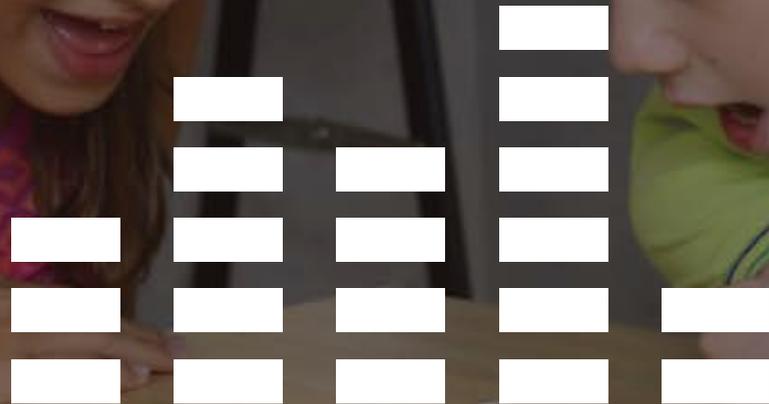


Create a

Sound Visualizer

Watch those beats! Invent a device that can visualize the nearby sound intensity. Try to play finger snapping around it with your friends, see who can create the loudest clicking sound. Or put it next to your music player and feel the music beats.

Project #01



TIME



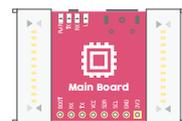
5 minutes

LEVEL

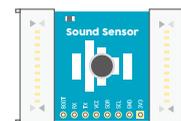


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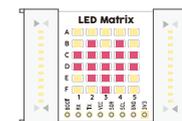
Modules and materials



Main Board



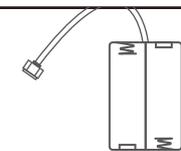
Sound Sensor



LED Matrix



Power

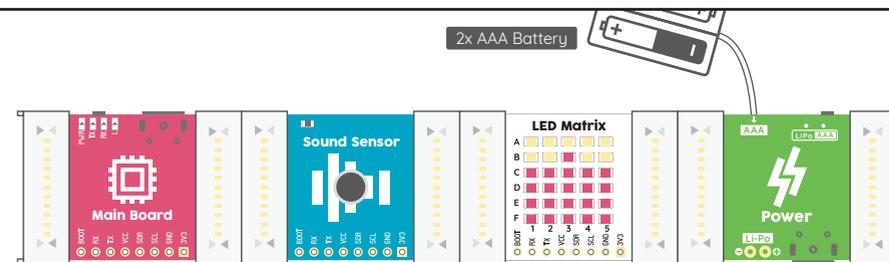


Battery Holder



2x AAA Battery (Not Included)

Build the circuit and



How it works

Main Board: Receive sensor data from the input (range from 0 to 1024), then map it to the LED Bar Levels on LED Matrix (range from 0 to 18).

Sound Sensor: Measure the nearby sound intensity and convert it into digital signals that range from 0 to 1024, then send the signal to main board.

LED Matrix: Display and update the received LED Bar Level which represents the current sound intensity 20 times per second.

Power: Provide electricity to the circuit.



Create a Thermeowmeter

Well, it's actually a **Thermeowmeter**. A cute cat that tells you the temperature in the ambient environment. Put it in your room or near the window to know the outdoor temperature in advance and dress yourself properly before going out.

Project #02



TIME



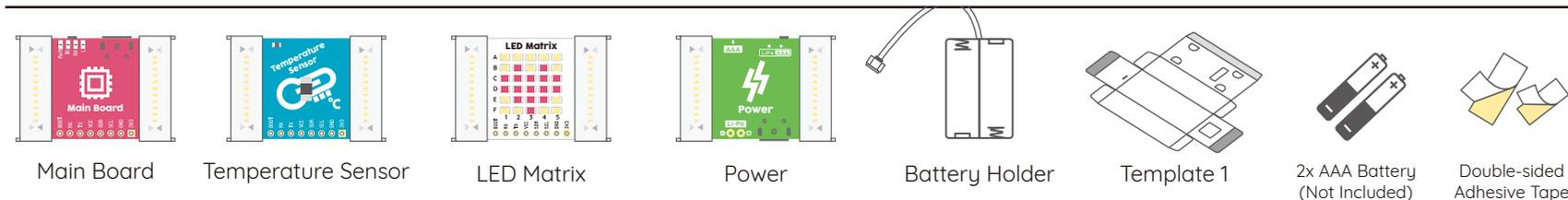
15 minutes

LEVEL

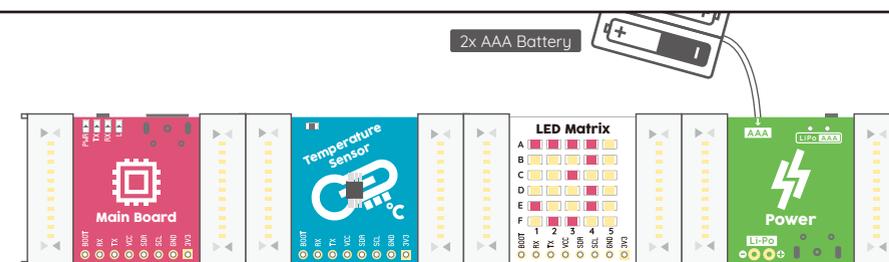


☆☆☆☆☆

Modules and materials



1. Build the circuit



How it works

Main Board: Receives sensor data from the input (range from -25°C to 50°C), then send it to the LED Matrix.

Sound Sensor: Measures the nearby temperature and converts it into digital signal, then send the signal to the Main Board.

LED Matrix: Displays and updates the received temperature once every three second.

Power: Provides electricity to the circuit.

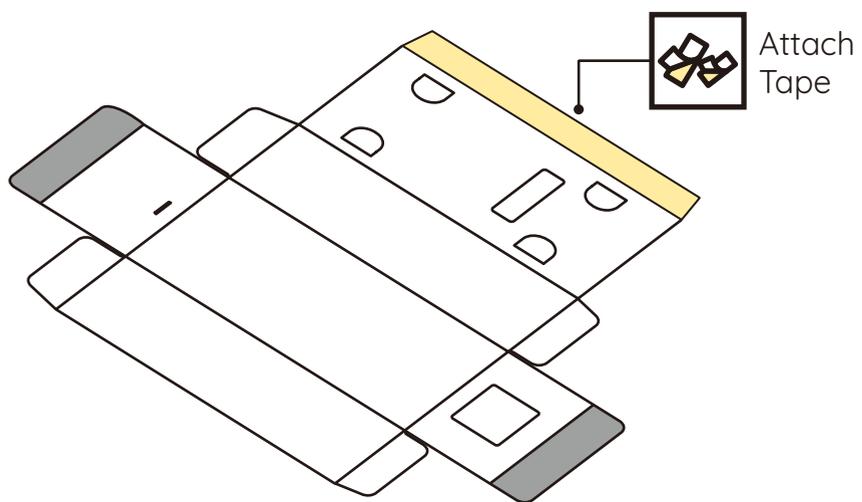




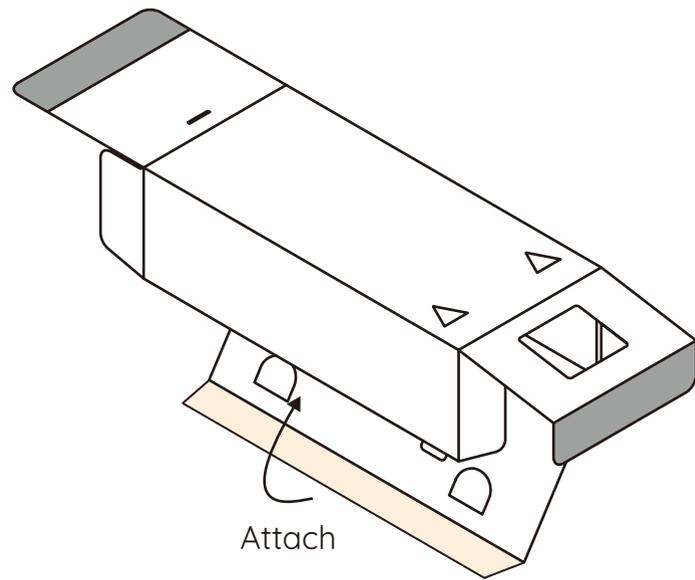
2. Assemble the template 1

Back of Adhesive Area
 Adhesive Area Insert Part

a.



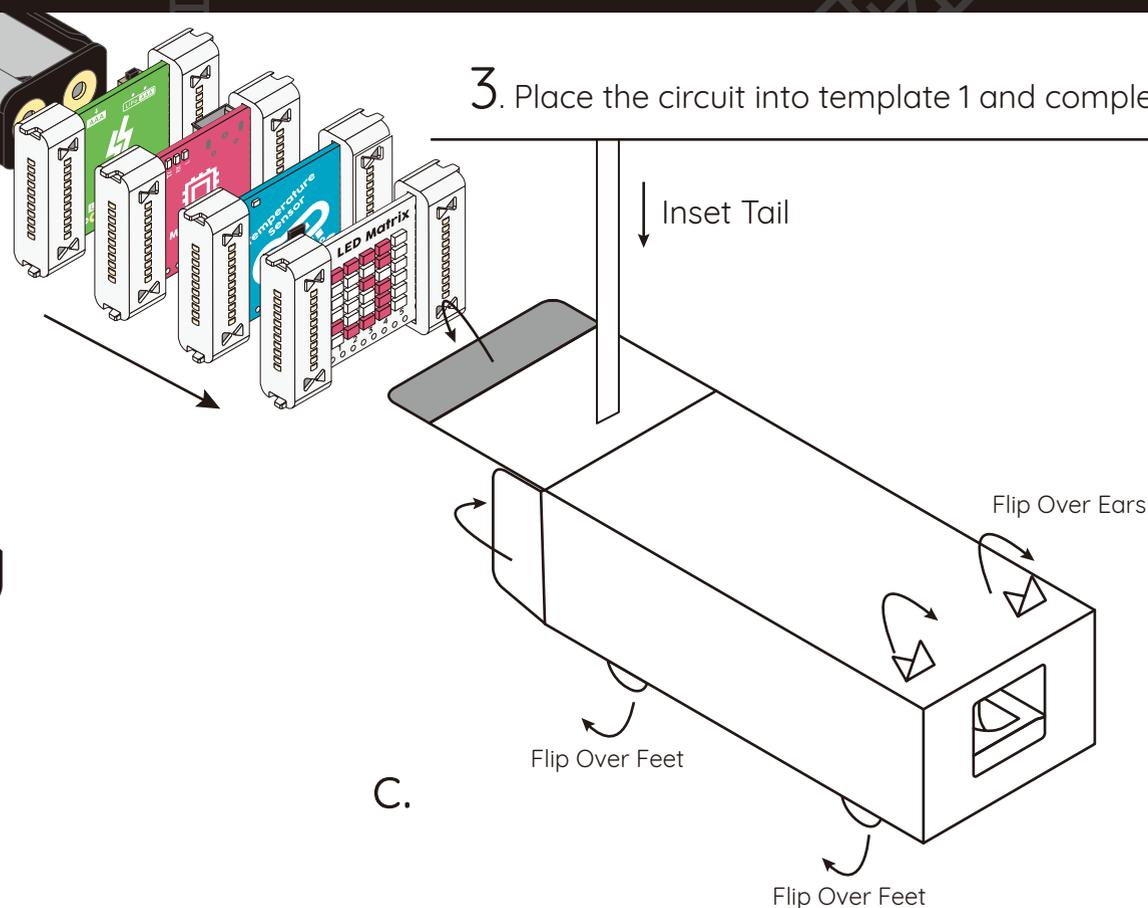
b.



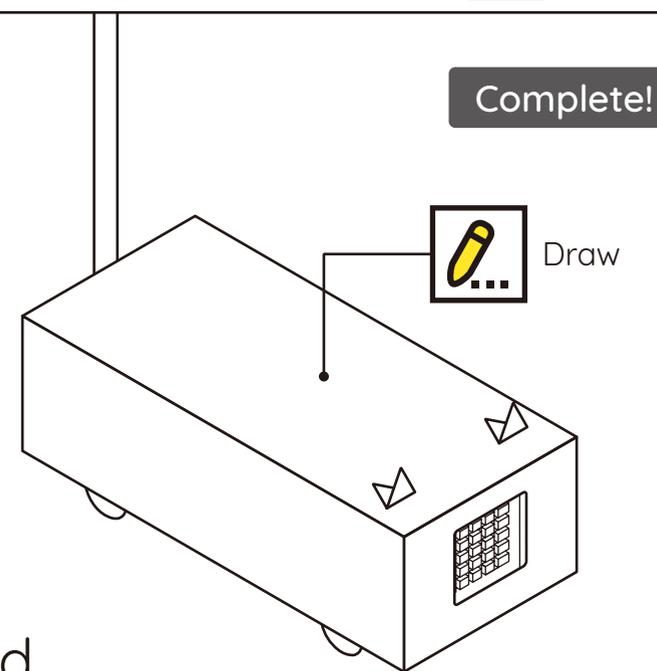
3. Place the circuit into template 1 and complete

Insert Part

c.



d.



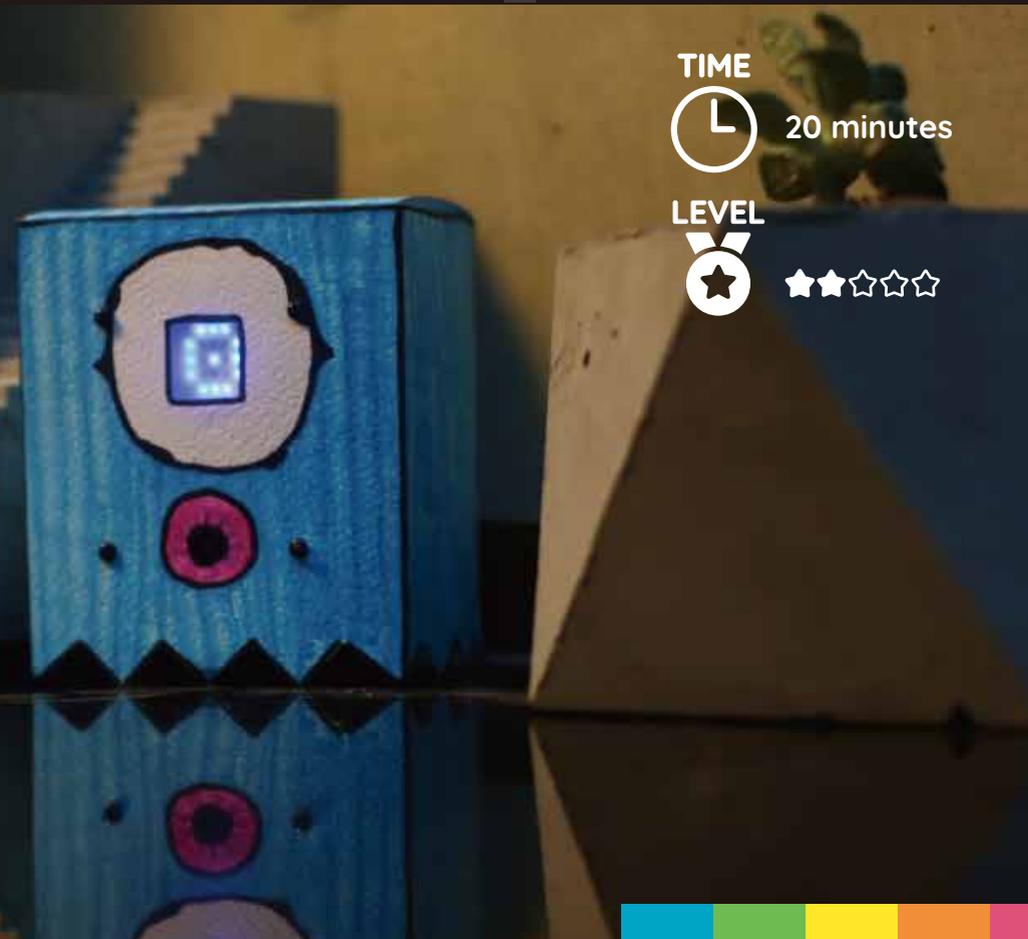


Create an

One-eyed Ghost

Make a creepy little ghost that sleeps at day and awakes at night. Use your magical color pens to give it a unique appearance and personality. Is it bad or good? That's up to you! Put it at the bedside as a night-light, or hide it somewhere in the house to trick your friends.

Project #03



TIME



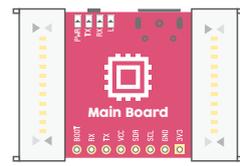
20 minutes

LEVEL

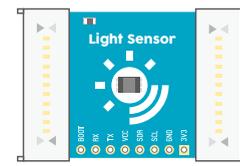


★★★★☆

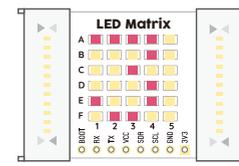
1. Prepare modules and materials



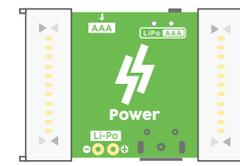
Main Board



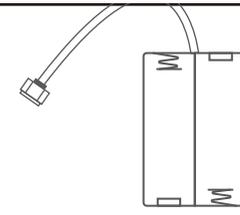
Light Sensor



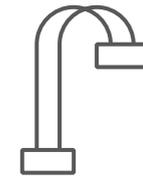
LED Matrix



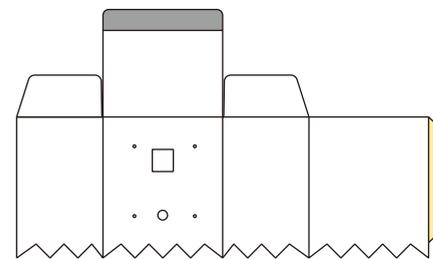
Power



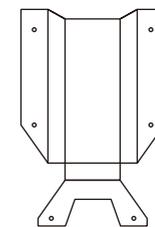
Battery Holder



Wire



Template 2 (Part A)



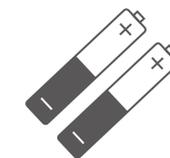
Template 2 (Part B)



Double-sided Adhesive Tape



4x Plastic Rivet

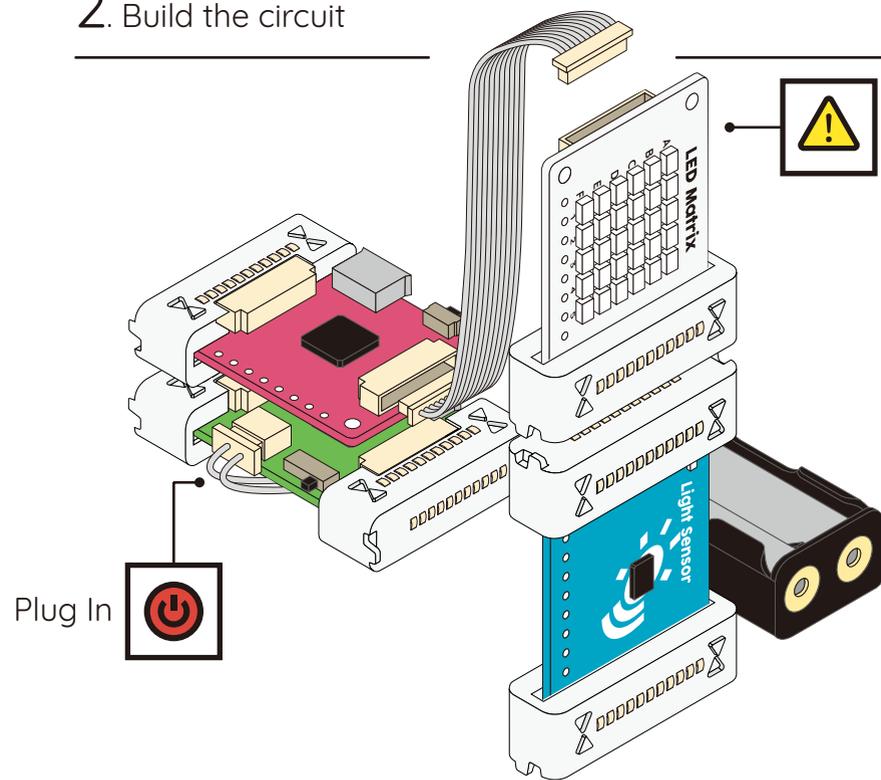


2x AAA Battery (Not Included)





2. Build the circuit



How it works

Main Board: Receives sensor event from the input (light or dark), then triggers the LED Matrix to turn ON or OFF the LEDs.

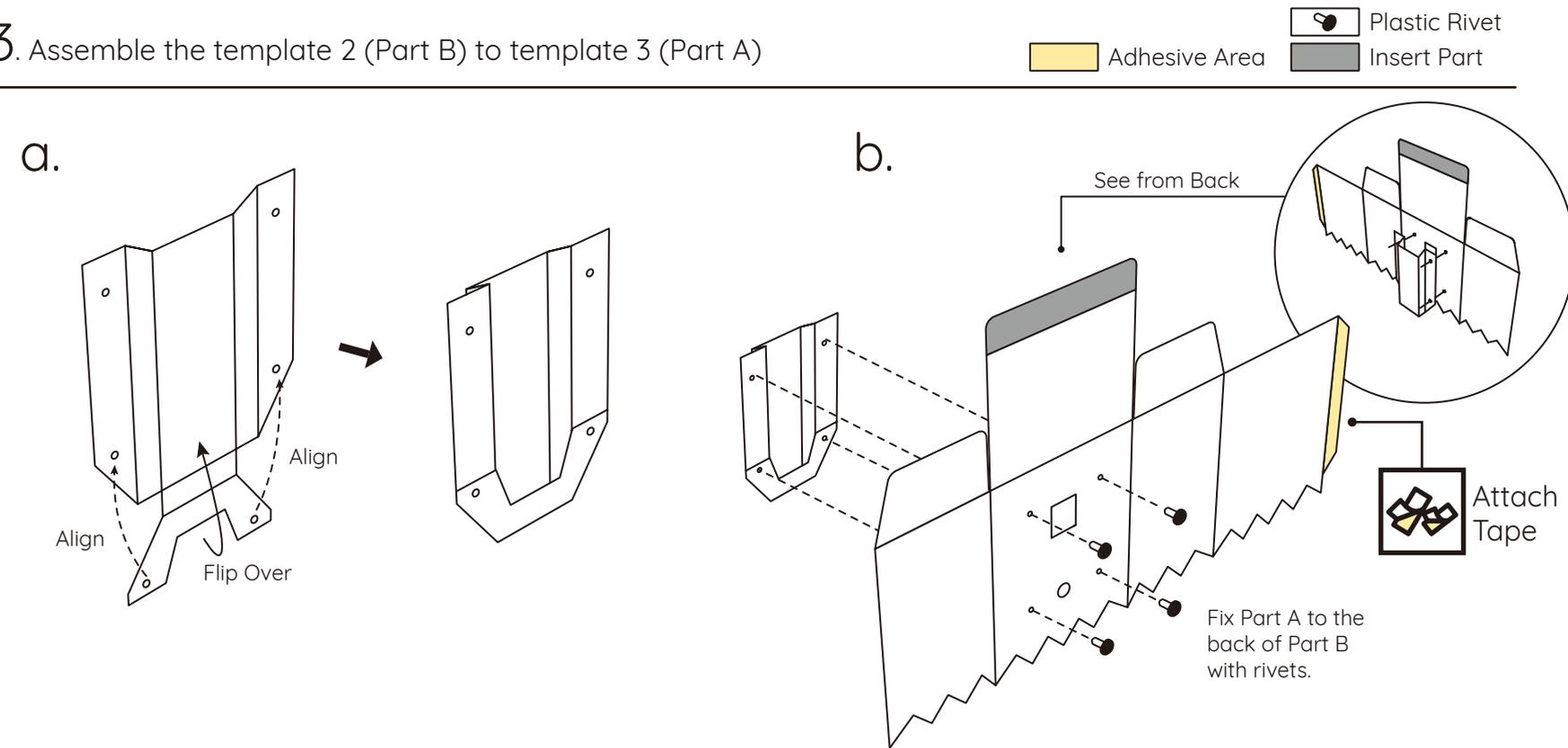
Light Sensor: Measures the nearby light level to see if it is a light or dark environment, and send the result to the Main Board.

LED Matrix: Turn ON or OFF the LEDs based on the sensor event.

Power: Provides electricity to the circuit.



3. Assemble the template 2 (Part B) to template 3 (Part A)

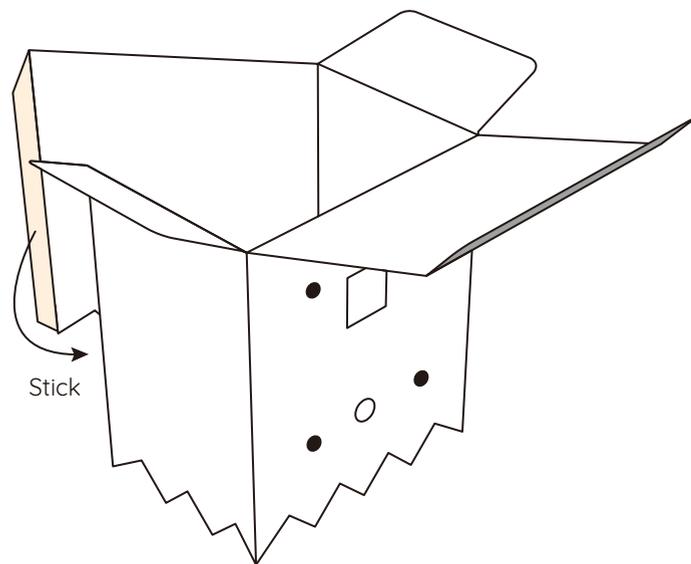




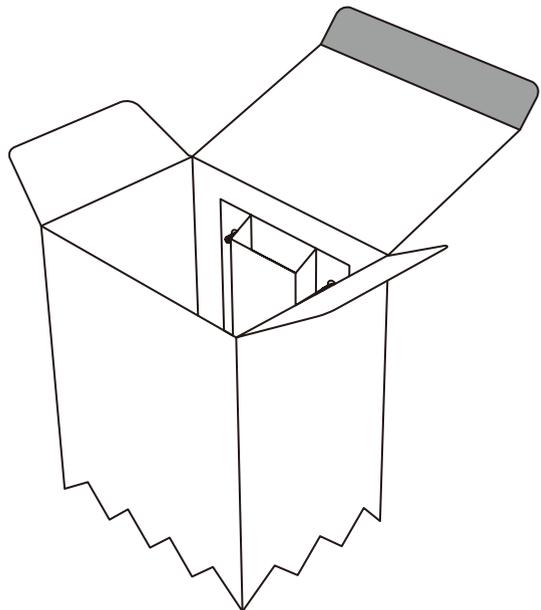
4. Assemble the tempate 2

Back of Adhesive Area Insert Part

a.



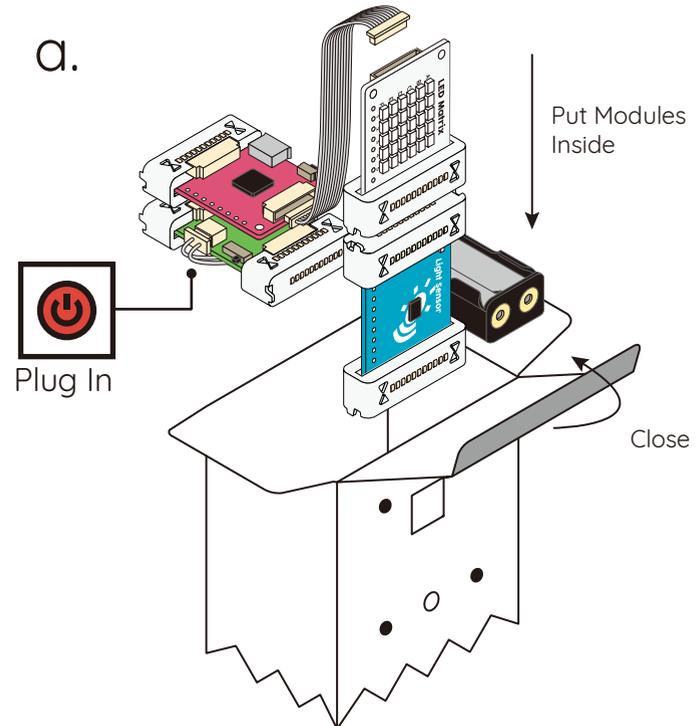
b.



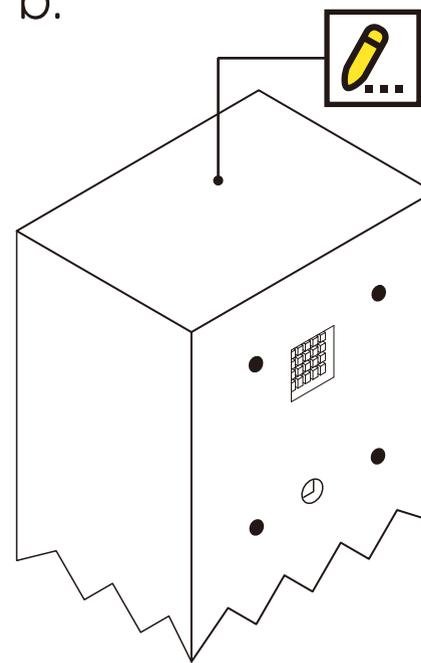
5. Place modules into the template 2

Insert Part

a.



b.



Complete!



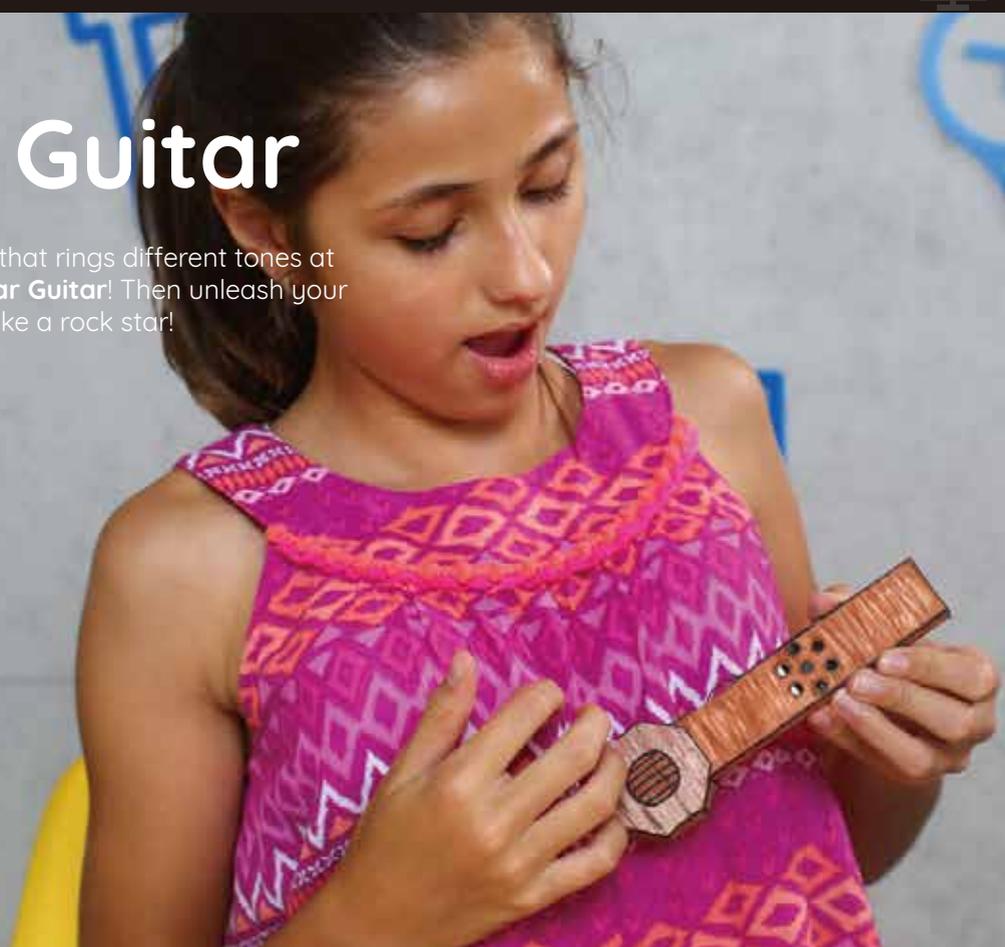


Create an

Angular Guitar

Invent a distinctive instrument that rings different tones at different tilt angle – **the Angular Guitar!** Then unleash your creativity and passion, play it like a rock star!

Project #04



TIME



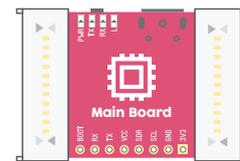
25 minutes

LEVEL

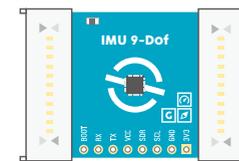


★★★★☆

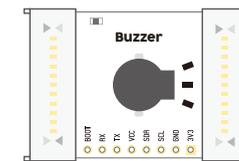
1. Prepare modules and materials



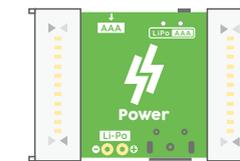
Main Board



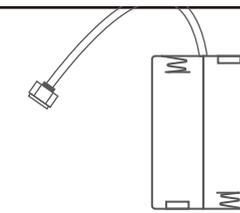
IMU 9-DOF



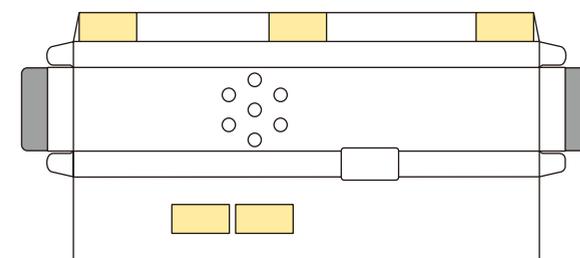
Buzzer



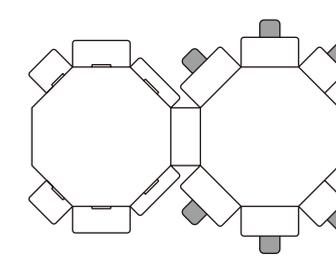
Power



Battery Holder



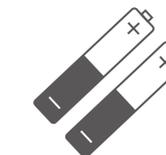
Template 3 (Part A)



Template 3 (Part B)



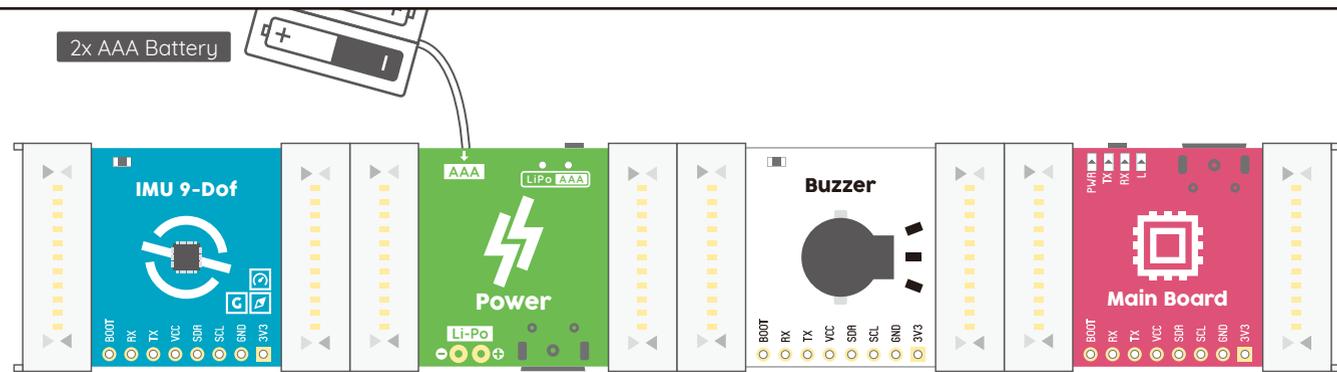
Double-sided Adhesive Tape



2x AAA Battery (Not Included)



2. Build the circuit



How it works

Main Board: Receives sensor data from the input (from 0 to 1023), then map it into tones (from C4 to B6).

IMU 9-DOF: Measures the acceleration at X axis and sends the sensor data to the Main Board. The acceleration will change when you tilt the sensor module.

Buzzer: Plays tones (from C4 to B6) based on the measured acceleration at X axis.

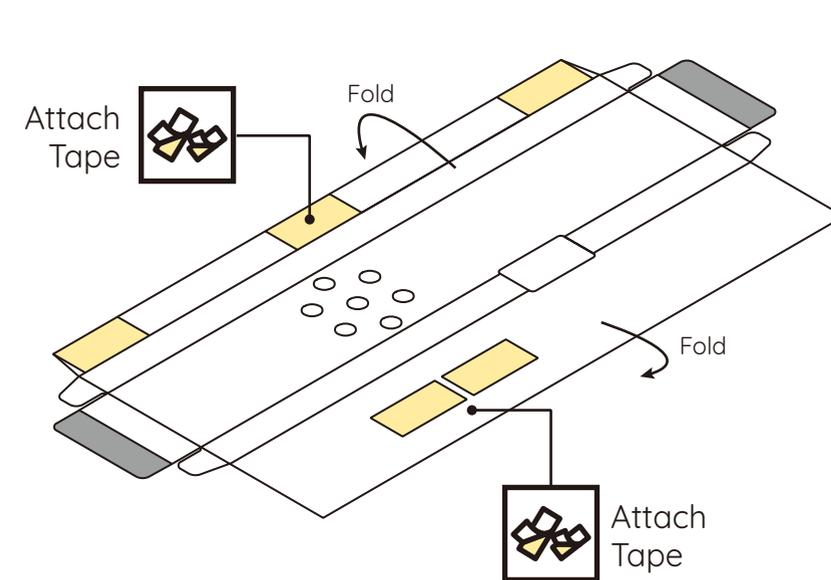
Power: Provides electricity to the circuit.



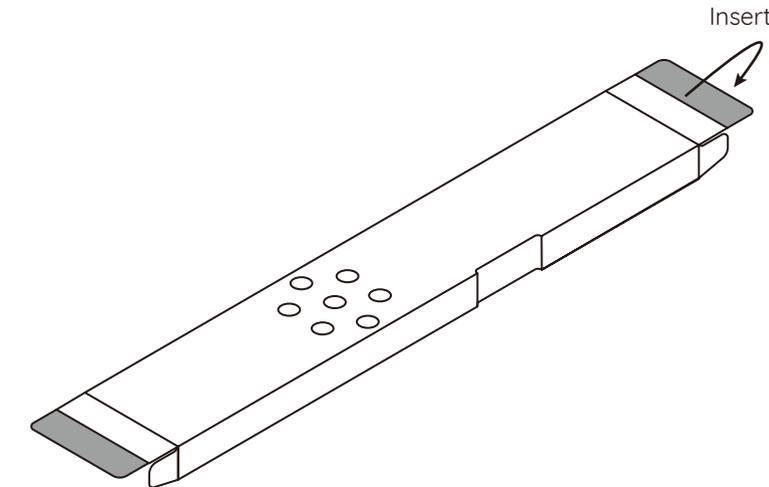
3. Assemble the template 3 (Part A)

Adhesive Area Insert Part

a.



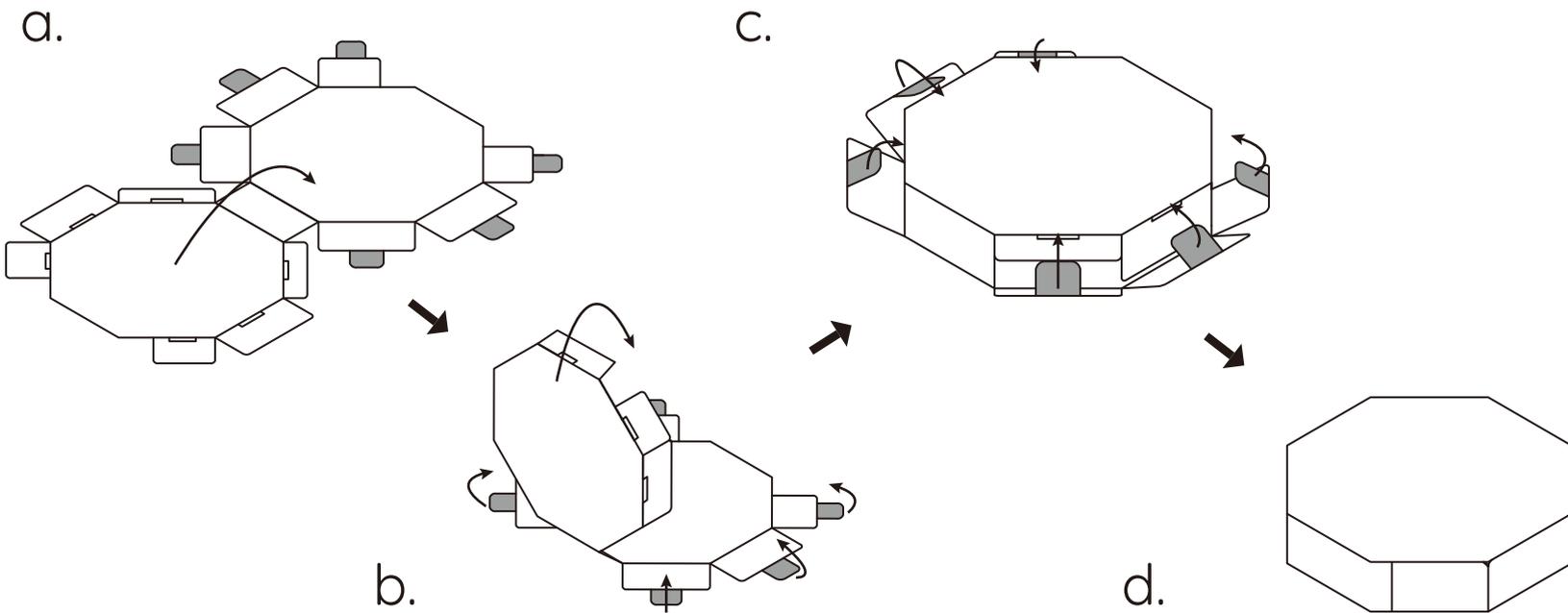
b.





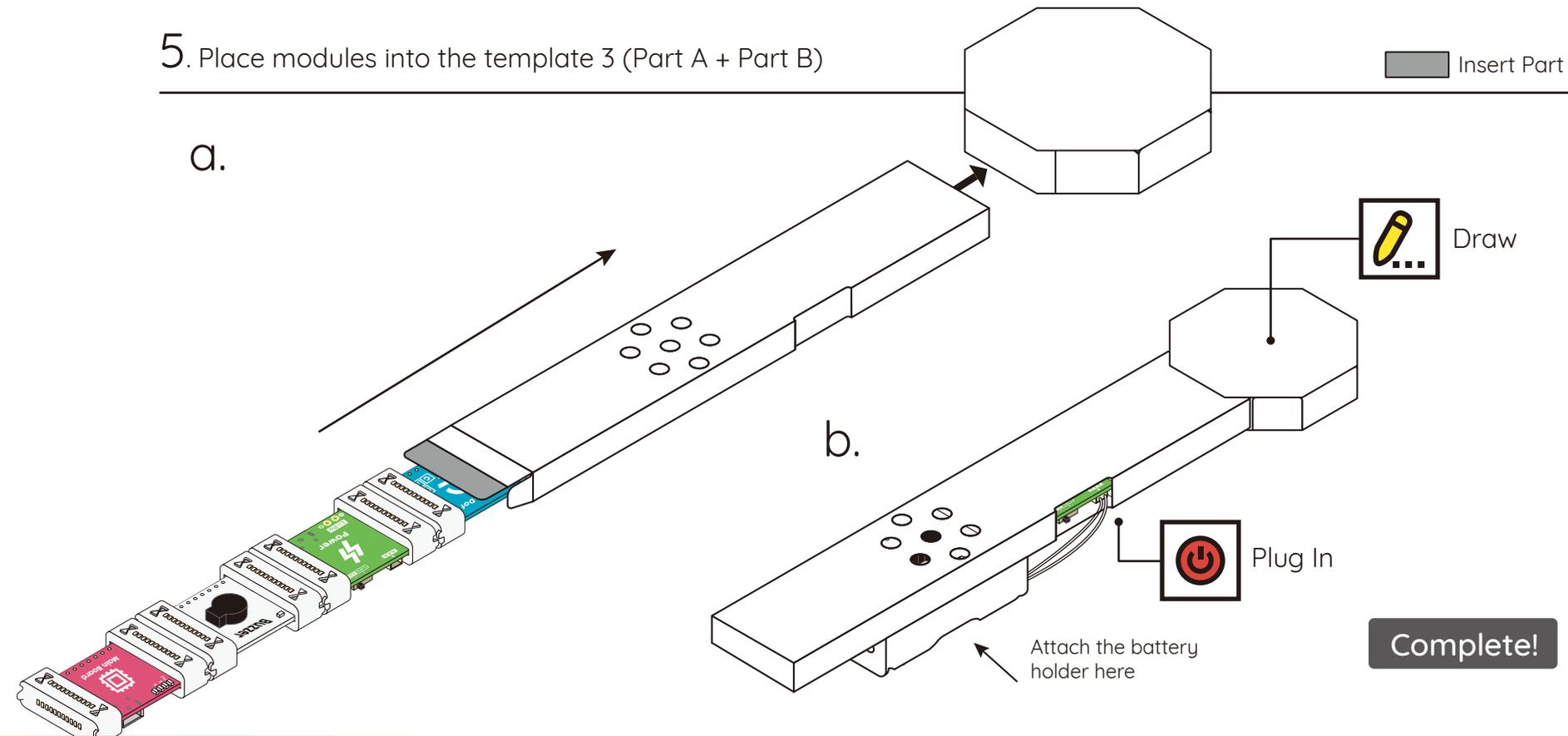
4. Assemble the template 3 (Part B)

Insert Part



5. Place modules into the template 3 (Part A + Part B)

Insert Part





Create a

Worm Bot

Invent a cute companion - **the Worm Bot**, that can change its face when you press the button. Place it at the doorway and give it a smiley face to welcome the guests. Or leave it on the table with a mad look when your parents come home late.

Project #05



TIME



30 minutes

LEVEL



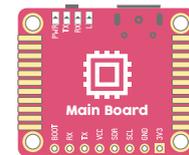
★★★★☆



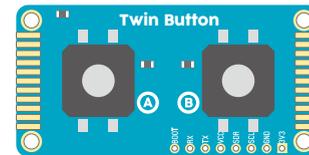
1. Prepare modules and materials



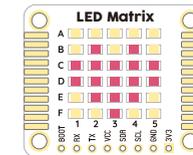
Be cautious while detaching the adaptors



Main Board



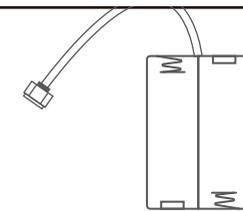
Twin Button



LED Matrix



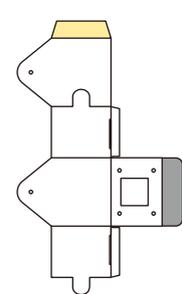
Power



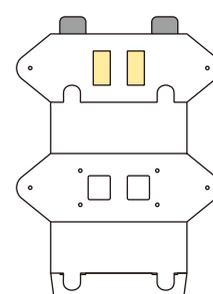
Battery Holder



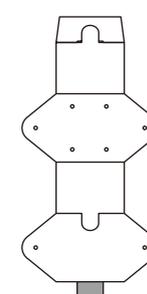
Double-sided Adhesive Tape



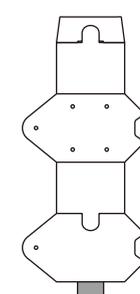
Template 4 (Part A)



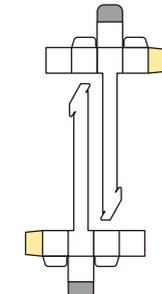
Template 4 (Part B)



Template 4 (Part C)



Template 4 (Part D)



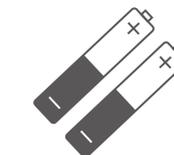
2x Template 4 (Part E)



22x Plastic Rivet



3x Wire

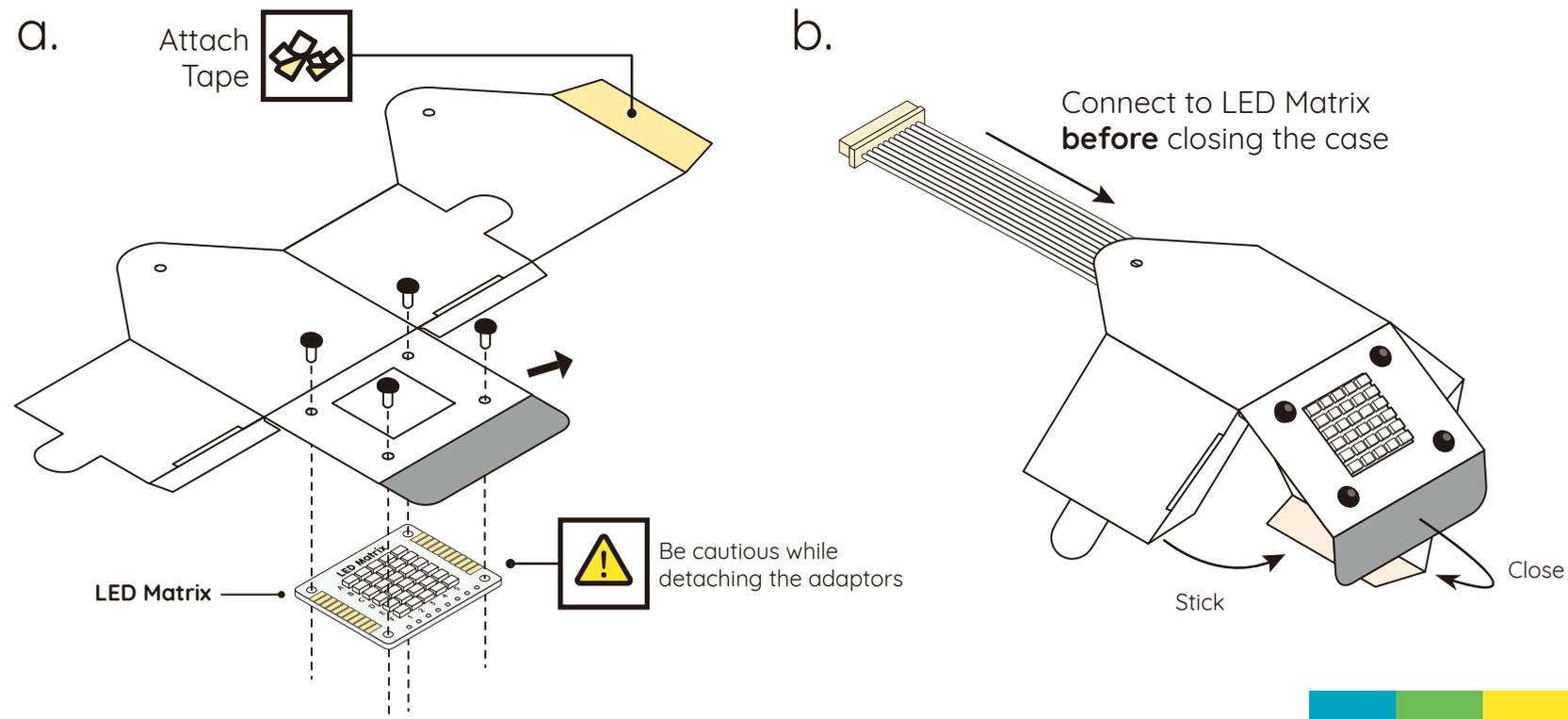


2x AAA Battery (Not Included)



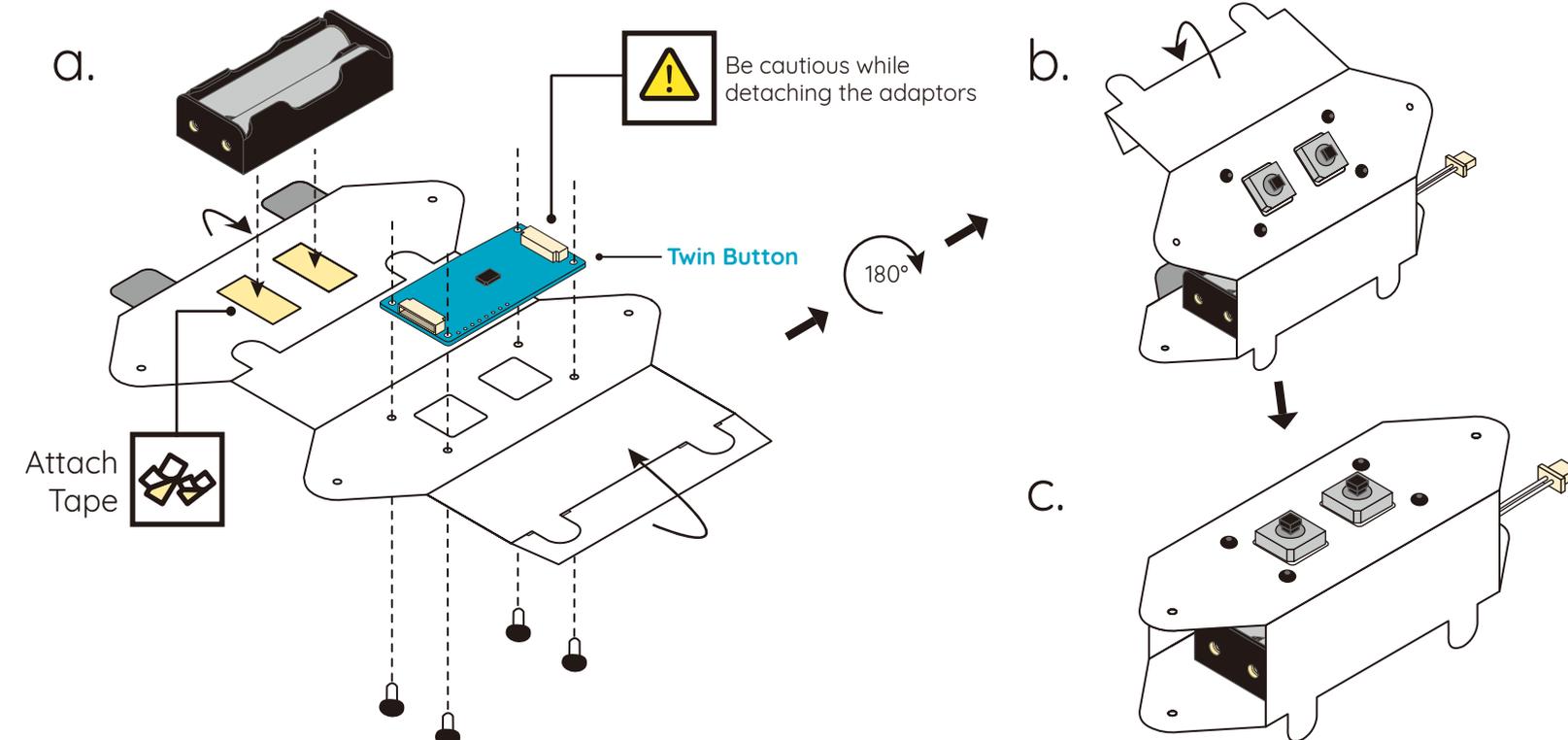
2. Assemble the worm head - Template 4 (Part A)

	Back of Adhesive Area		Plastic Rivet
	Adhesive Area		Insert Part



3. Assemble the worm chest - Template 4 (Part B)

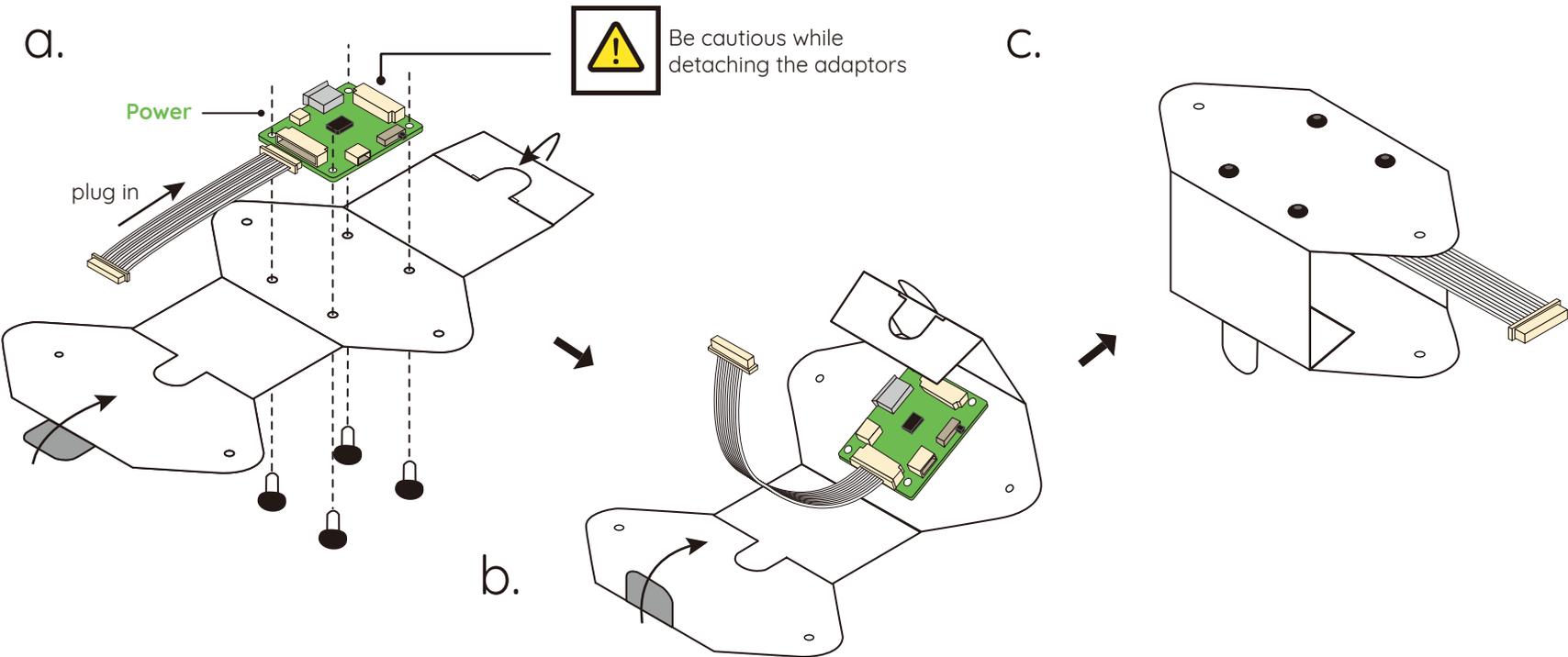
	Adhesive Area		Plastic Rivet
	Insert Part		





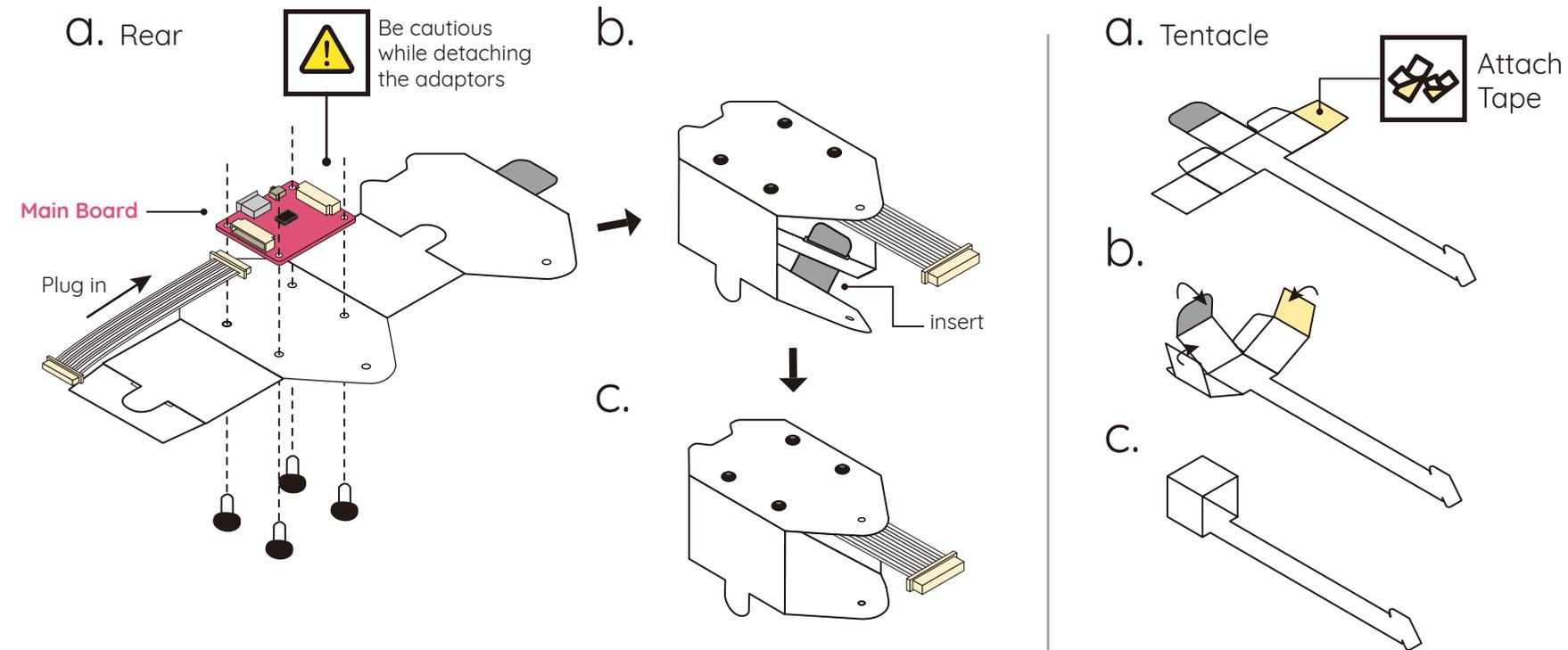
4. Assemble the worm belly - Template 4 (Part C)

Plastic Rivet Insert Part



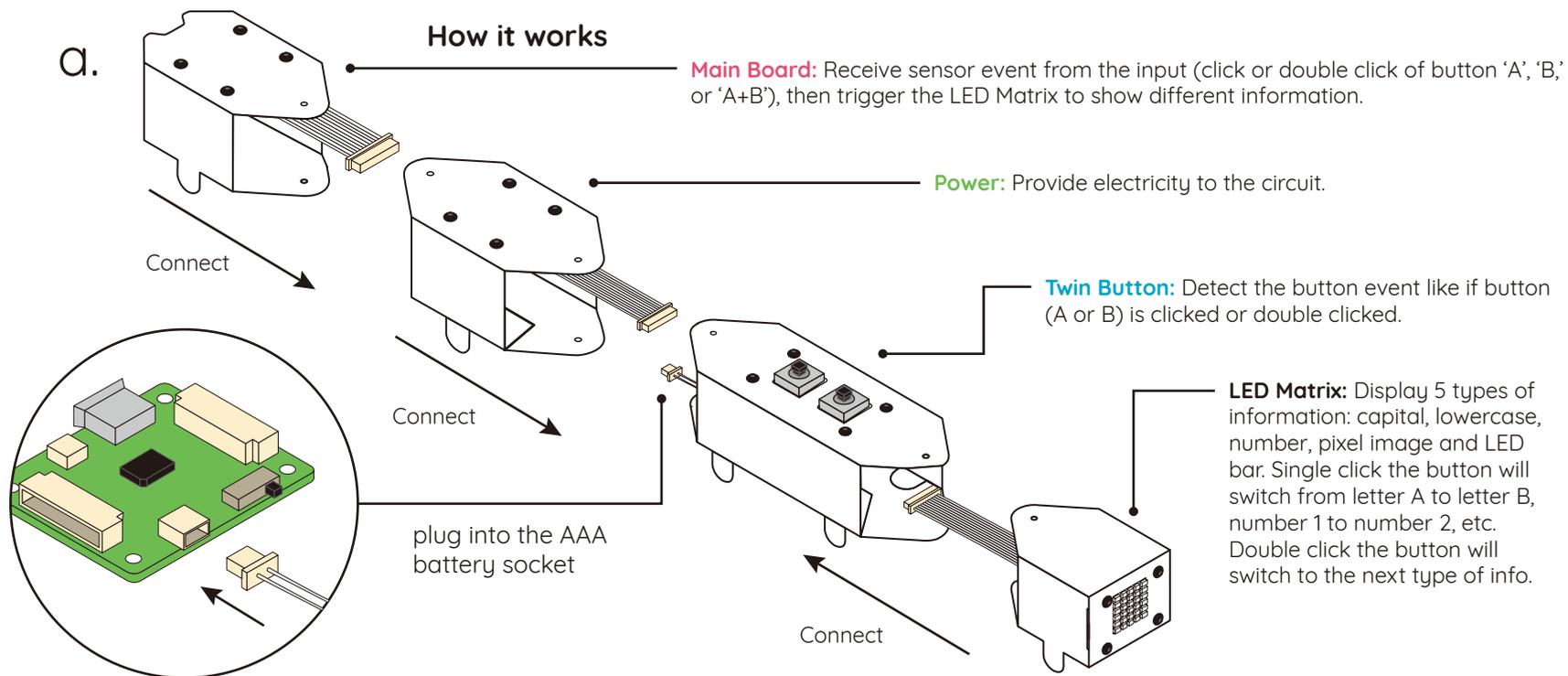
5. Assemble the worm rear & tentacle - Template 4 (Part D&E)

Adhesive Area Plastic Rivet Insert Part





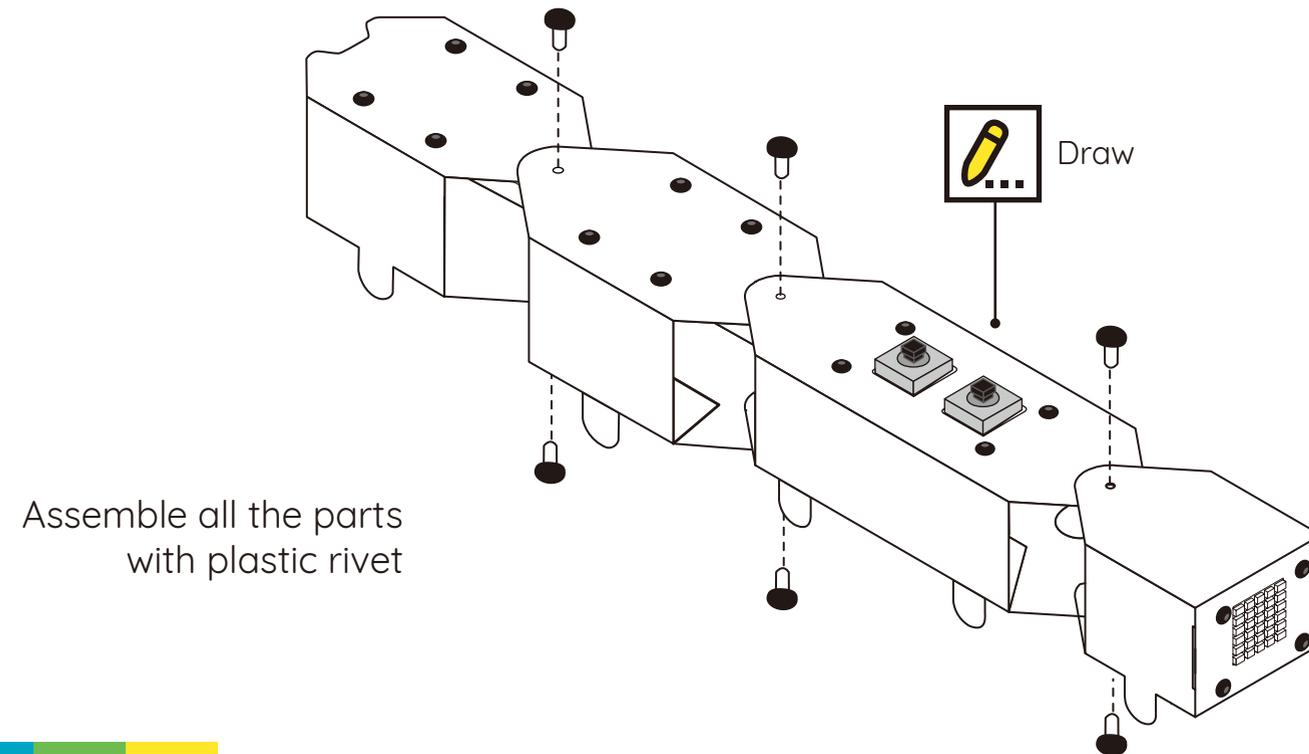
6. Connect the modules and 'How it works'



7. Assemble all the parts



a.

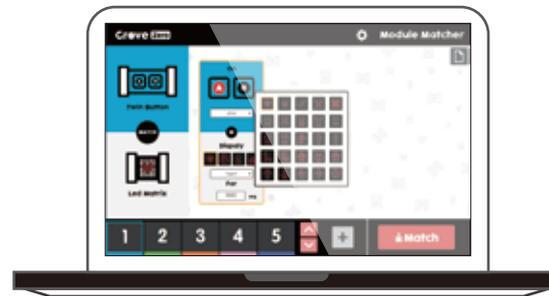
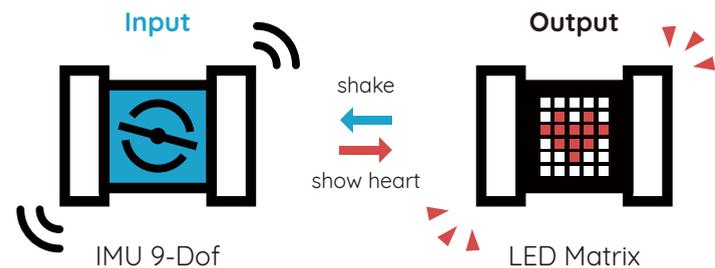




Module Matcher

An entry-level, computer-based app for you to learn the basics of coding as well as practice your logical thinking. You can make simple projects very easily and quickly, just by pairing up the actions of an input and the reactions of an output.

Actions and Reactions



Compatible with:



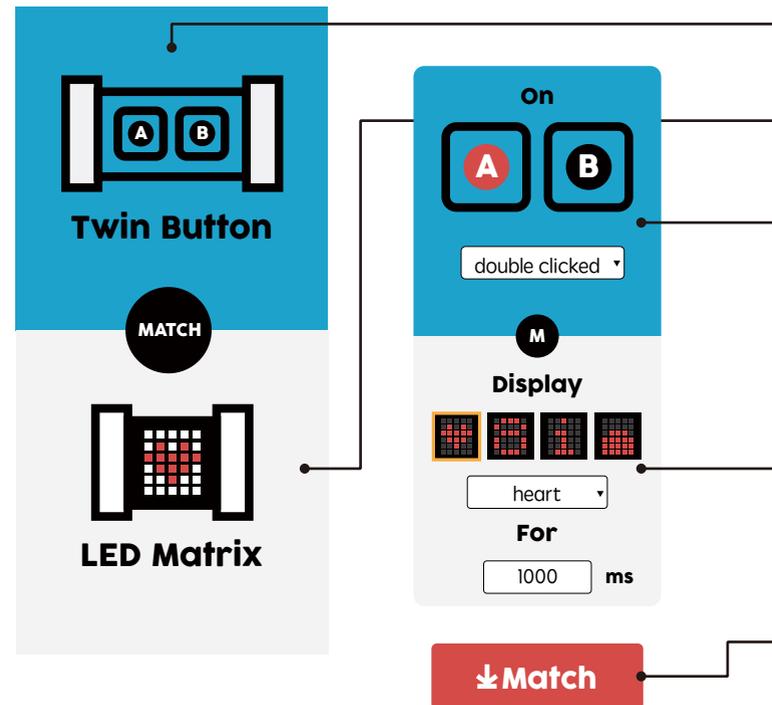
Windows



Mac

Download for free at www.seeedstudio.com/edu/Grove_Zero

Tinker your creations with Module Matcher



1. Select **Input** Module
2. Select **Output** Module
3. Set the **Actions** of input
The action of an input refers to a specific event that happens on the input or simply read the data of a sensor module.
4. Set the **Reactions** of output
Make the output module responds to the actions of input.
5. Click **Match** to complete

Do you know?

In programming, set up the actions and reactions of modules is actually setting up parameters in functions.

Function

The function is a type of procedure or routine designed to do a specific task. They are the 'what to do'.

Like:
Read the sensor data, or detect if the button is clicked.

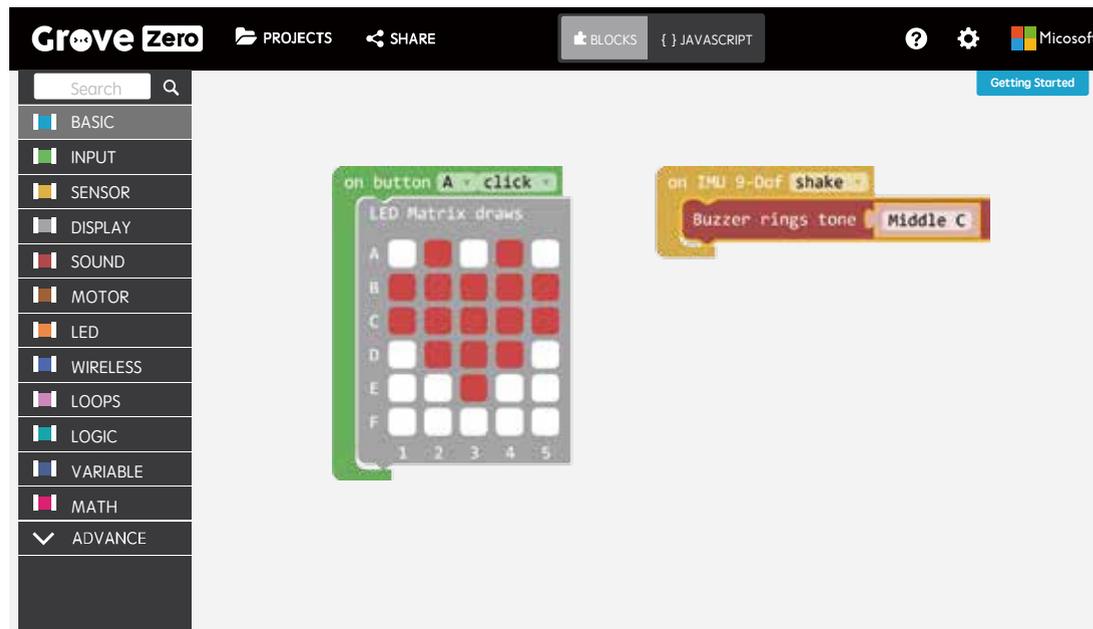
Parameters

A parameter is a special kind of variable used in the function, they tell the modules 'how to do what they do'.

Like:
Detect actions of button A (not B), show heart (not arrows) on LED Matrix.



Improve your inventions with some magic code!



MakeCode for Grove Zero

A free online web-based visual programming language for you to start with colored blocks that you can drag and drop onto the workspace to construct your programs and improve your inventions.

Use MakeCode for Grove Zero at makecode.seeedstudio.com

About Microsoft MakeCode makecode.com



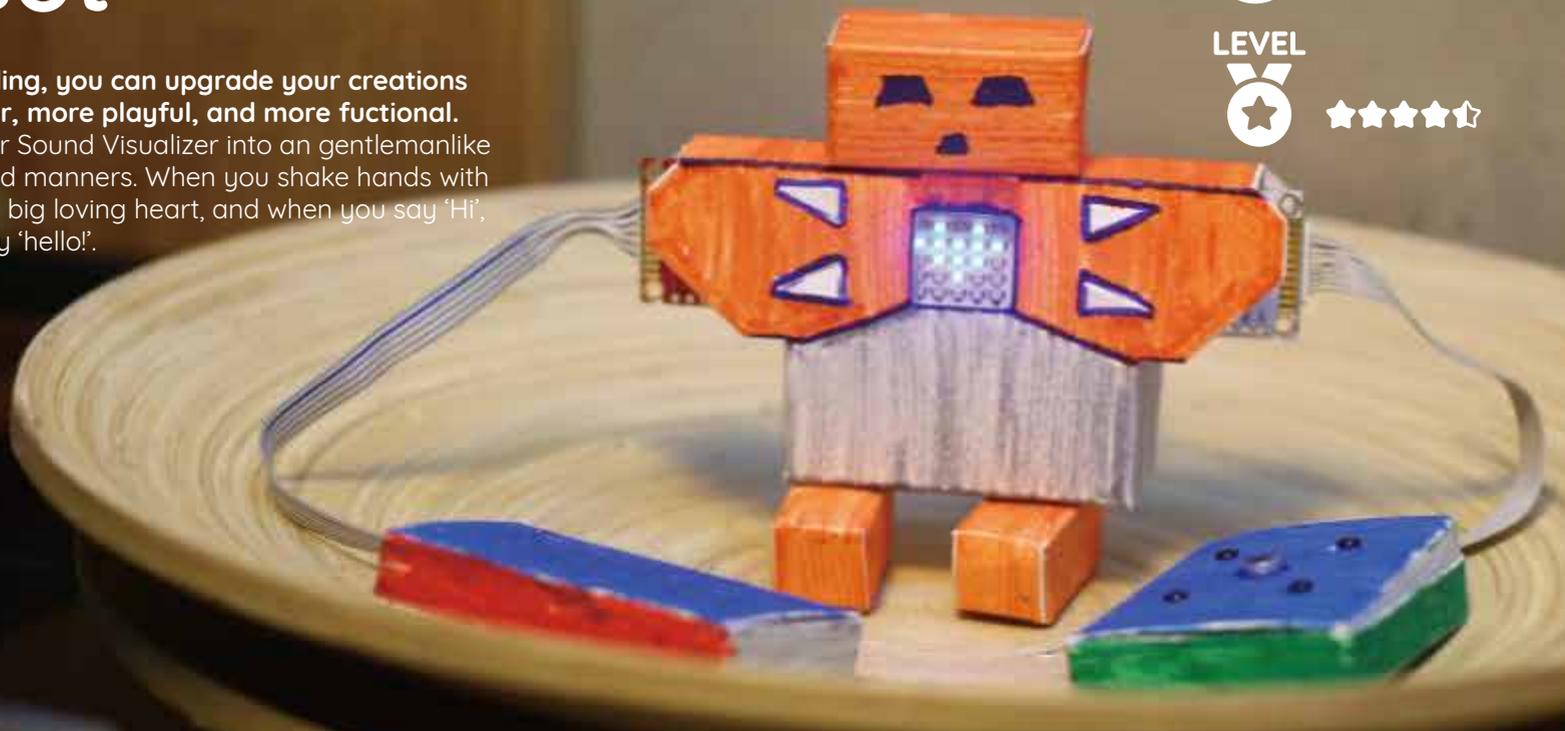


Upgrade your Sound Visualizer to a

Arm Bot

Just with a bit of coding, you can upgrade your creations into something cooler, more playful, and more functional. Like this one, turn your Sound Visualizer into an gentlemanlike **Arm Bot** that has good manners. When you shake hands with him, he will give you a big loving heart, and when you say 'Hi', he'll greet you and say 'hello!'.

Project #06



TIME



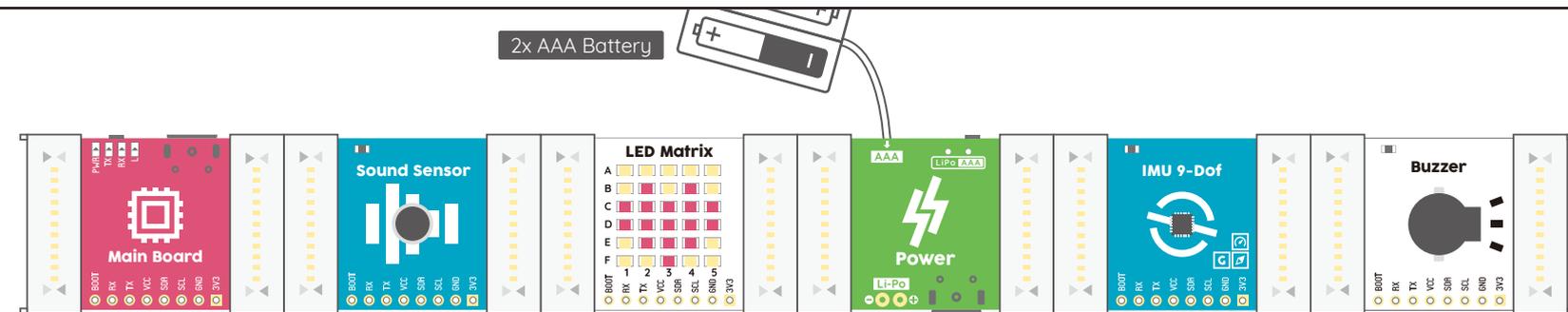
40 minutes

LEVEL



★★★★☆

1. Upgrade the circuit by adding more modules



Circuit of Sound Visualizer

Added Modules

Arm Bot



2. Upgrade the program using MakeCode



Think...before you code

How will the modules works in this project

Main Board: Run the code you put in, deal with sensor data from the input or sensor module, then tell the output 'what to do' and 'how to do it'.

1 IMU 9-DOF: As part of the Arm Bot's hand to detect if there is a 'shake' event happening (when you are shaking hand with Arm Bot.)

2 Sound Sensor: Detect the sound intensity around the Arm Bot. When someone says 'hi', then sensor might sense a 'Loud' environment.

LED Matrix: Display a warm 'heart' when IMU 9-DOF senses a 'shake' event, display text 'hello' when sound sensor detects a 'Loud' environment.

Power: Provide electricity to the circuit.



Now you have your program

```

1 on IMU 9-Dof shake
  LED Matrix shows icon [LED Matrix icon] at orientation 0°

2 on sound loud
  LED Matrix shows string "hello"
  
```

Tips: You can change the 'Loud' or 'Quiet' threshold of your sound sensor as follows. **DO NOT** put the block under a 'forever' loop as it works by reflashing the firmware and includes a 3 seconds delay (to protect the MCU of sensor.).

```

on start
  set sound loud threshold to 0 (delay for 3 seconds)
  
```



3. Download the code to your Main Board



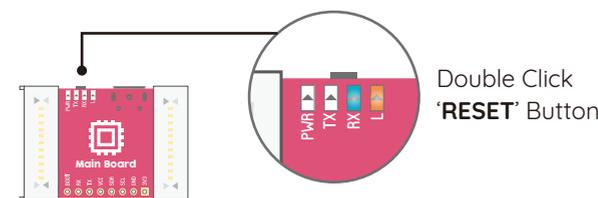
a. Press the 'Download' button to download your code.



b. Then you can see a file named 'test-01.uf2' (or other names you picked) just been downloaded.



c. Double click the 'RESET' button on your Main Board to enter the removable disk named 'Grove Zero'. Meanwhile the blue 'RX' LED and orange 'L' LED will keep flashing rapidly.



d. Now simply drag the file 'test-01.uf2' that you just downloaded into the removable disk.





4. Upgrade the appearance with papercraft

Template 5 (Part A)
 Template 5 (Part B)
 Template 5 (Part C)
 Template 5 (Part D)
 Template 5 (Part E)
 2x Template 5 (Part F)

Battery Holder
 Double-sided Adhesive Tape
 8x Plastic Rivet
 2x Wire
 2x AAA Battery (Not Included)



5. Assemble the chest of Arm Bot - Template 5(Part A)

Adhesive Area
 Insert Part

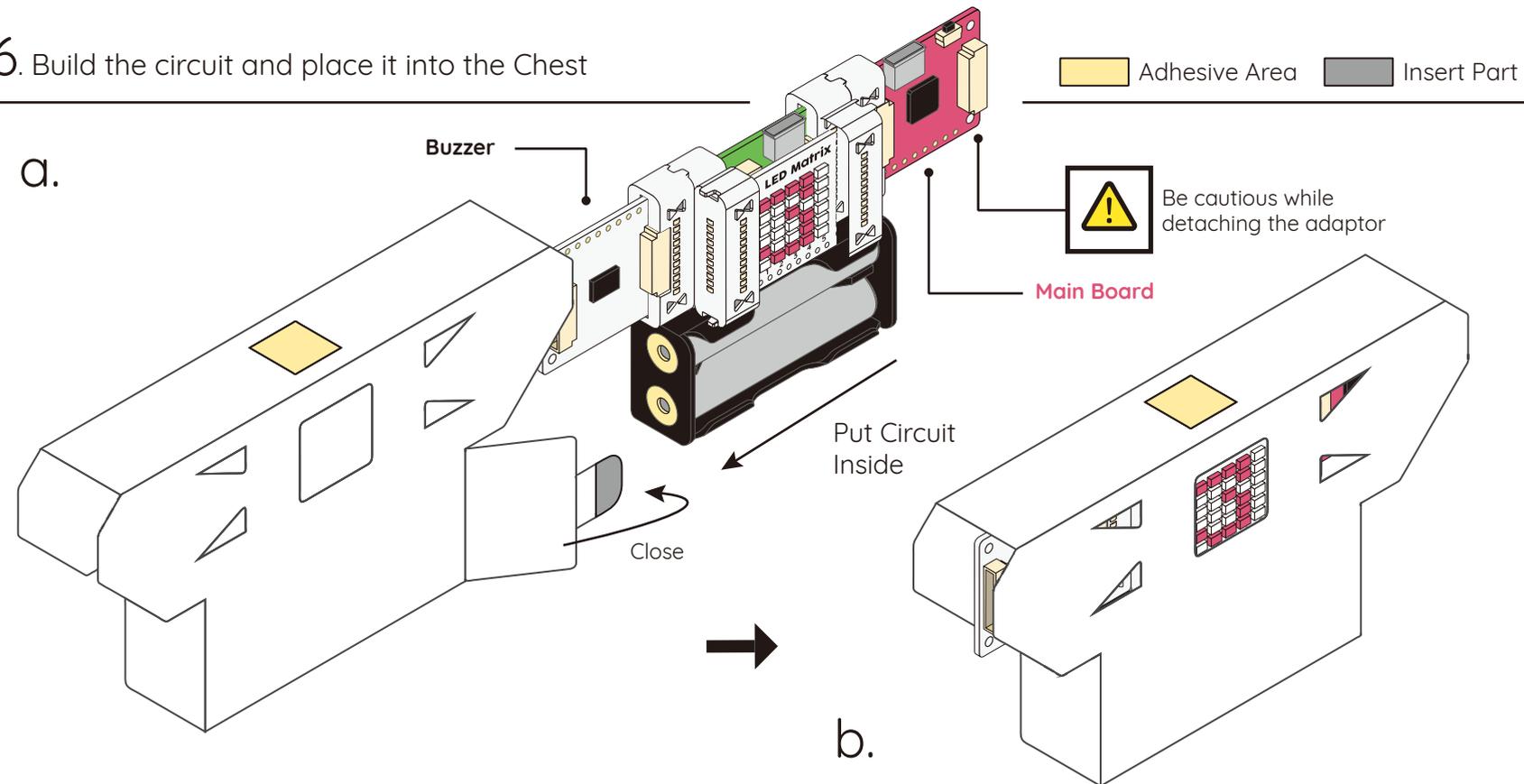
a.
 b.

Attach Tape

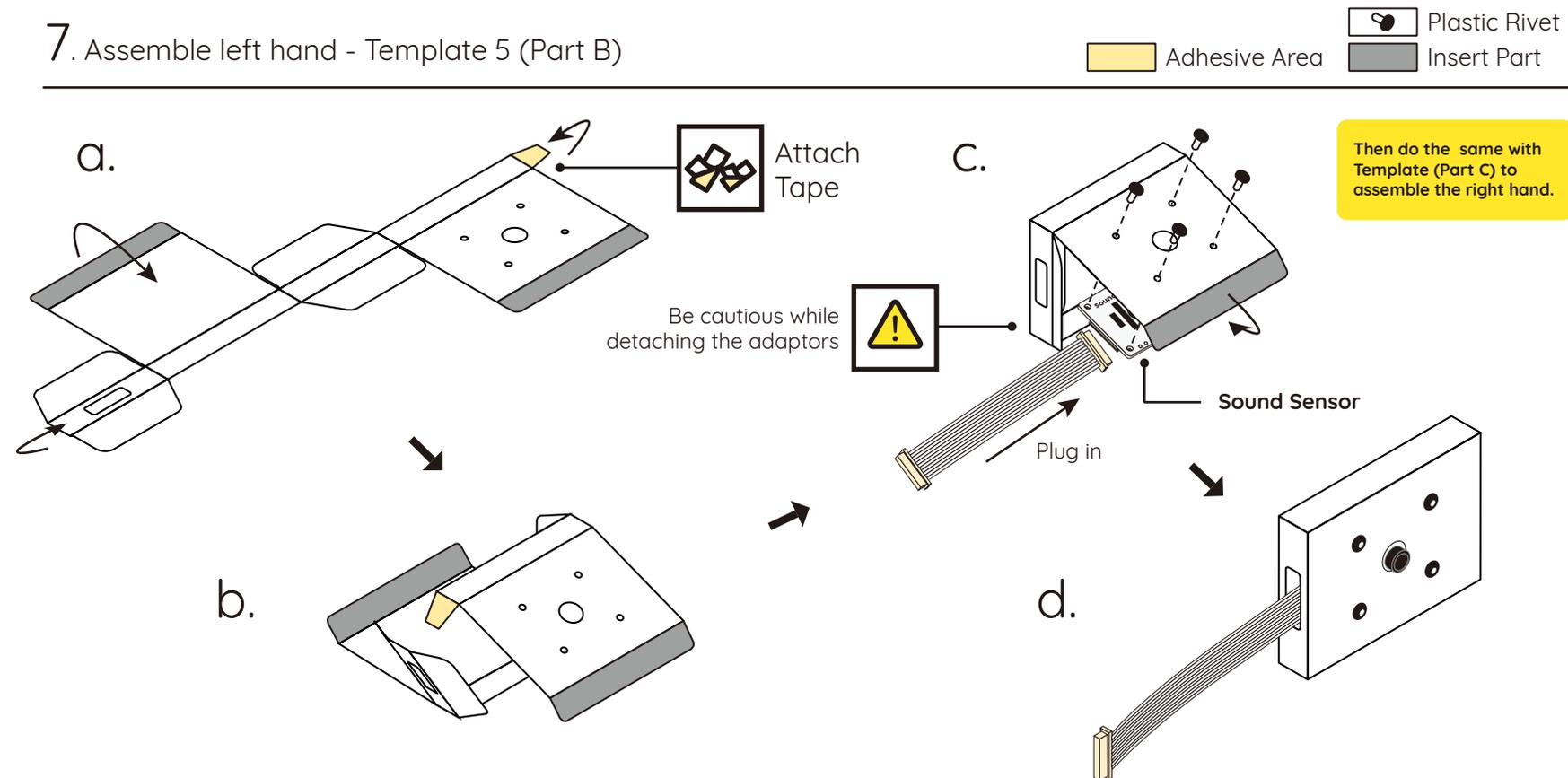
Insert **ONLY** RIGHT side



6. Build the circuit and place it into the Chest



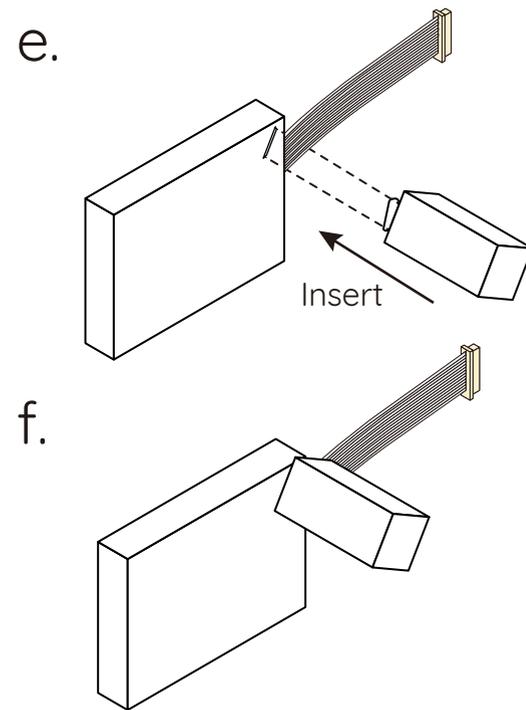
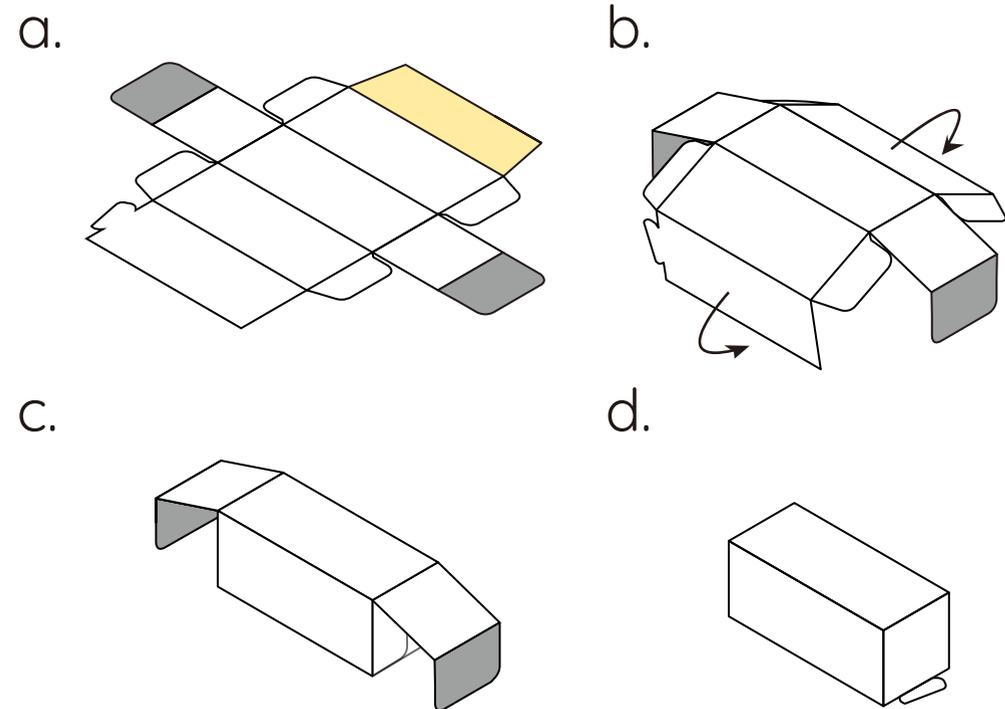
7. Assemble left hand - Template 5 (Part B)





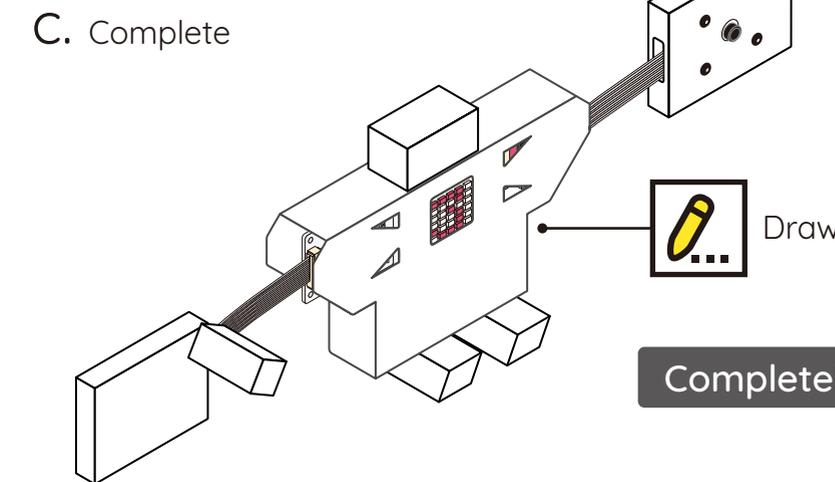
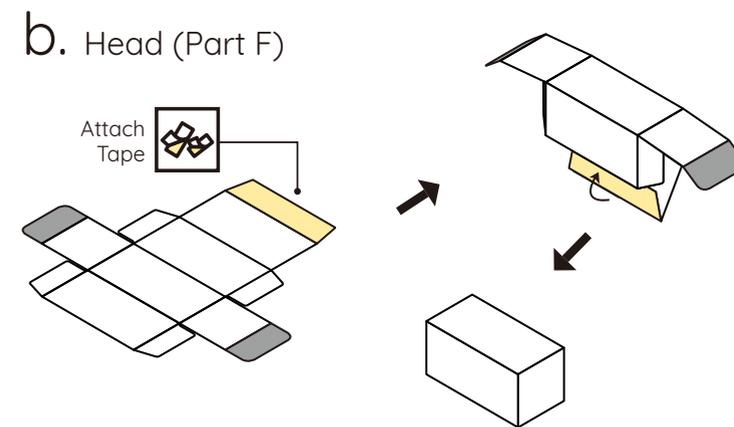
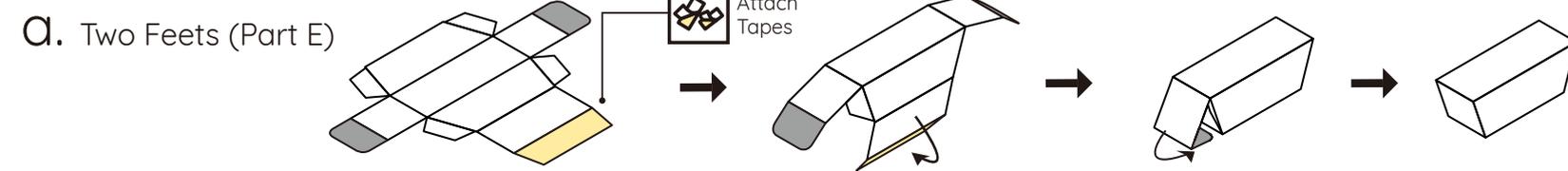
8. Assemble thumb of left hand - Template 5 (Part D)

Adhesive Area Insert Part



9. Assemble the rest and complete

Adhesive Area Insert Part





KEEP TRYING

Don't stop there, keep trying.

You have just finished your invention journey with this guide, congratulations! However, **your real invent journey with Grove Zero has just started.**

As long as you keep trying, there is unlimited possibilities of what you can do with the Grove Zero modules. Try to build you own circuit and make your own projects. Try to share your ideas with your friends. You may also get fresh new ideas from them too.





Circuit does not work

- Try to reset the circuit by single clicking the reset button on the Main Board.
- Check the LED Indicator labeled 'L' on your Main Board, see if you have accidentally double-clicked the reset button and entered the 'removable disk', see PG 52. If you do, double-click it again to exit.
- Check your battery, see if it has ran out.
- Check your connections, make sure the magnetic connectors are aligned and the contacts are not shorted.

Notice

The Grove Zero Modules are occasionally updated in the future, along with the update of this guide. So the modules you possess may differ from what's written or illustrated in this guide.

