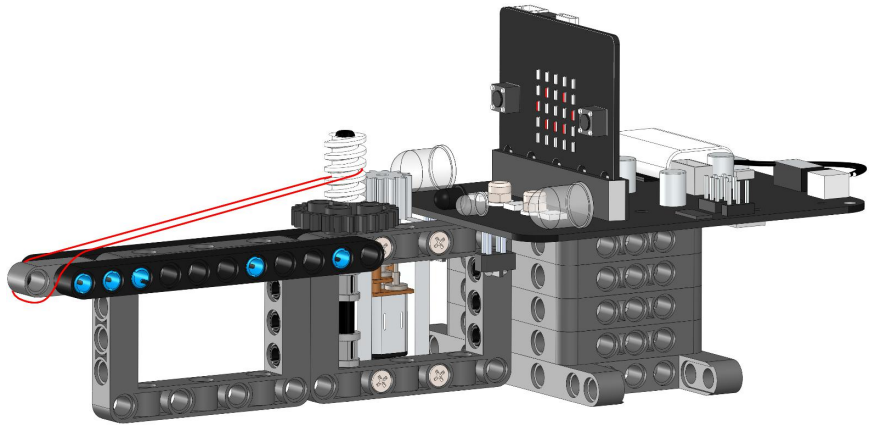
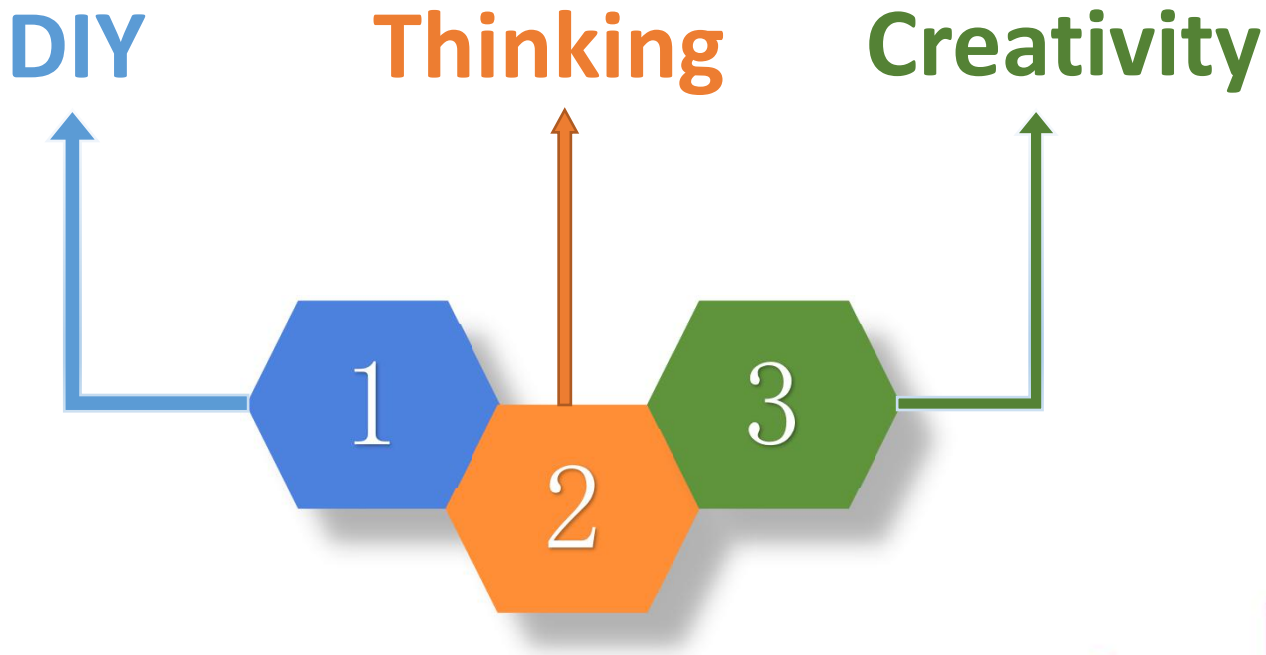
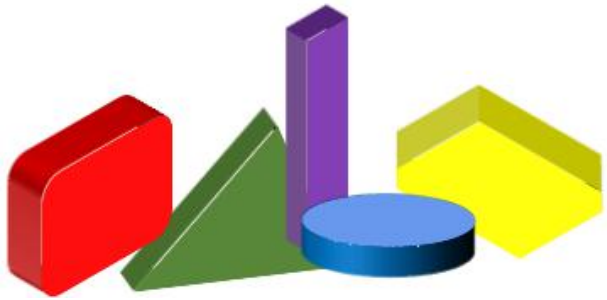
Yahboom Building:bit blocks

No.6 Sniper

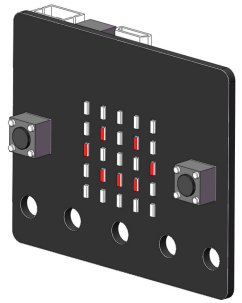
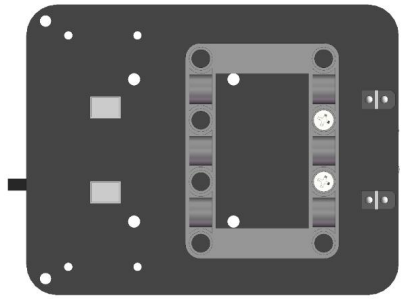
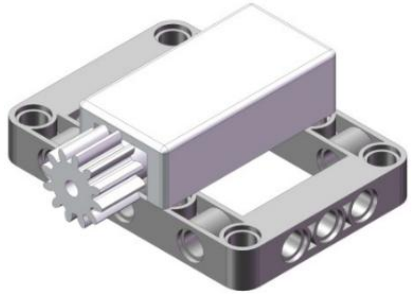
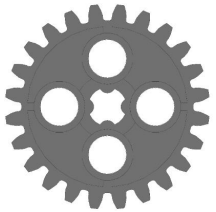
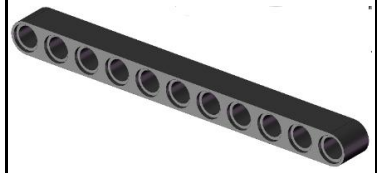
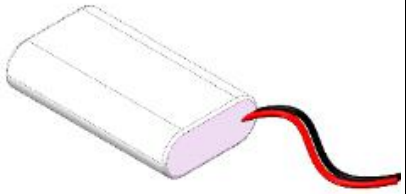
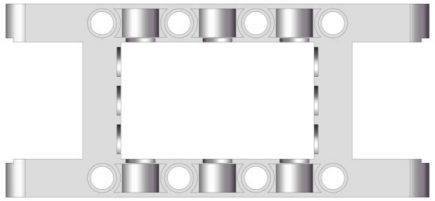



DIY
Thinking
Creativity
1
2
3



DIY: This section is mainly to teach you to assemble sniper with building blocks.

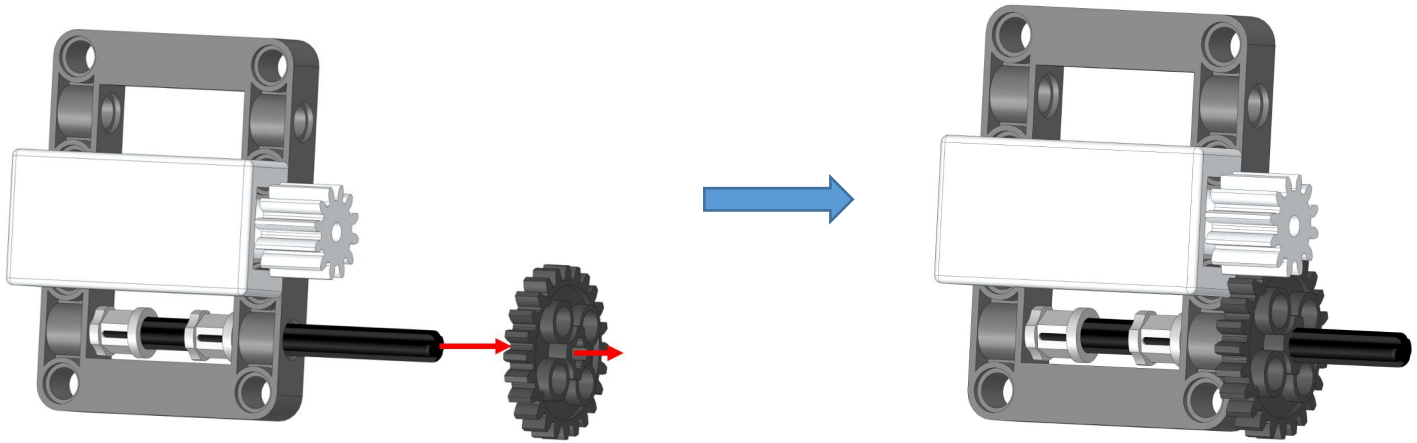
Prepare the following blocks and we will assemble a cute building block sniper.

 Micro:bit*1	 Micro:bit expension board*1	 Motor module*1	 5x7 beam frame*4	 24 toothed wheel*1
 1x11 hole arm*2	 Battery*1	 5x11 beam frame*1	 1x8 Cross Axle*1	 1x3 shaft*5
 Bushing*2	 1x3 hole arm*1	 1x2 Frictional pin *14	 Spiral wheel*1	

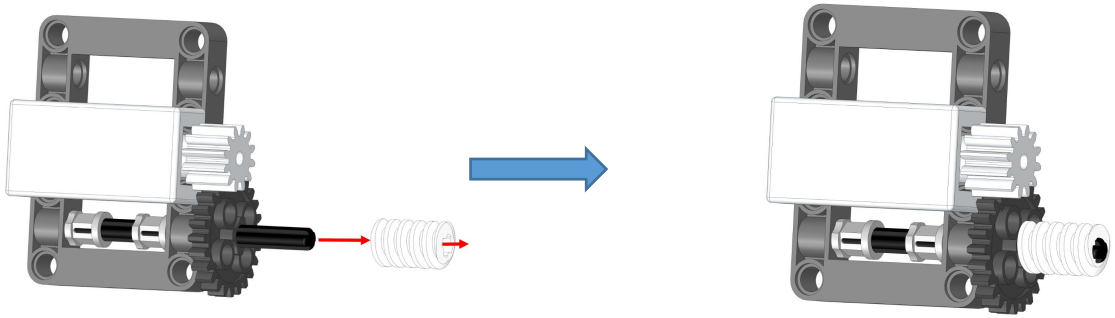
Step 1: Find a motor module, two bushings and a 1x8 cross axle. Pass the cross axle through the corresponding hole position of the motor module and the two bushings.

Tip: After the cross axle passes through the bushing and motor module, there is no need to reserve the length on the left side.

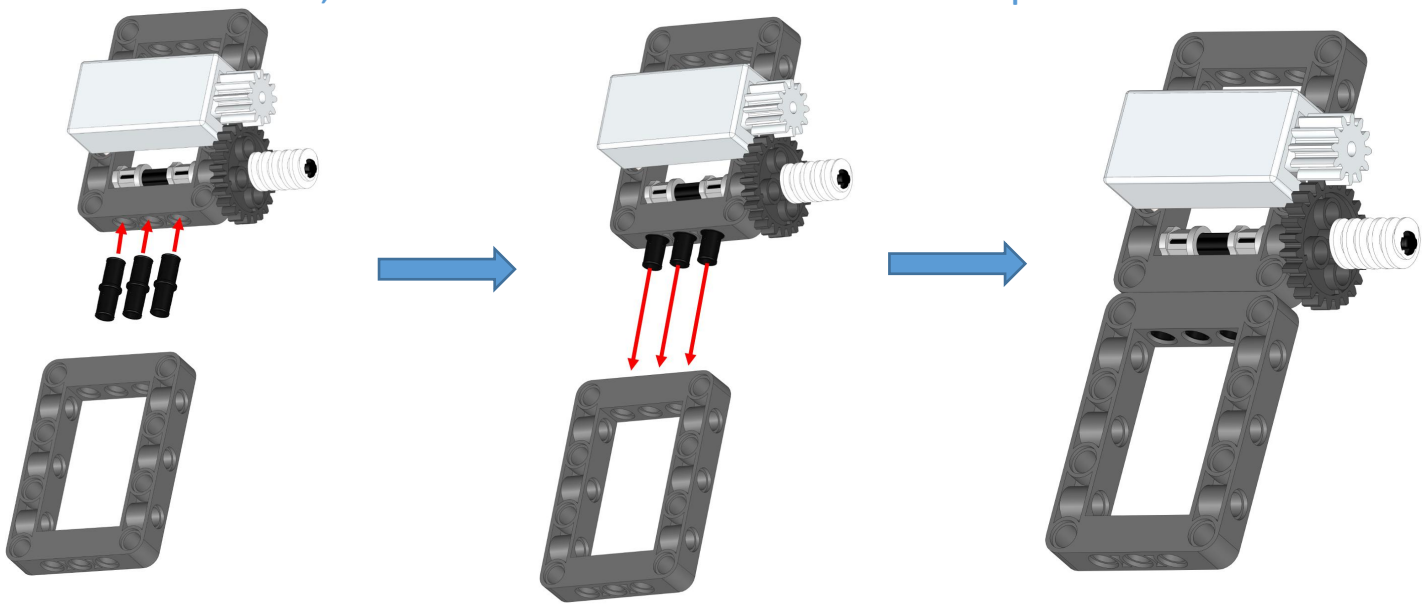
Step 2: Look for a 24-toothed wheel to install it.



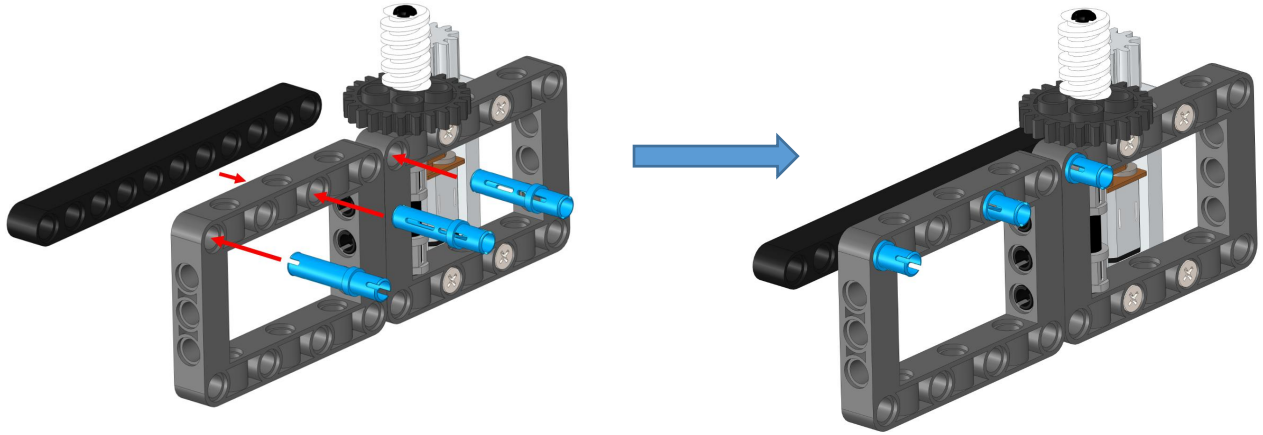
Step 3: Find a spiral wheel and install it on the already assembled cross axle.



Step 4: Locate three 1x2 friction pins and one 5X7 beam frame. First insert the three friction pins into the corresponding holes on the side of the motor module, and then install the 5x7 beam frame on the friction pin.

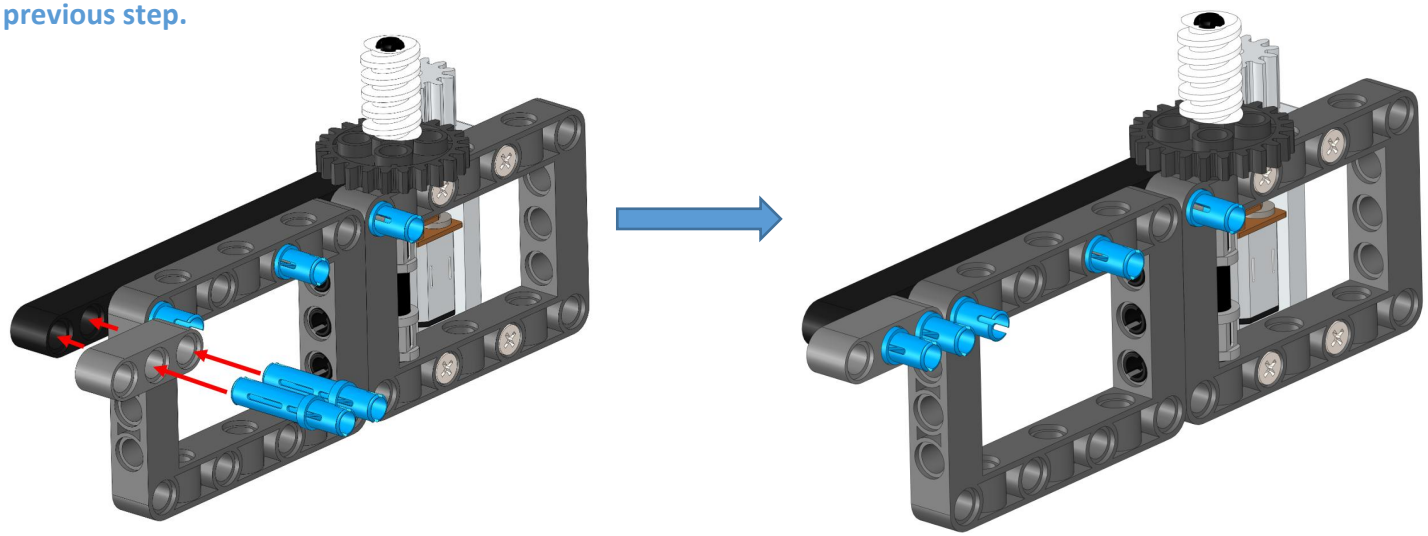


Step 5: Find three 1x3 bolts and a 1x11 hole arm for assembly.

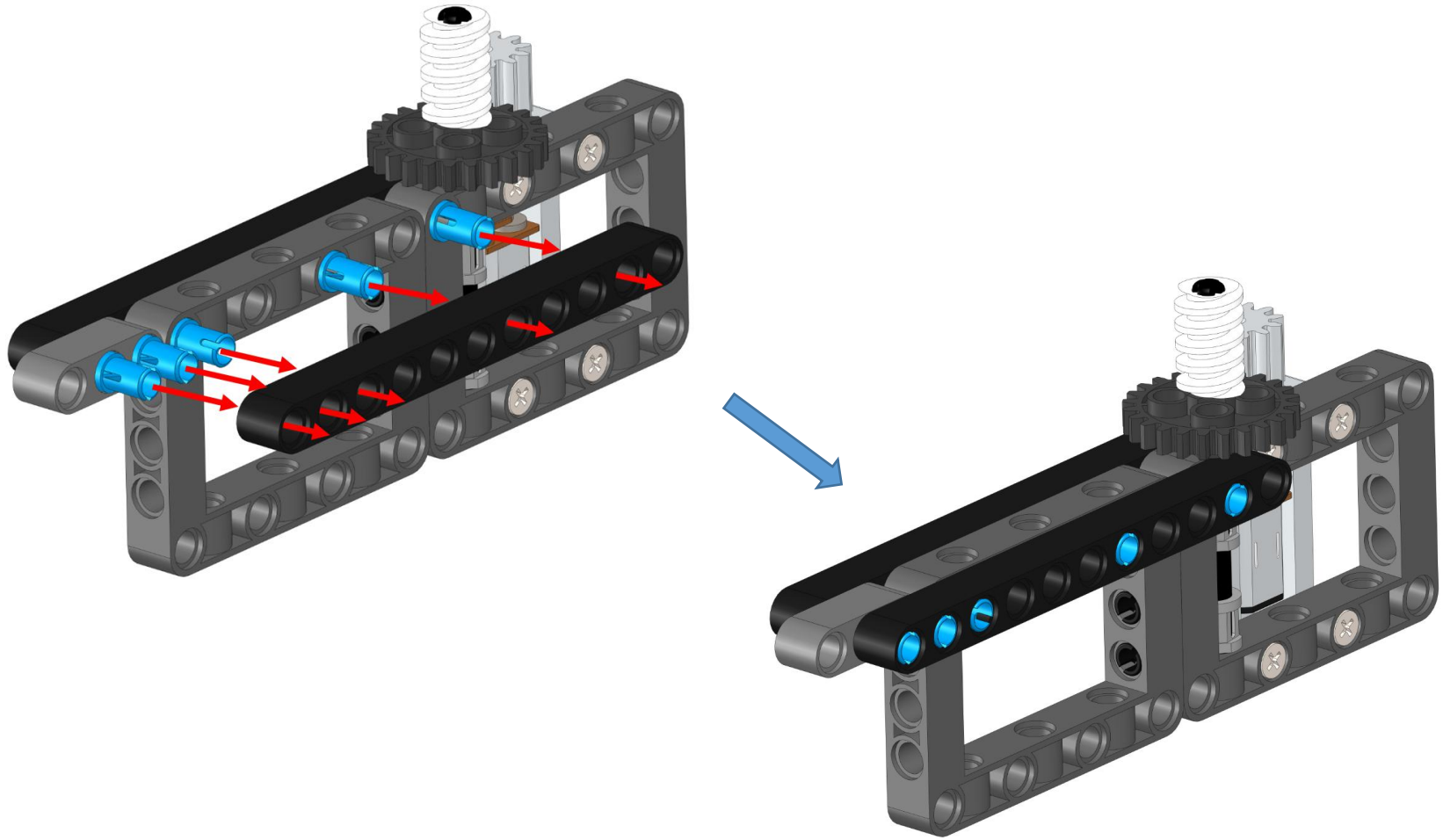


Tip: After the 1x11 hole arm is installed, the front end is reserved for the length of the two holes. These two holes will be used in the next assembly.

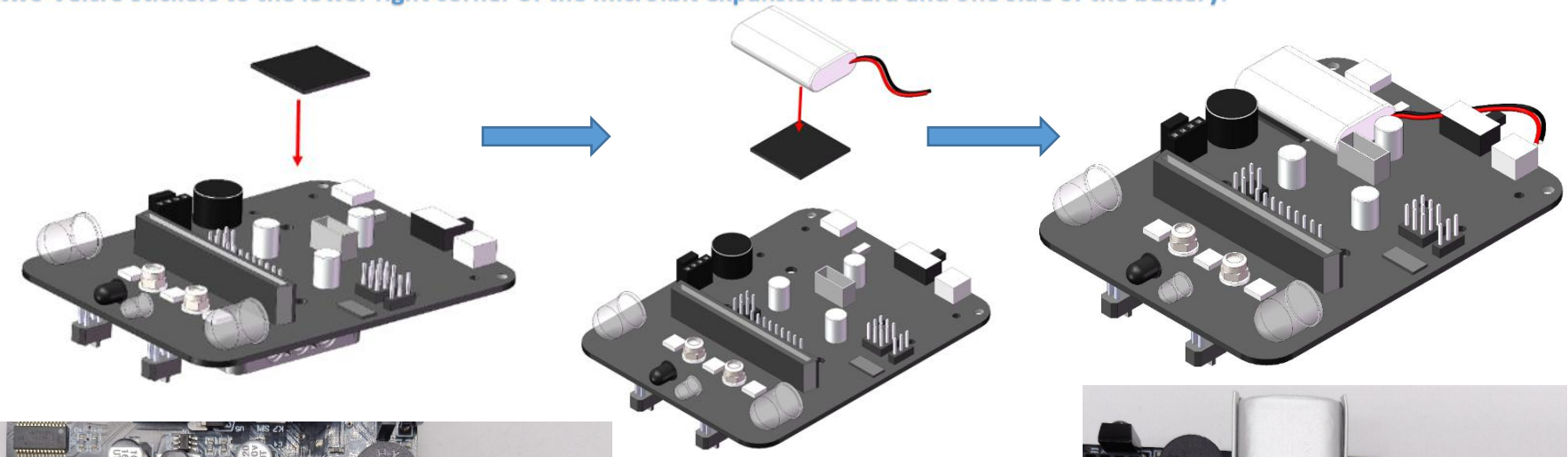
Step 6: Locate a 1x3 hole arm and two 1x3 pins. Install the 1x3 hole arm through the two 1x3 bolts to the two holes reserved in the previous step.

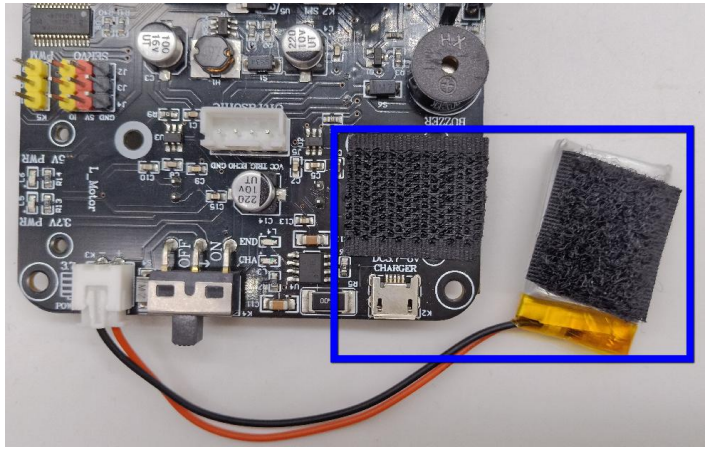


Step 7: Continue to find a 1x11 hole arm and mount it on the other side.

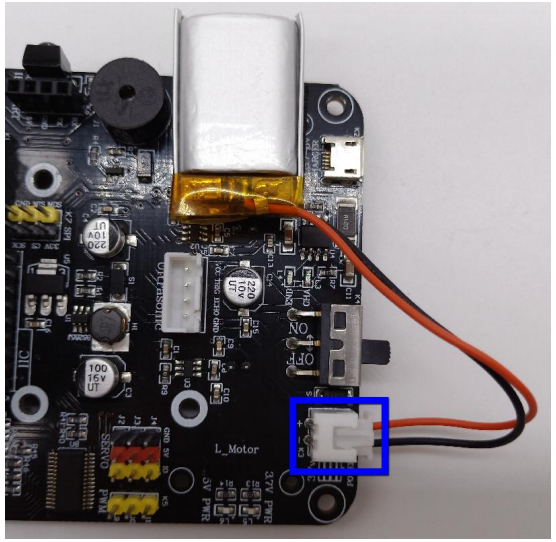


Step 8: Find the Velcro and micro:bit expansion board, remove the protective film on the back of the Velcro, and attach the two Velcro stickers to the lower right corner of the micro:bit expansion board and one side of the battery.

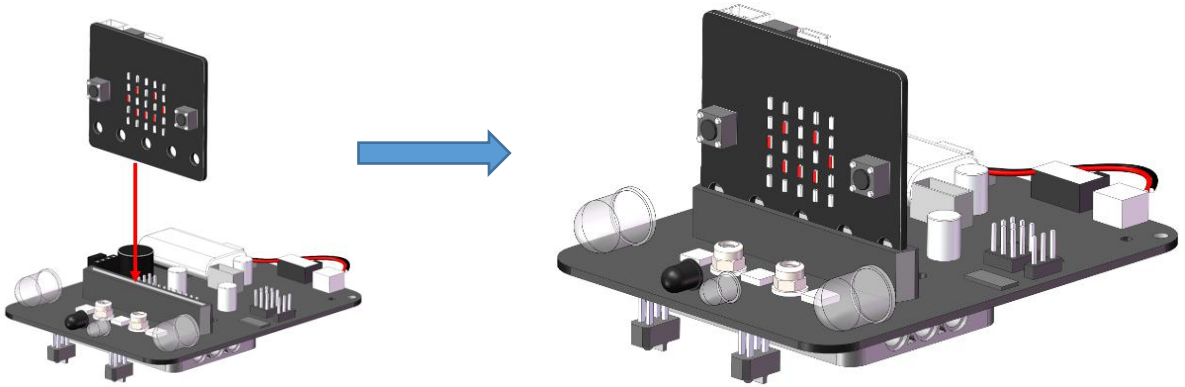




Tip: The socket for battery wiring, we use anti-reverse design. Just plug the battery cable into the socket.

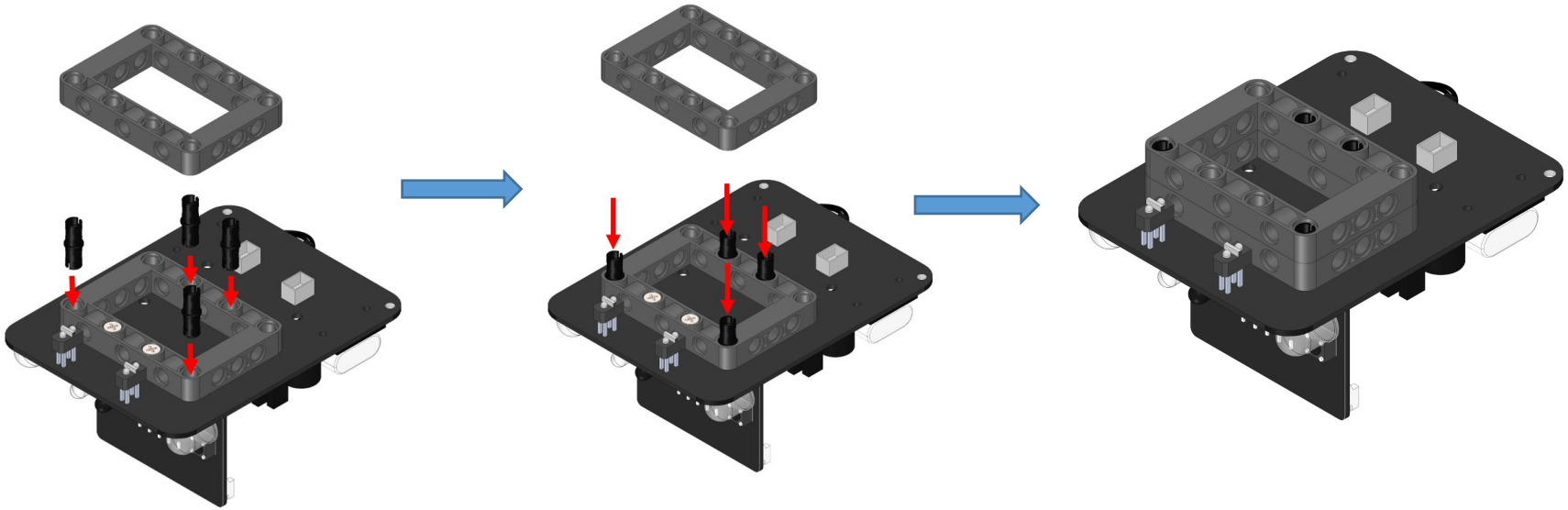


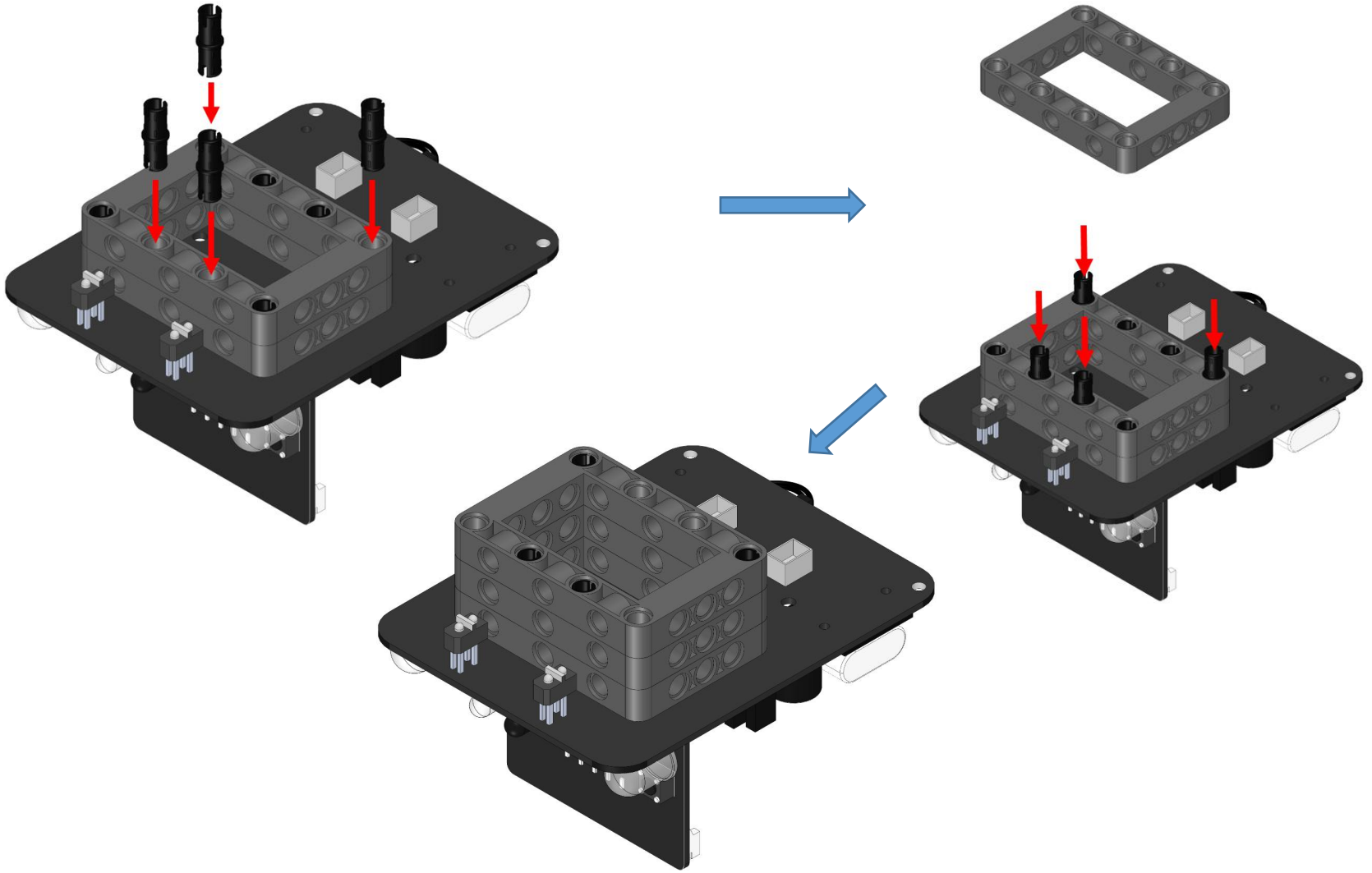
Step 9: Locate the micro:bit motherboard and insert it correctly into the micro:bit expansion board.

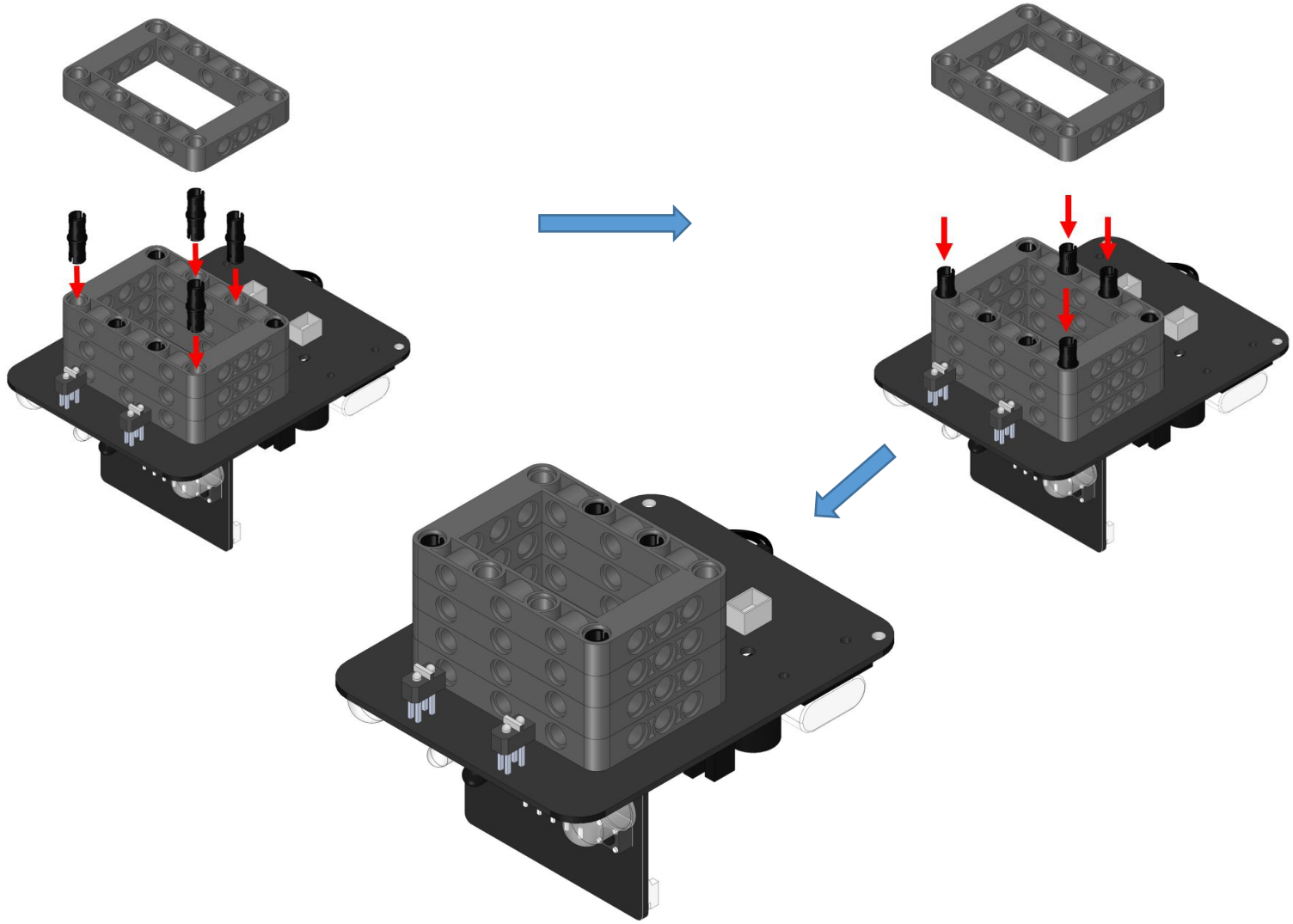


Tip: The micro:bit board is equivalent to the "brain" of the sniper, so please remember to install it correctly.

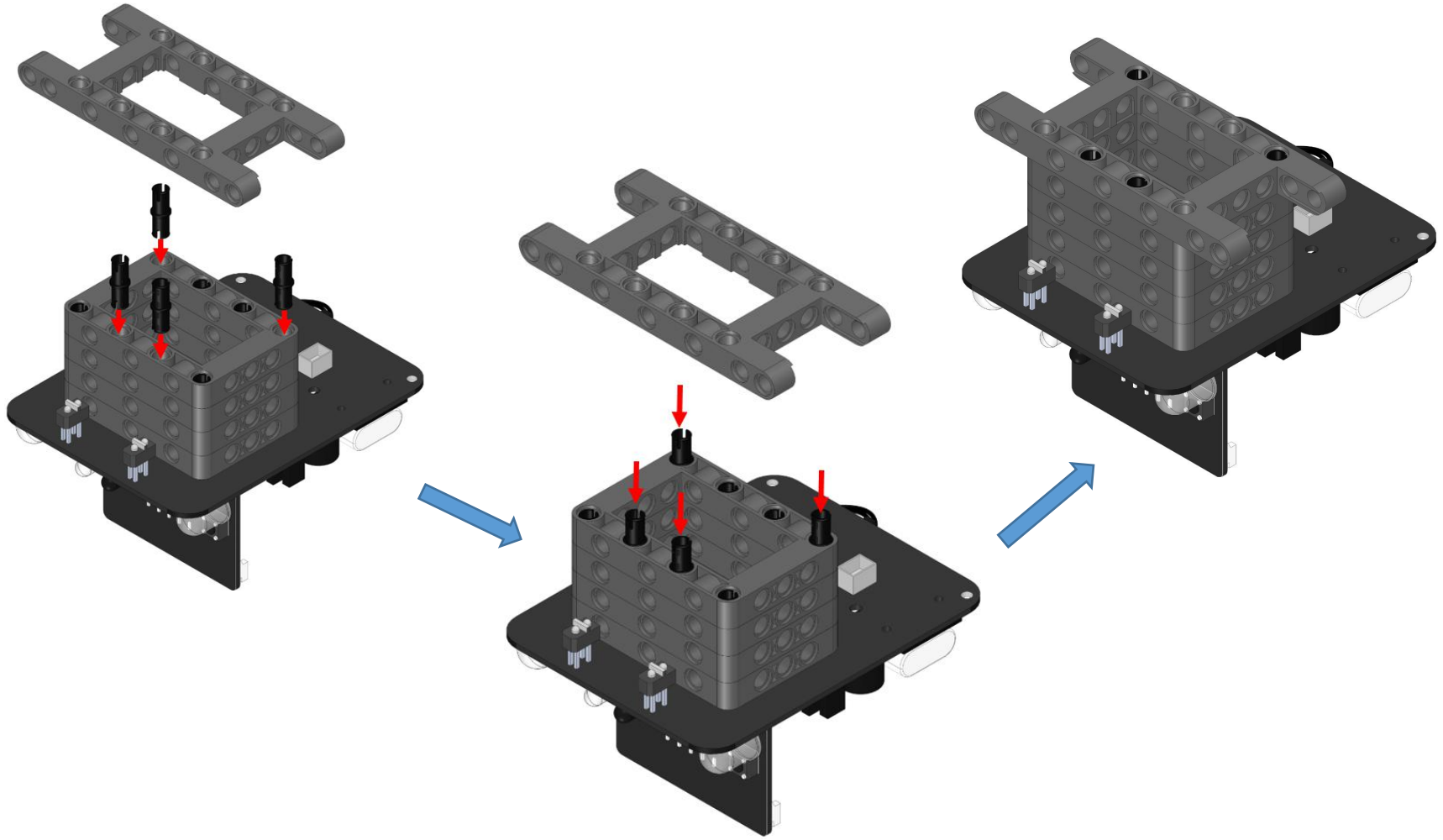
Step 10: Find the micro:bit expansion board, twelve 1x2 friction pins, three 5x7 beam frames, and assemble them.



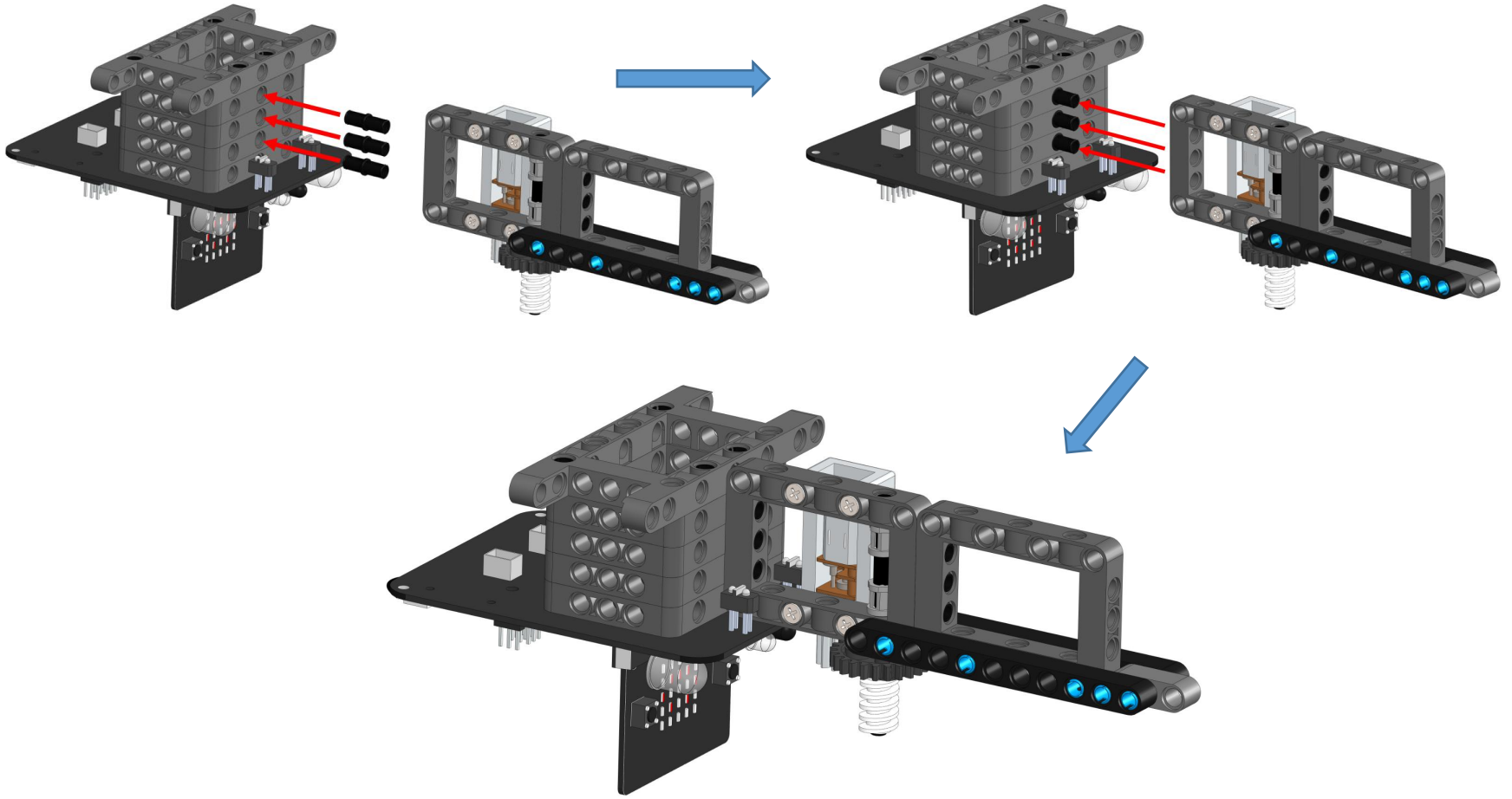




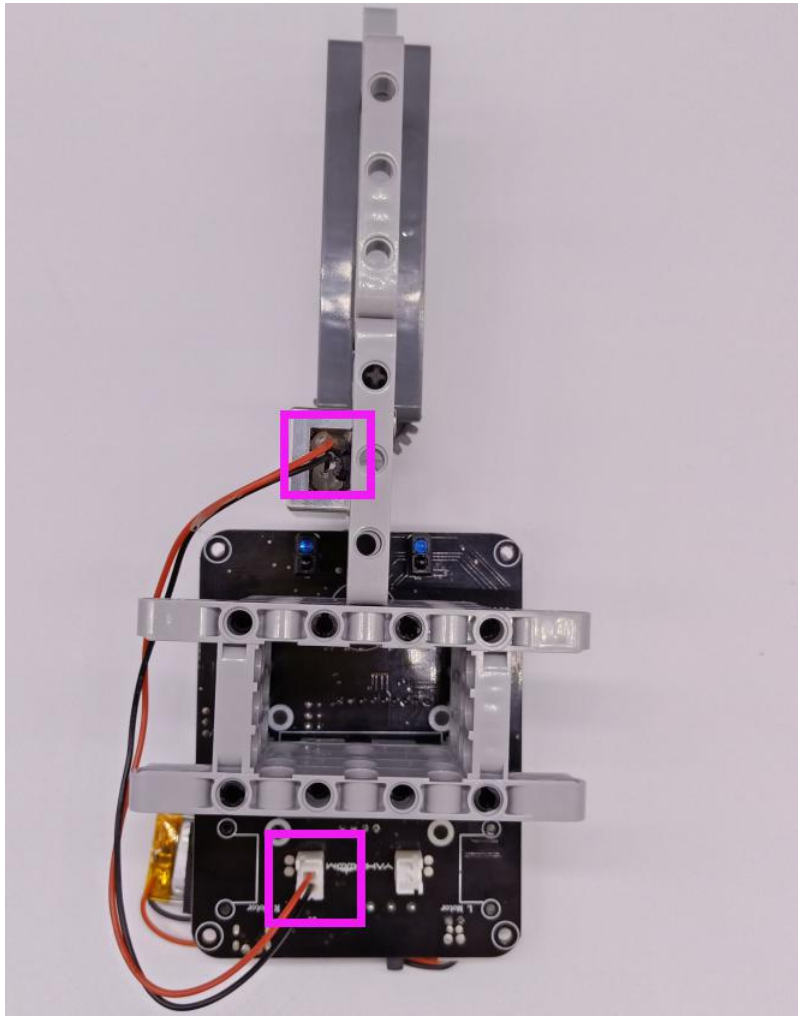
Step 11: Find four 1x2 friction pins, a 5x11 beam frame, and assemble them.



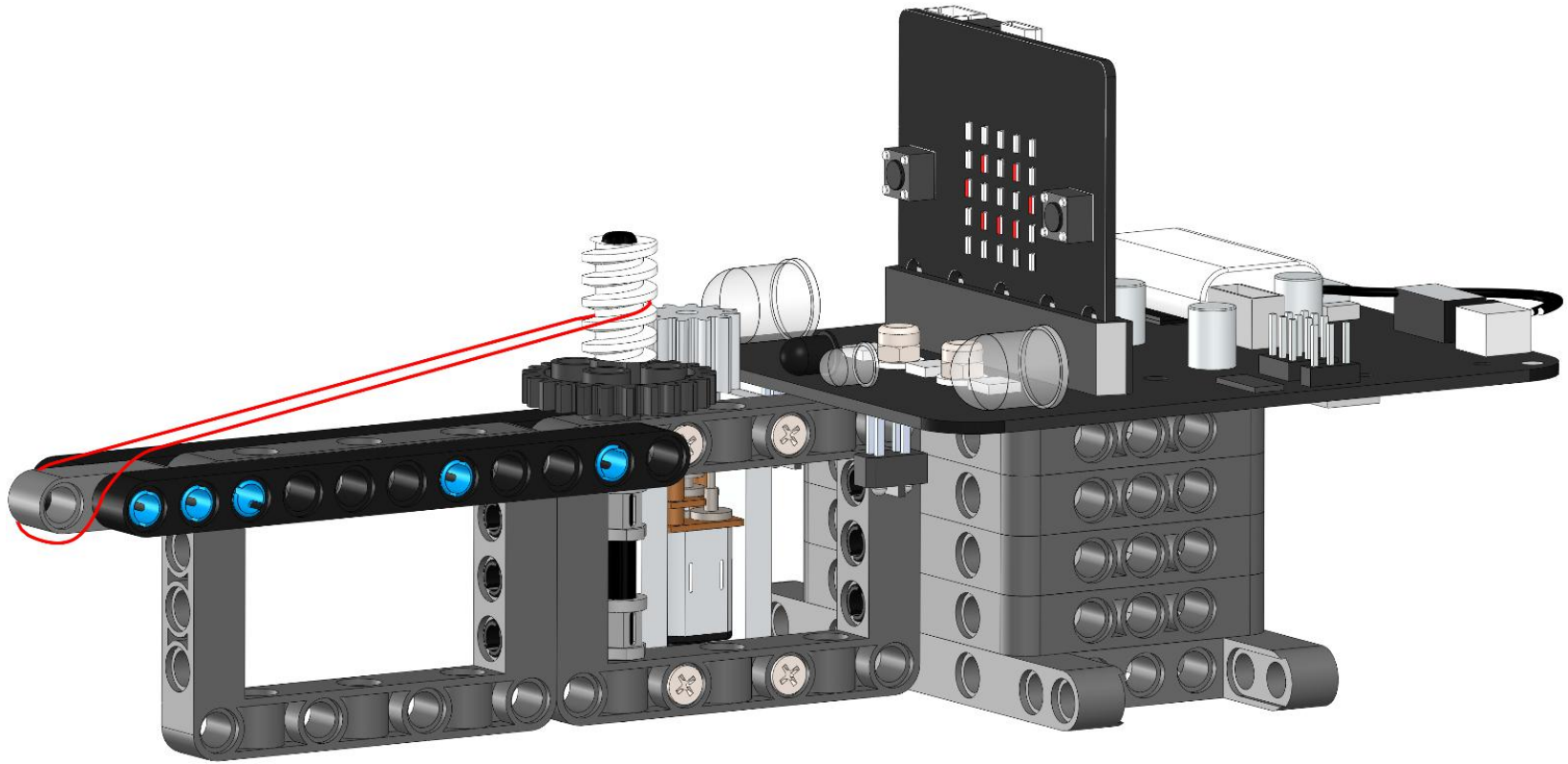
Step 12: Combine the two pieces of building blocks we have assembled in the seventh and eleventh steps with three 1x2 friction pins.



Step 13: Wire as shown below.



Please remember to put on the rubber band after the assembly is completed, as shown below.



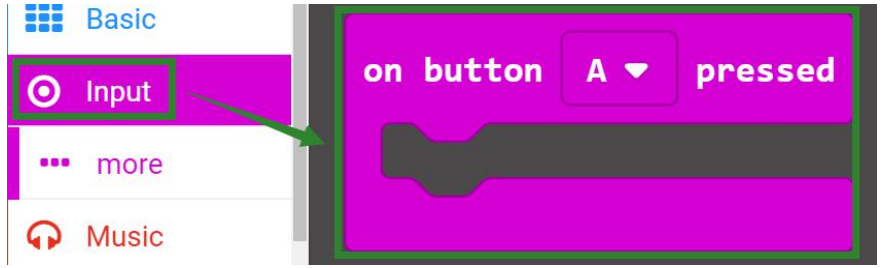
Tip: When playing with a sniper, you can't shoot at people. You can shoot at an empty place.

Thinking： This session is mainly to teach you how to use graphical programming to control snipers.

Preparation

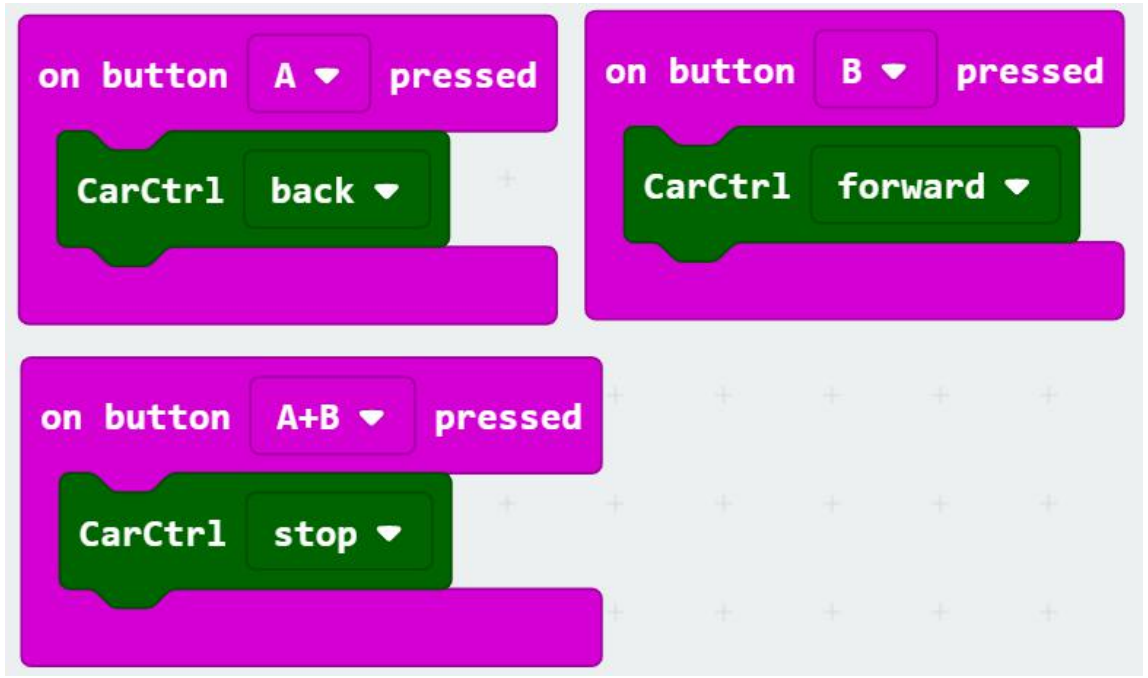
- USB cable *1
- Sniper *1

Blocks

Block	Instruction
	When the button on the micro:bit board is pressed, the corresponding content is executed.
	The Cartrl forward represents the forward rotation of the motor, and the Cartrl back represents the reverse rotation of the motor.

Programming

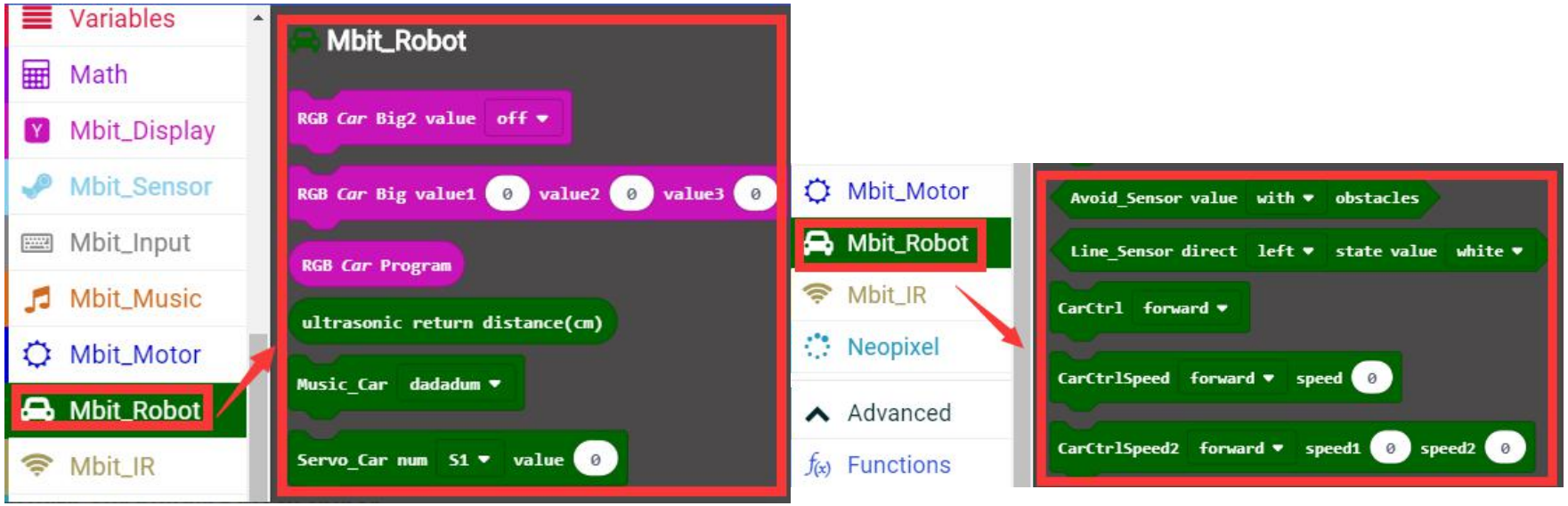
The program of this course is shown in the figure below. After downloading the program, open the sniper's power switch, install the rubber band on the helical gear. Press the A button on the micro:bit board, the motor will start until the rubber band is ejected. Press the B button on the micro:bit , the motor is reversed. Press the A and B button on the micro:bit board, the motors stop rotation.



This experimental program file has been provided, you can download and use it directly according to the steps in "Instruction".

Program path:Building bit starter kit\2. Experimental course\F.Sniper\2.Sniper\Sniper.hex

We have packaged the blocks as shown in the two figures below for this sniper.



If you see these blocks, you can definitely think of more gameplay, so don't hesitate to try it bravely.
Drag these blocks and play with our building block sniper.

On our official website, we also provides other tutorial: Sniper Infrared remote control, Sniper bit handle remote control.
Official website learning website: www.yahboom.net/study/Building_bit