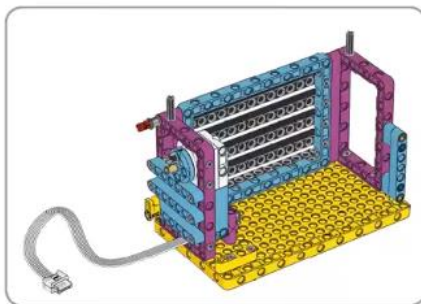


Capítulo 14 (Caja superfuerte)

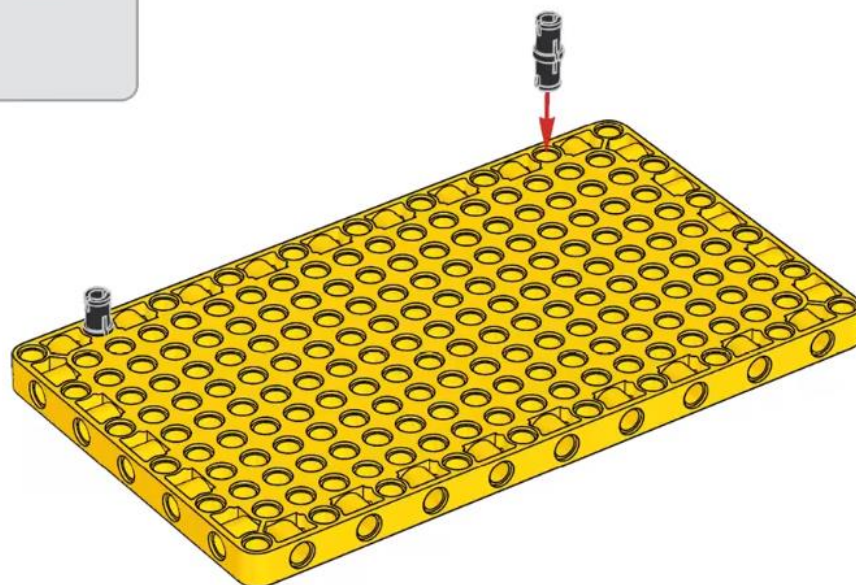
Este proyecto consta de dos partes:



Caja superfuerte



1

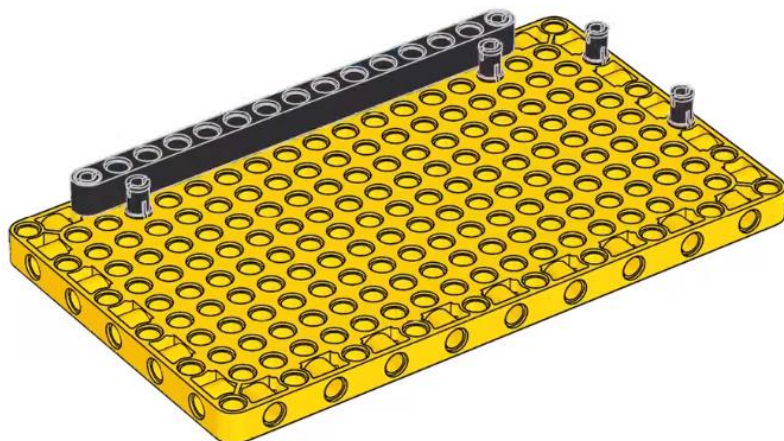


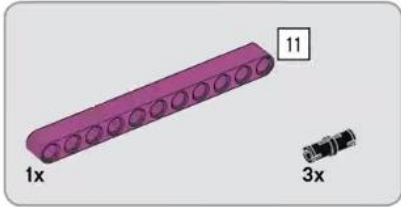
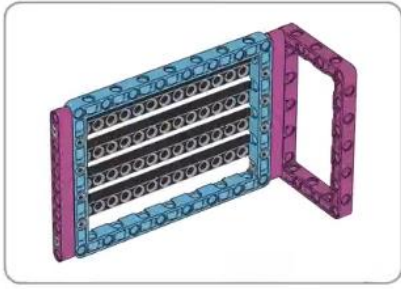


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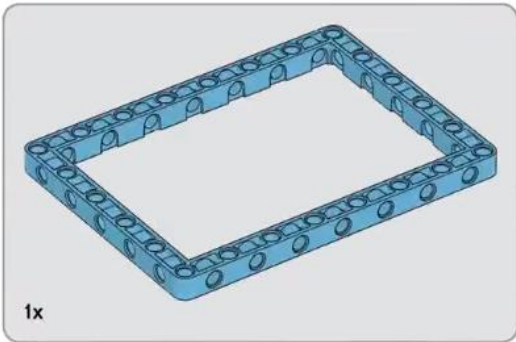
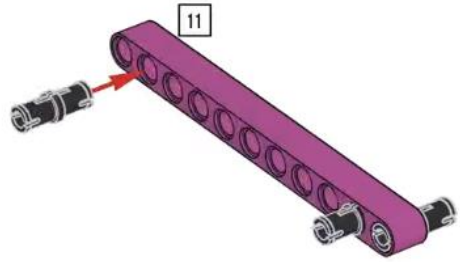


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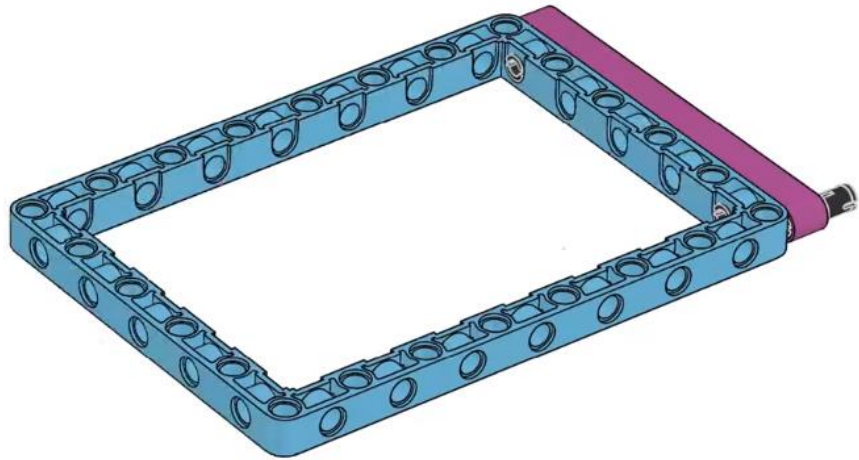




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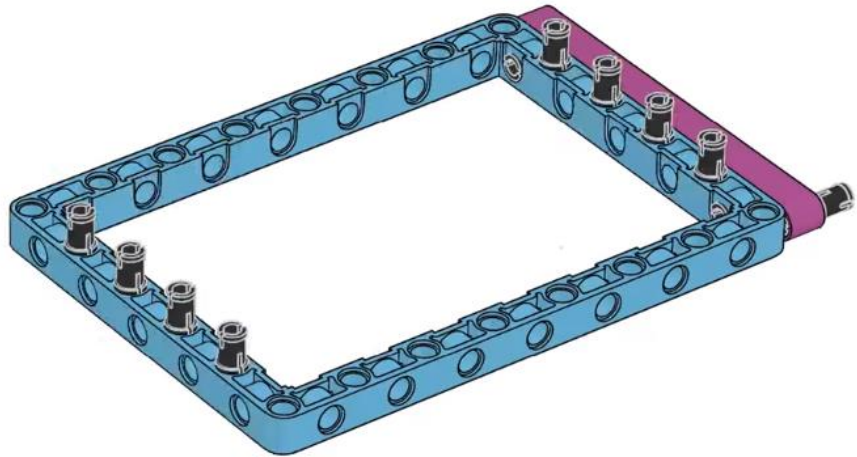


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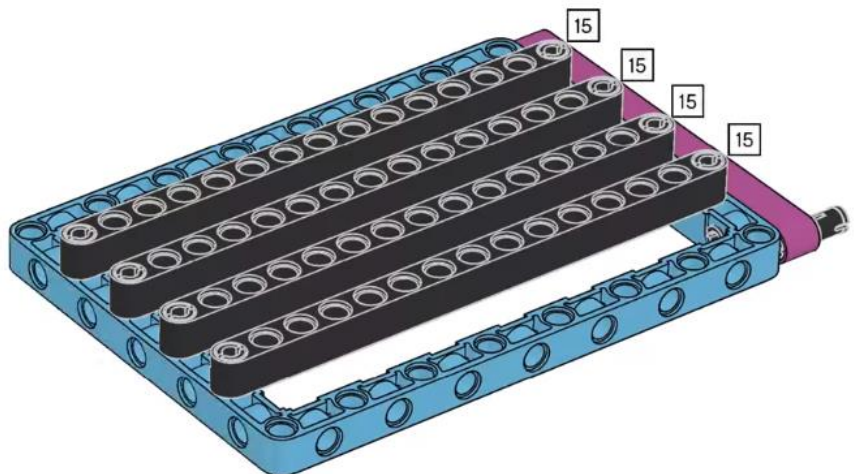




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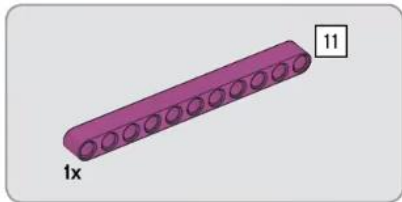
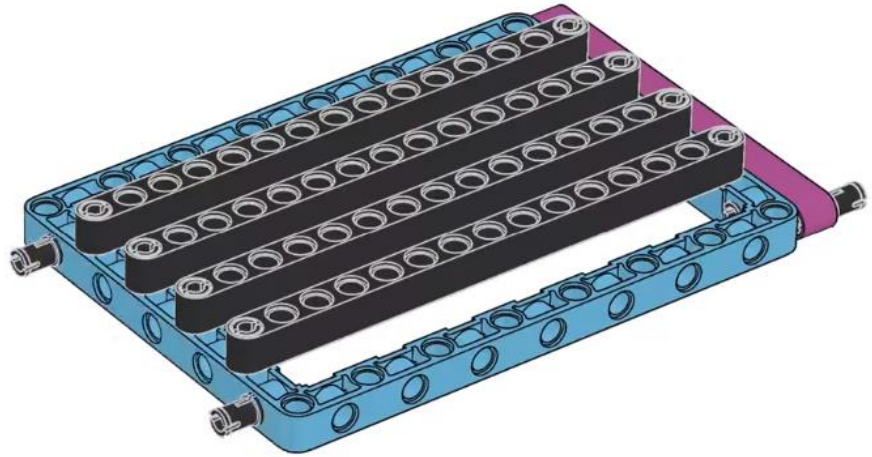


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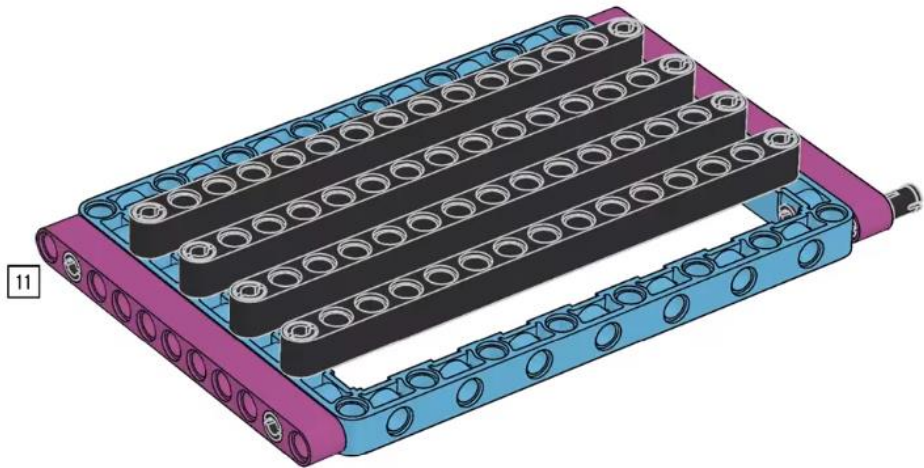


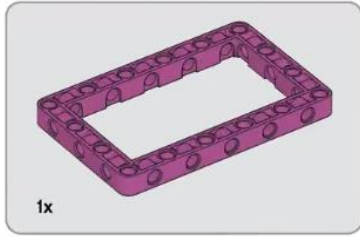


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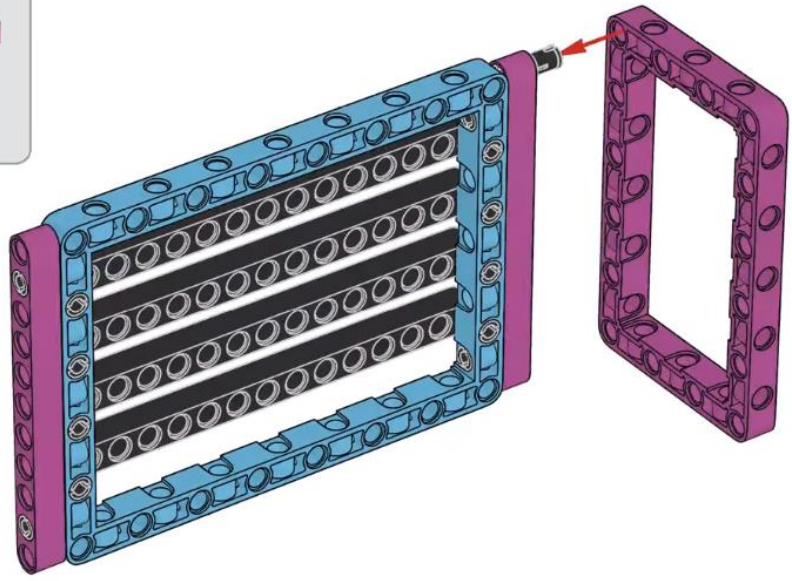


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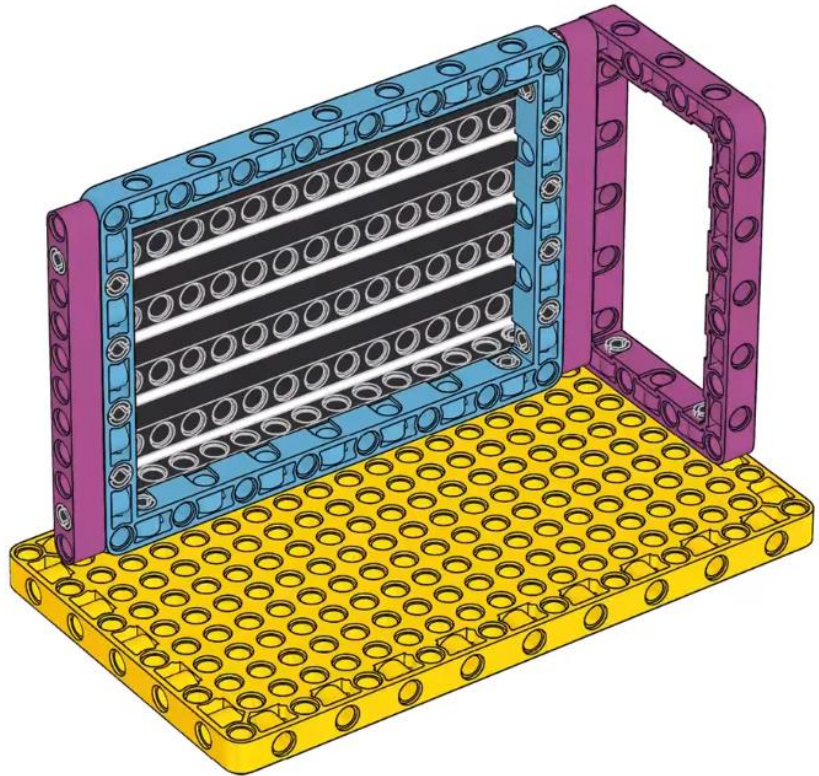


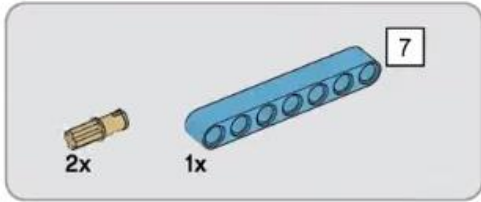
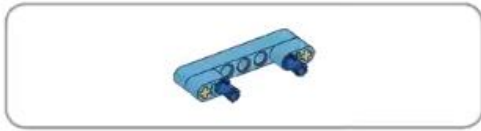


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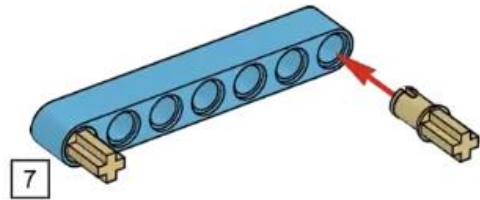


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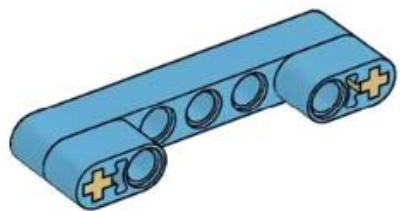




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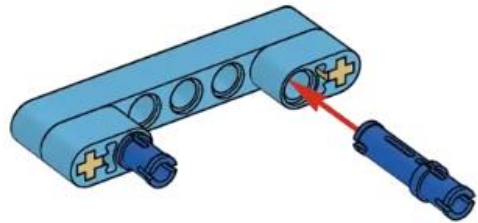


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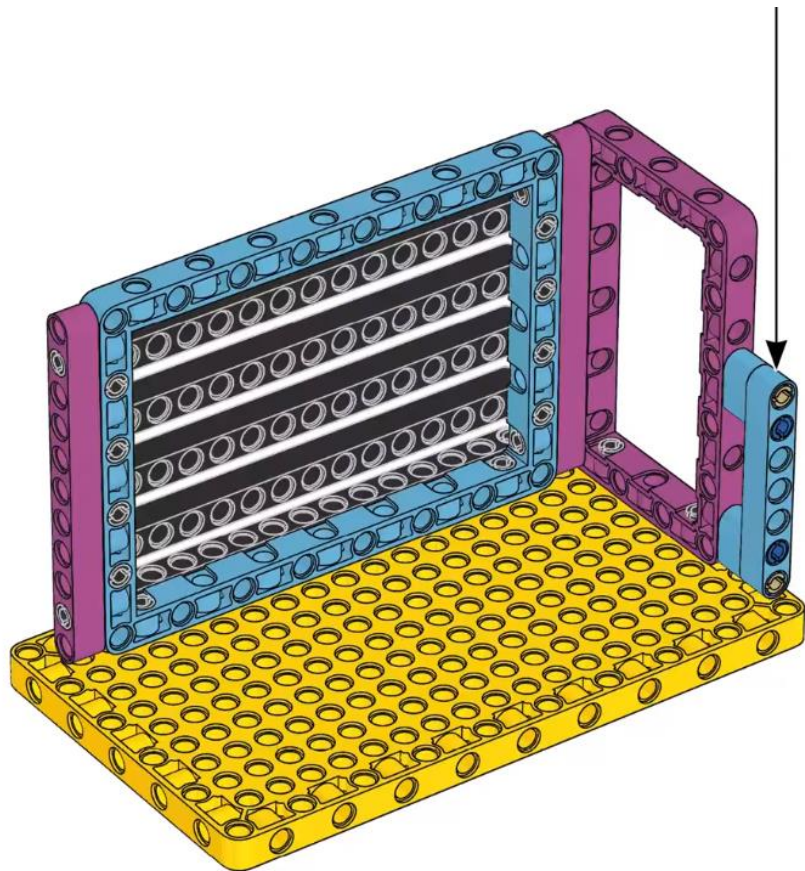




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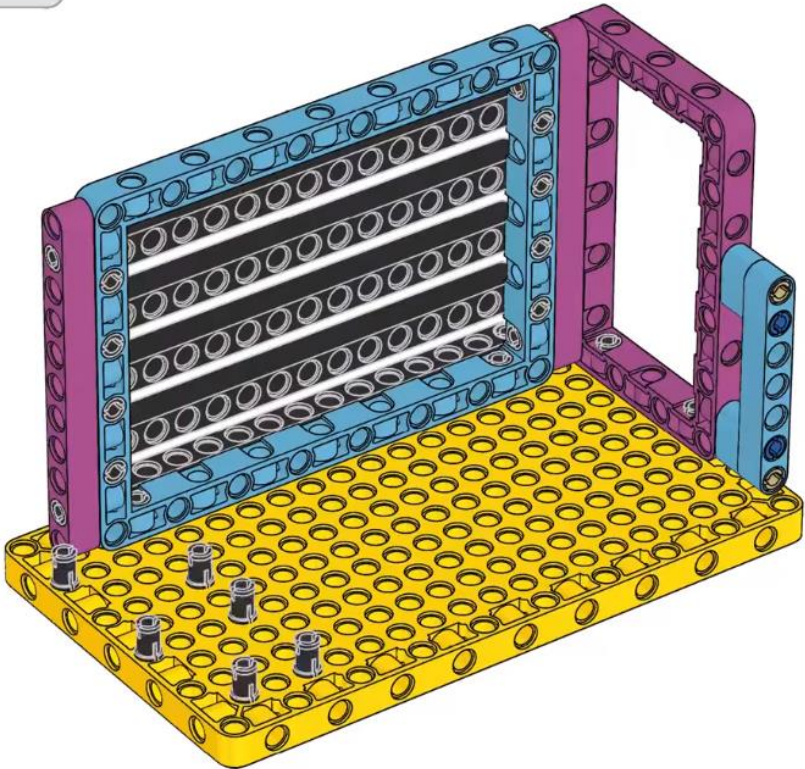


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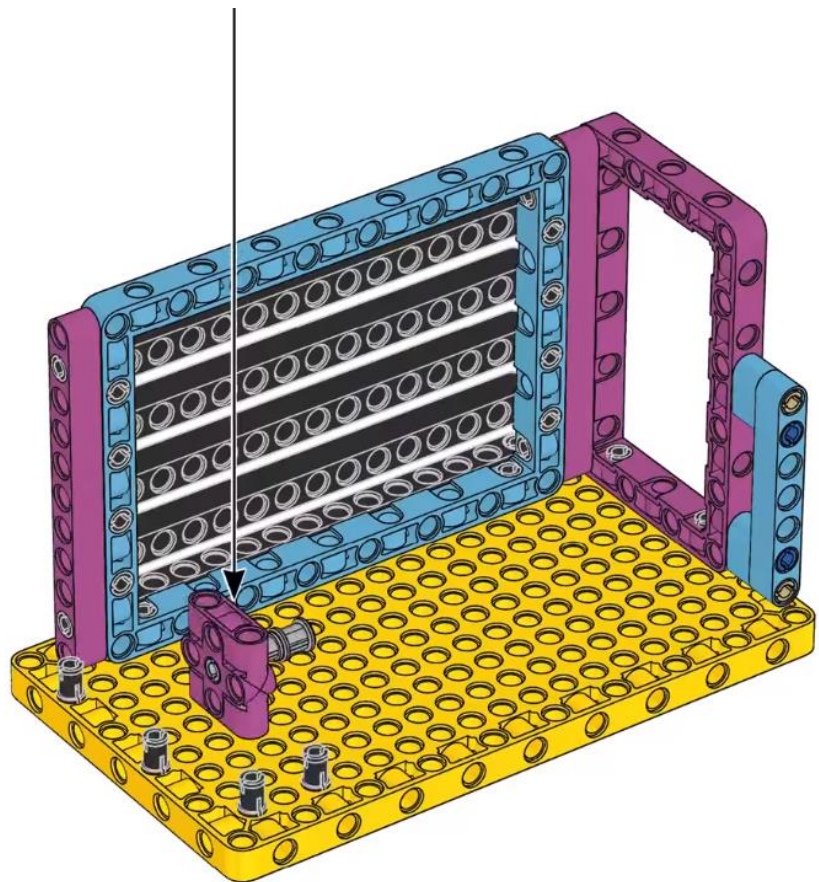


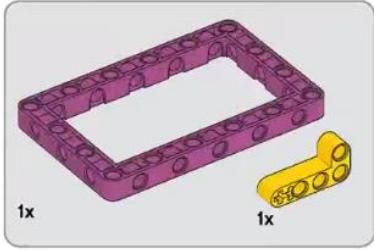


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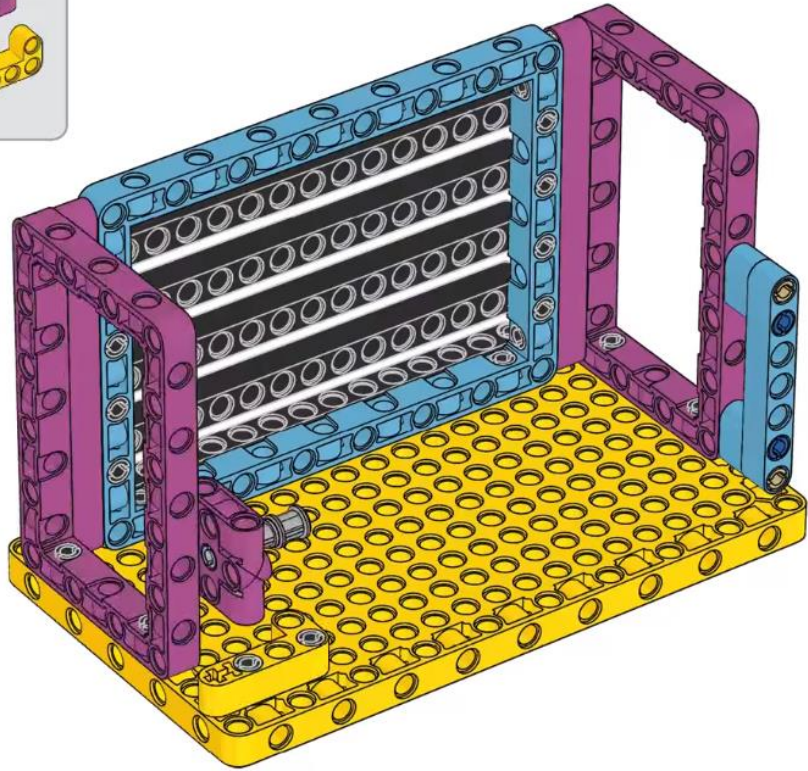


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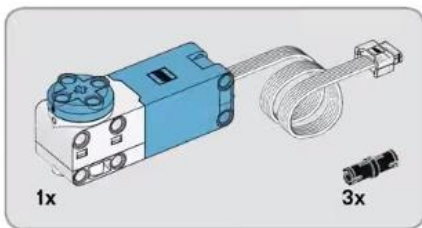
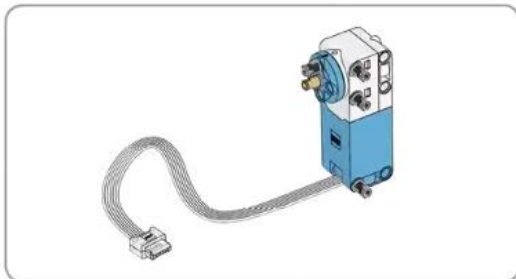
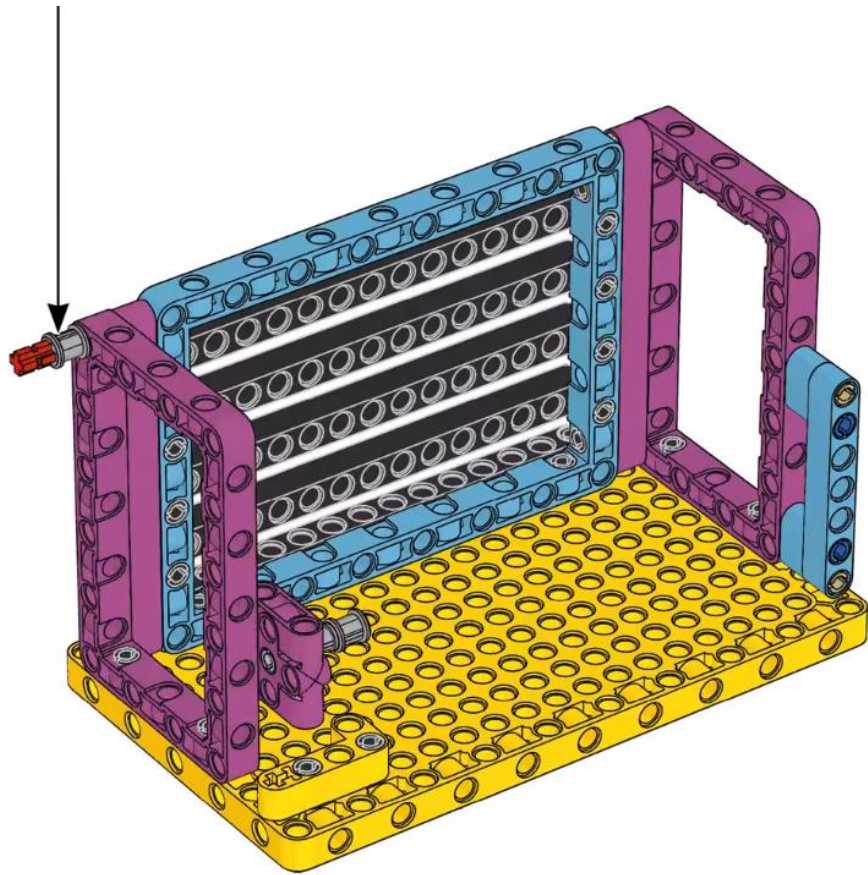
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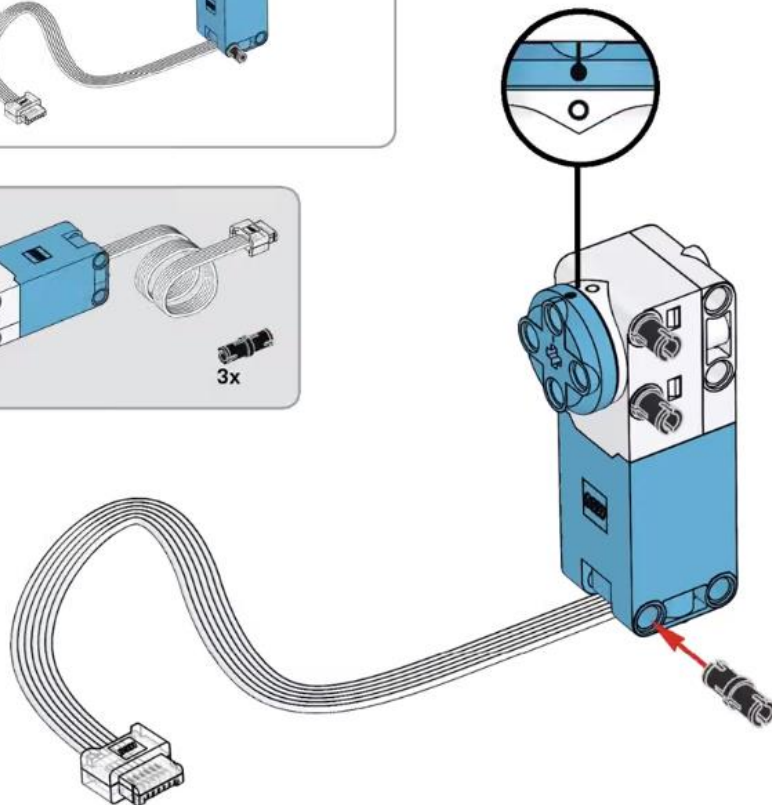
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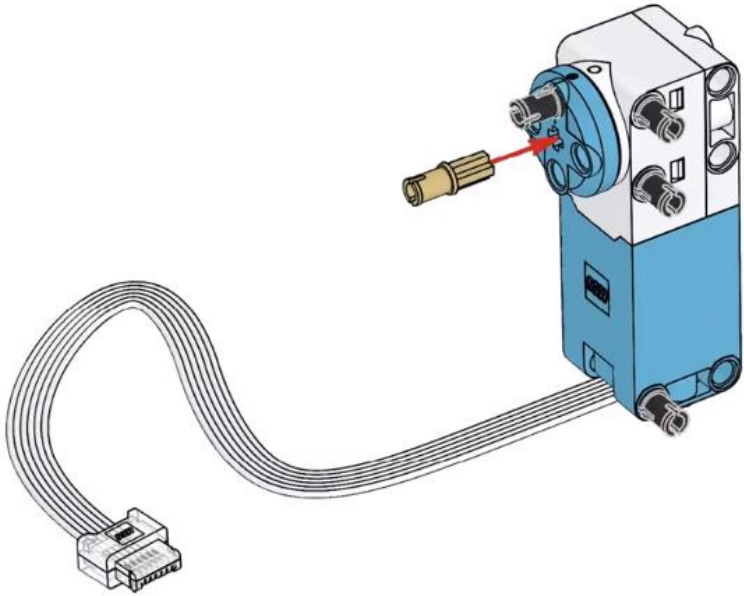


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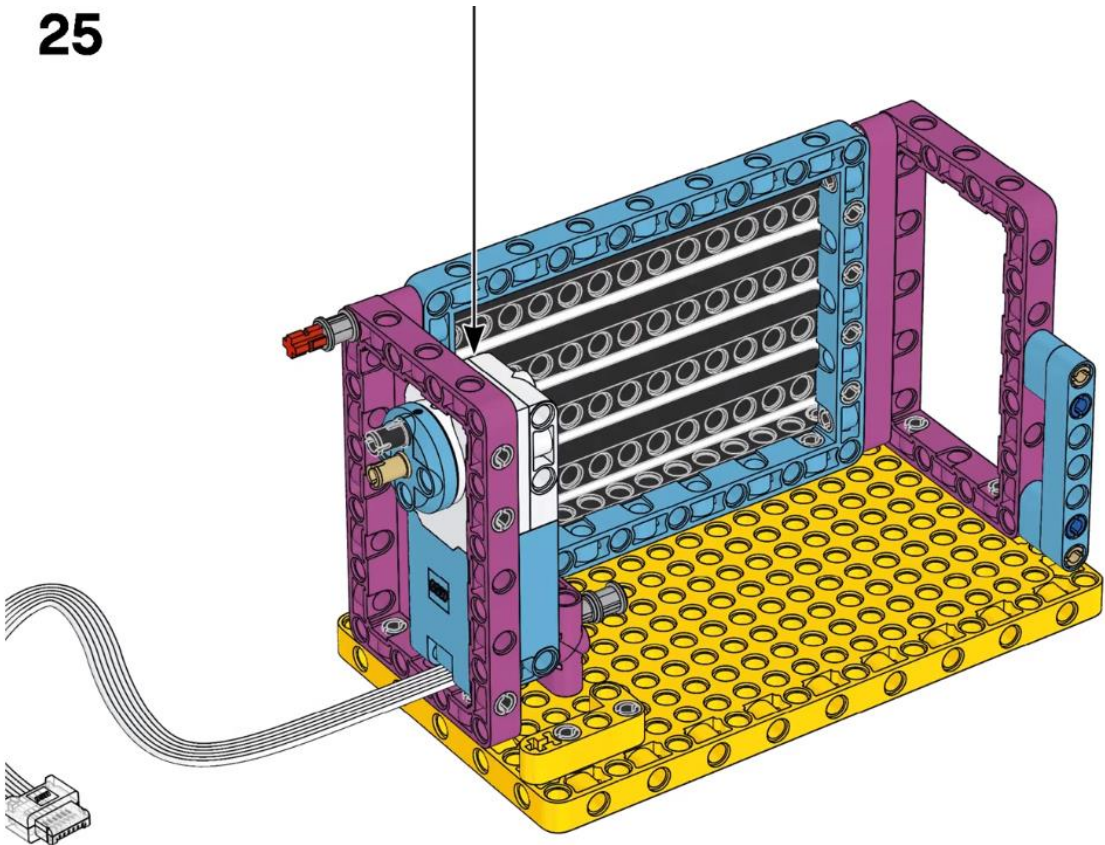




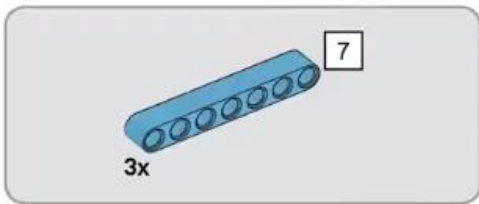
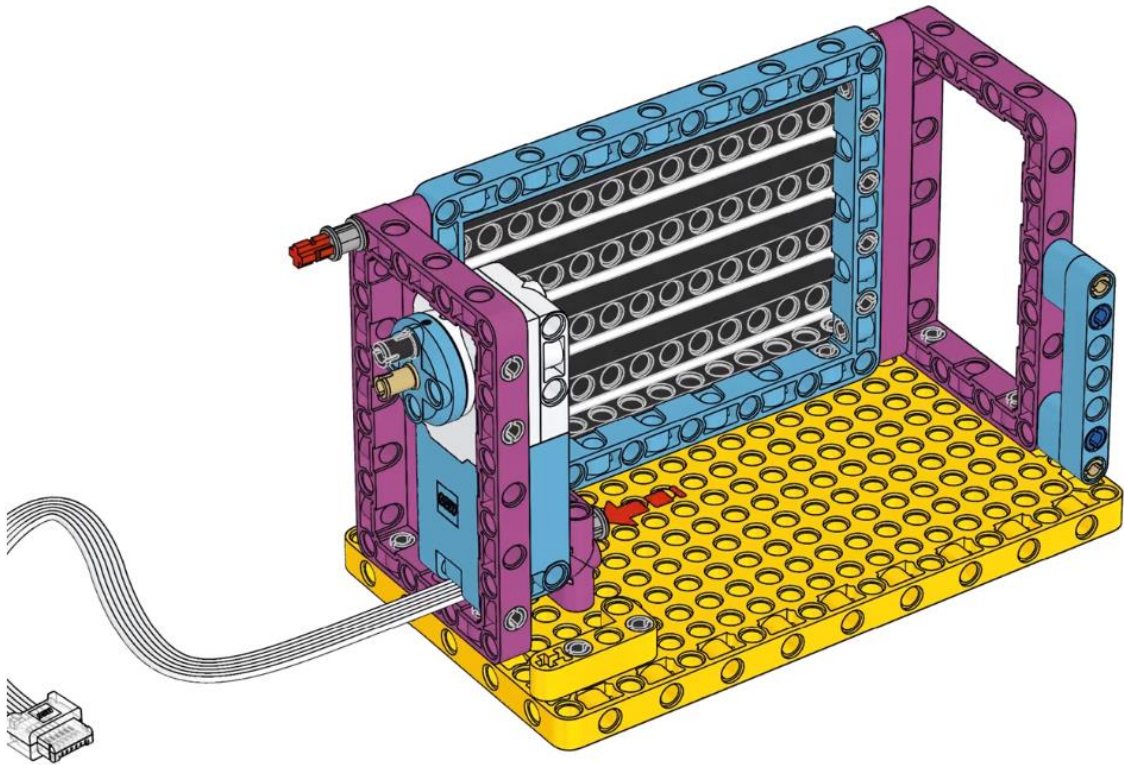
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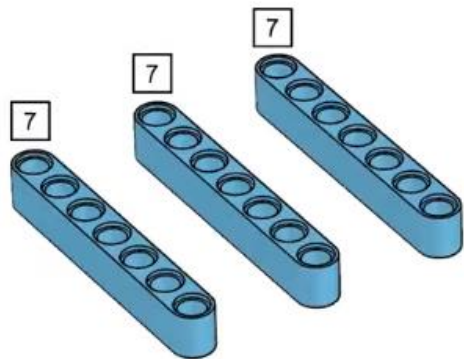
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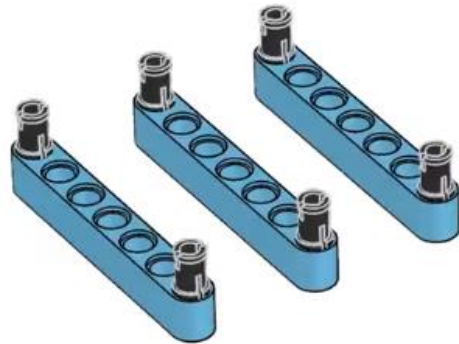


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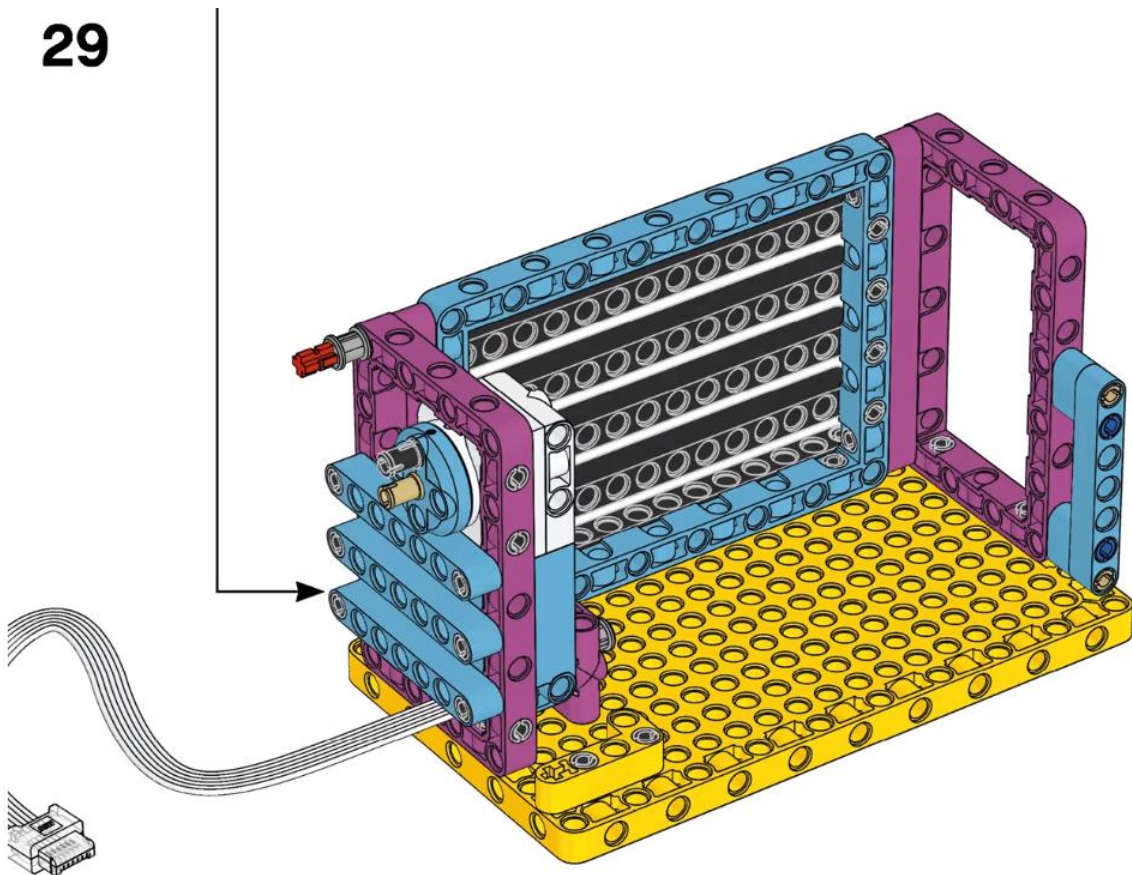




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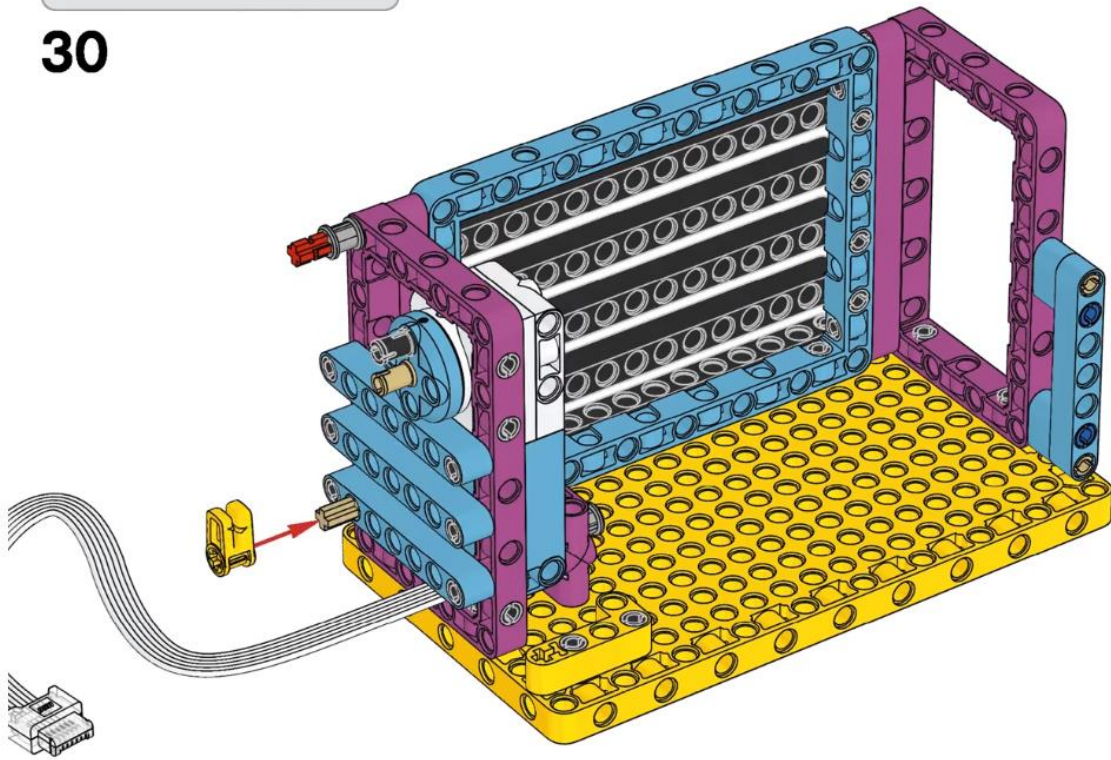


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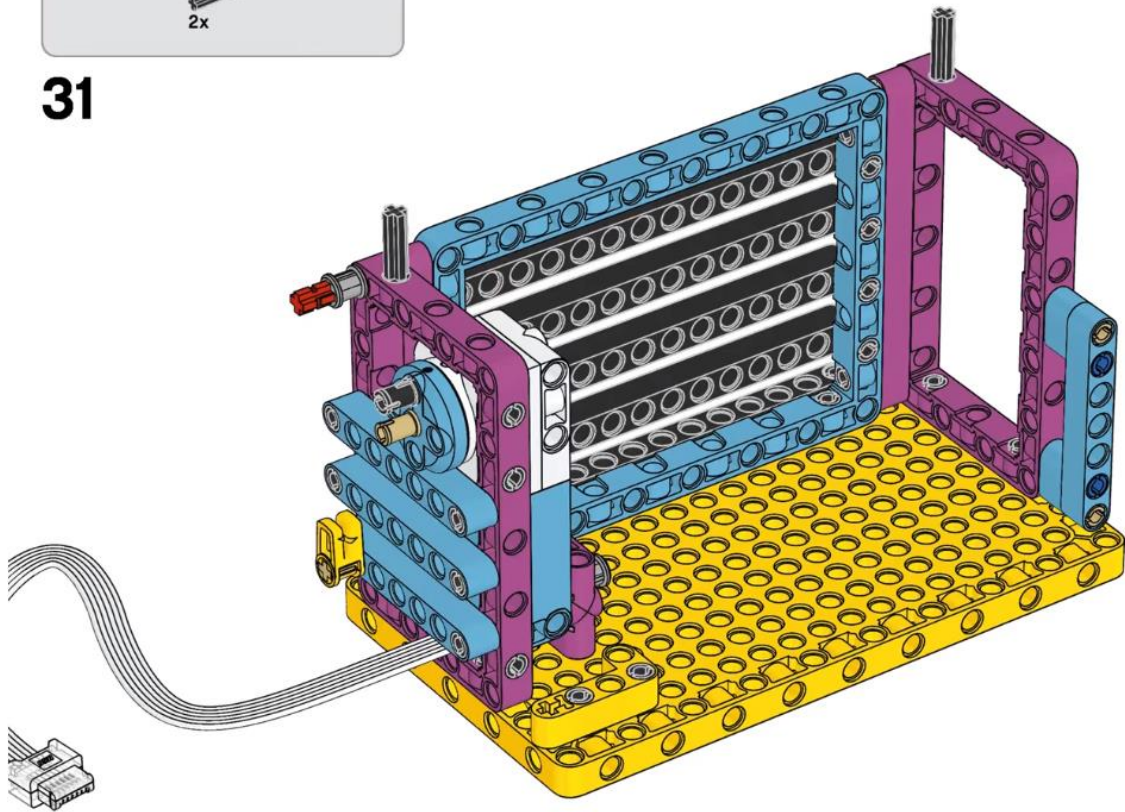




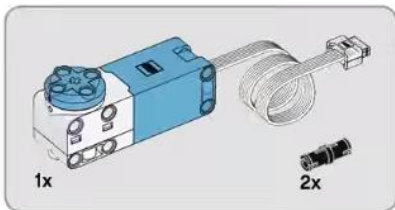
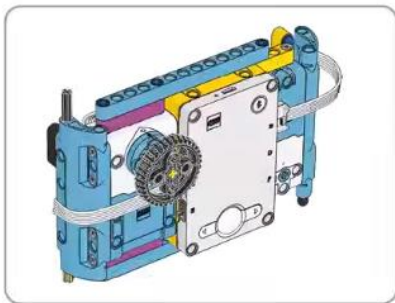
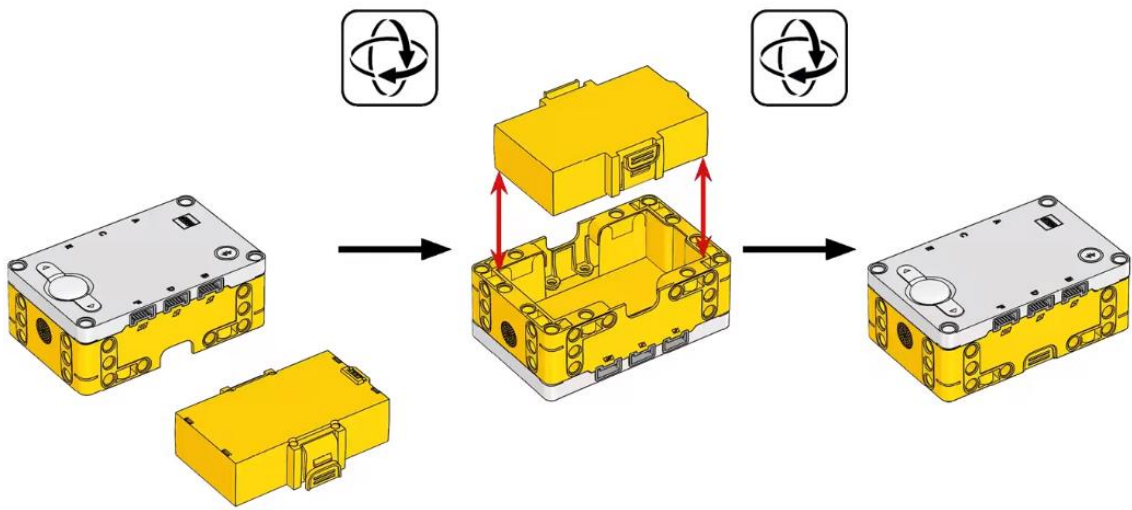
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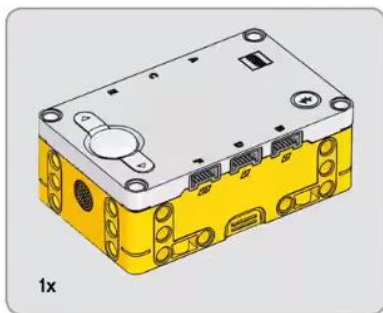
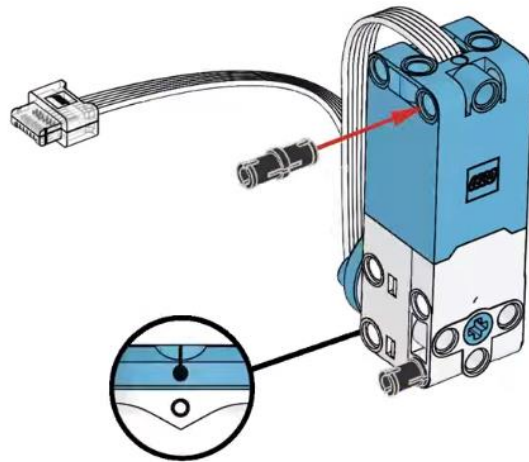
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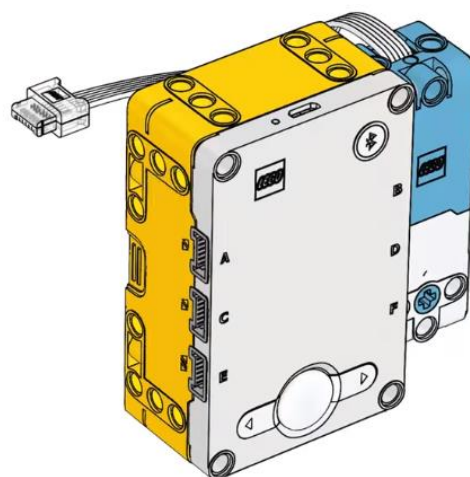
Puerta y brazo de la caja superfuerte

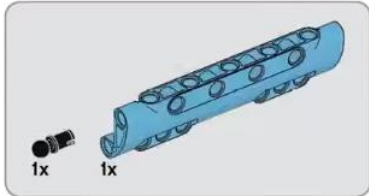


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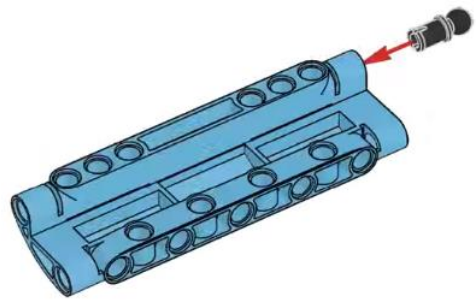


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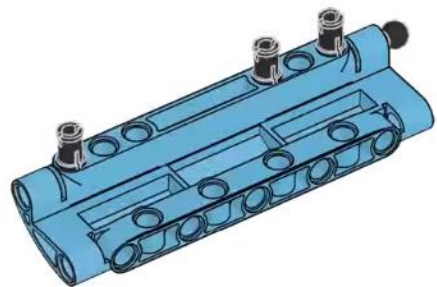




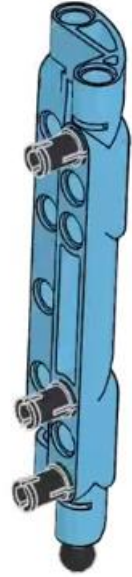
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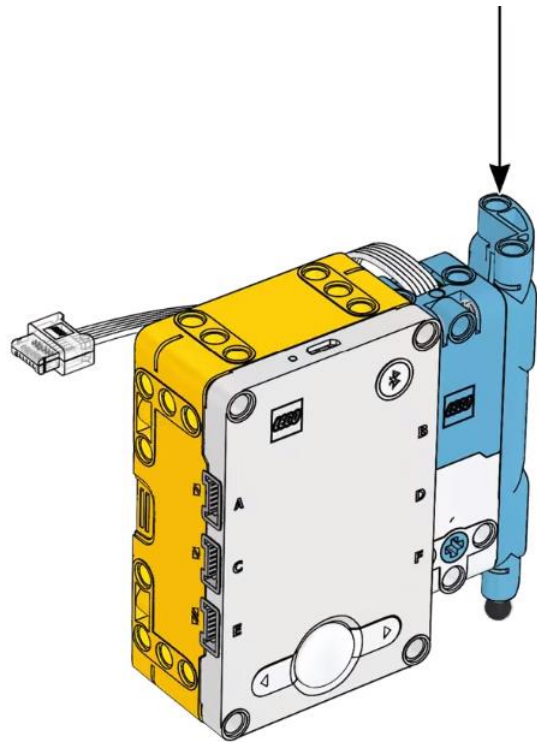
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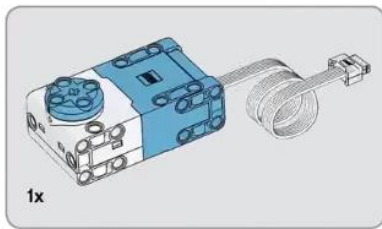
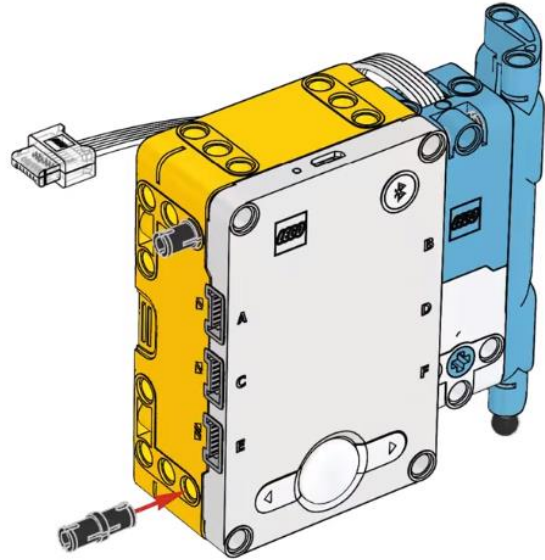


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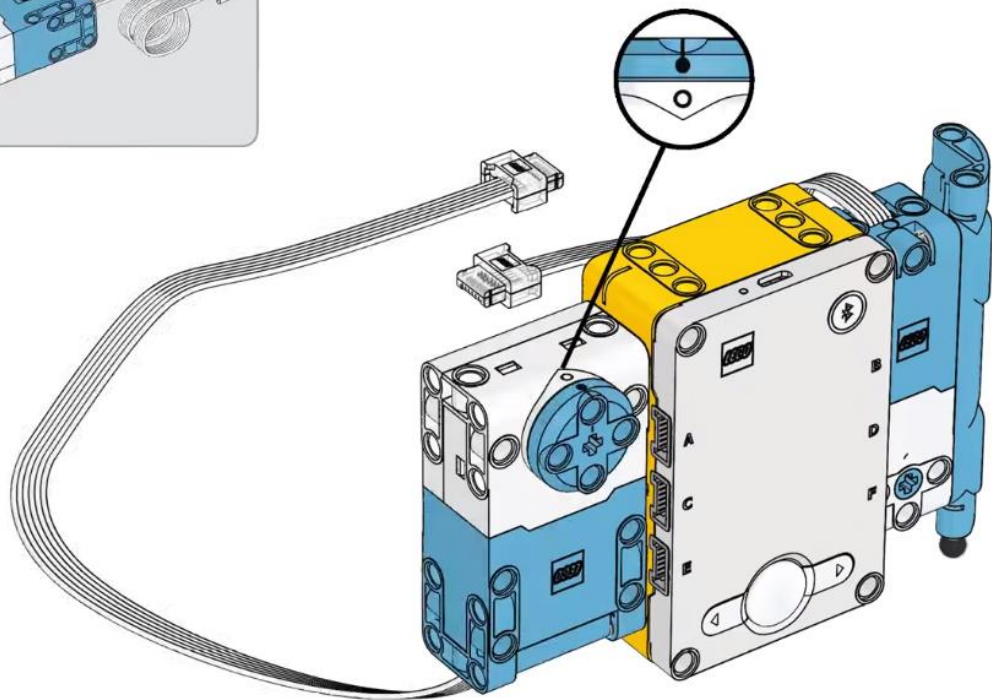




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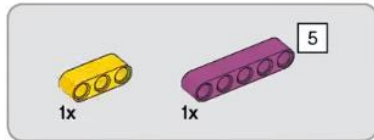
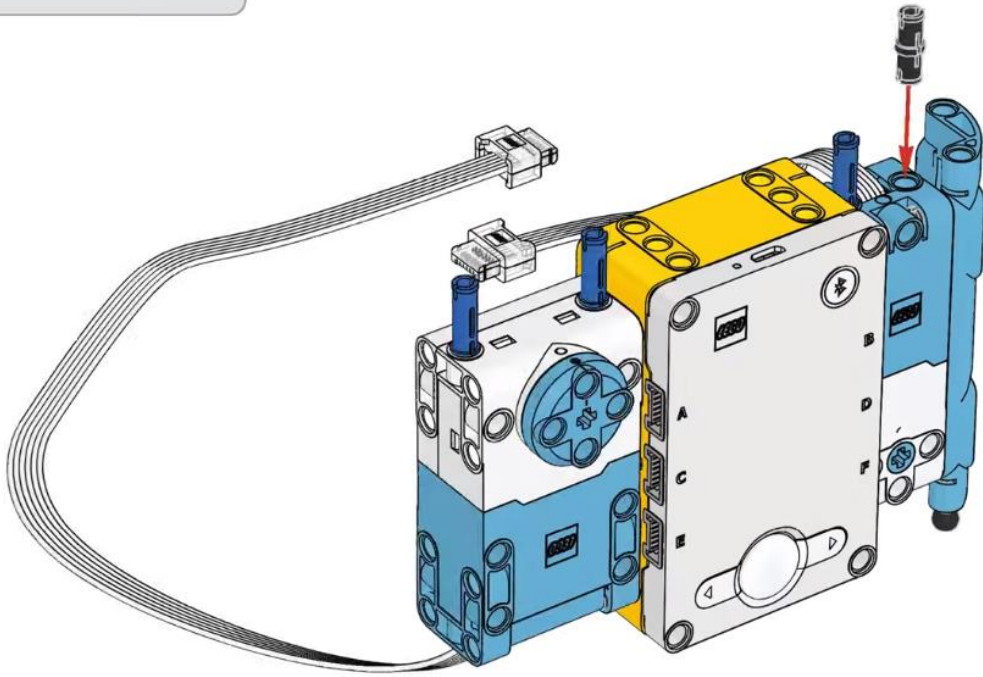


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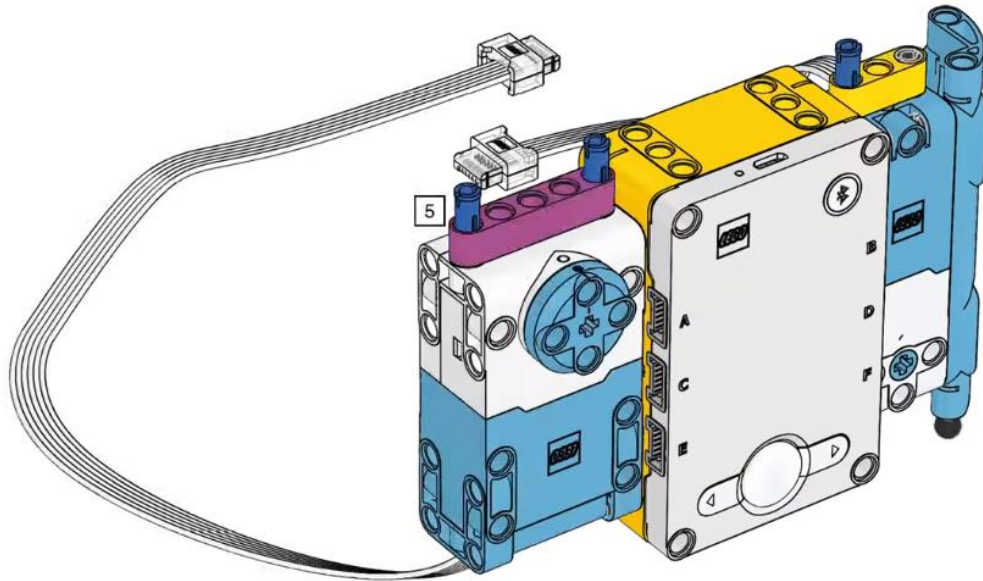


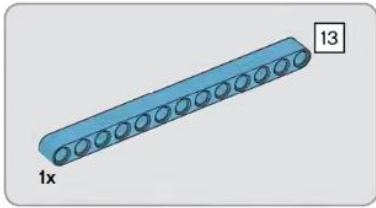


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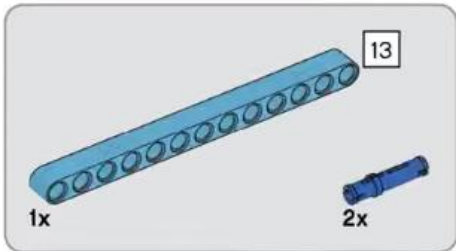
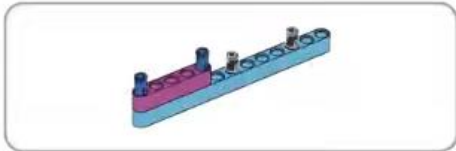
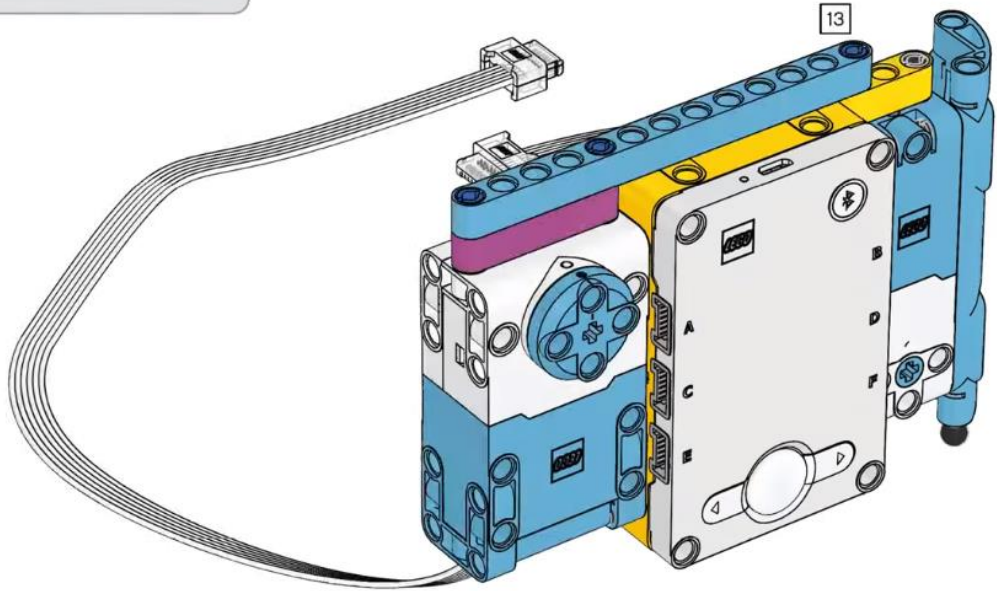


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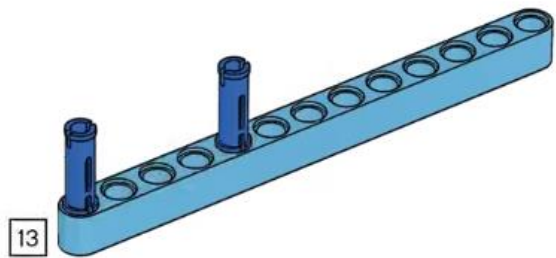


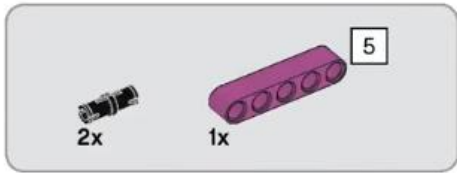


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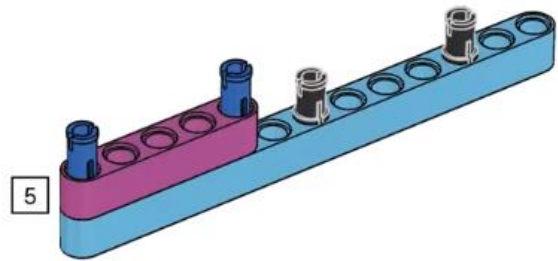


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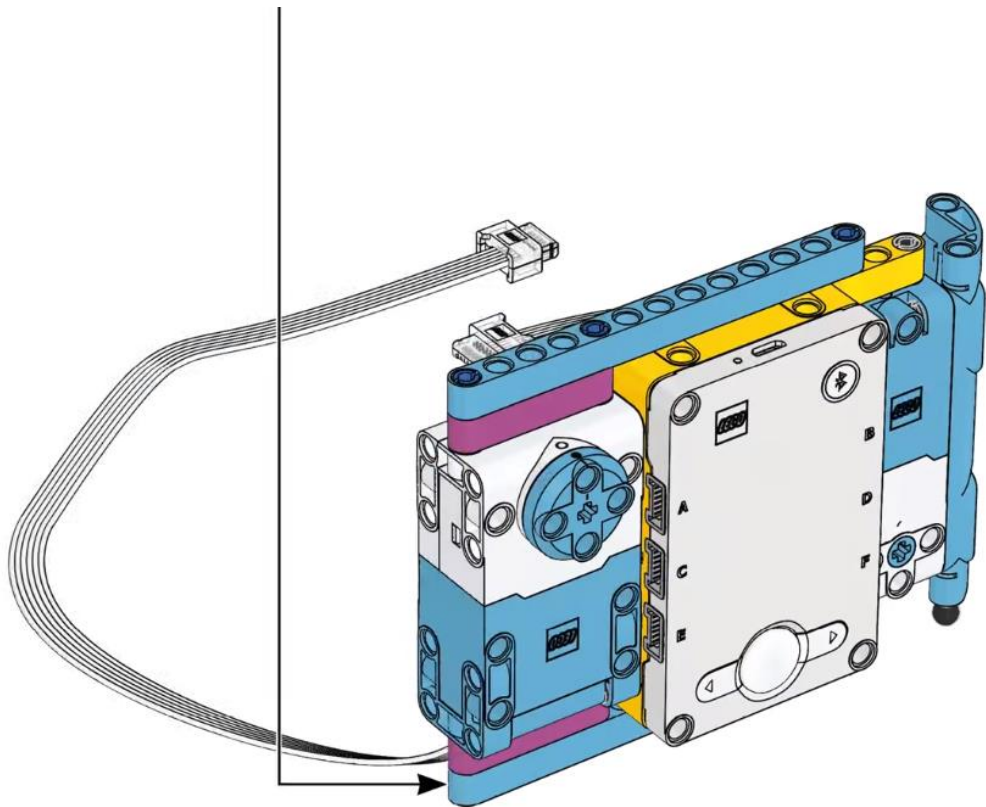




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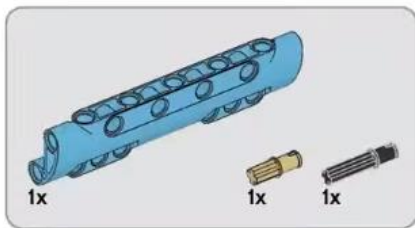
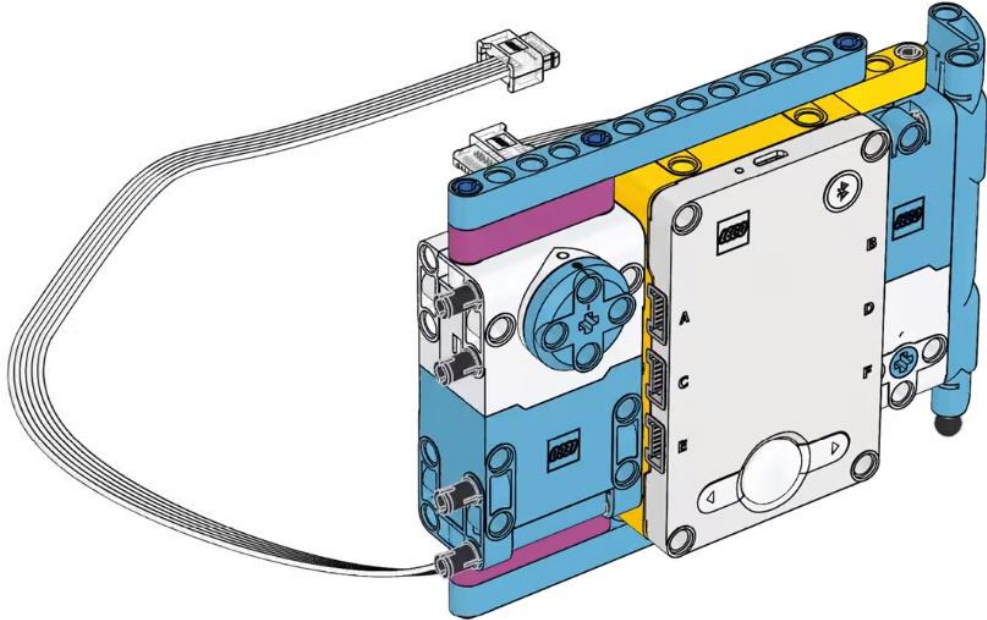


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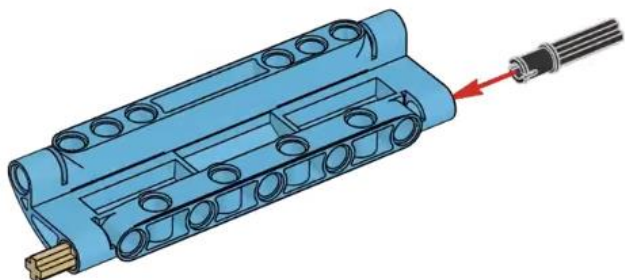




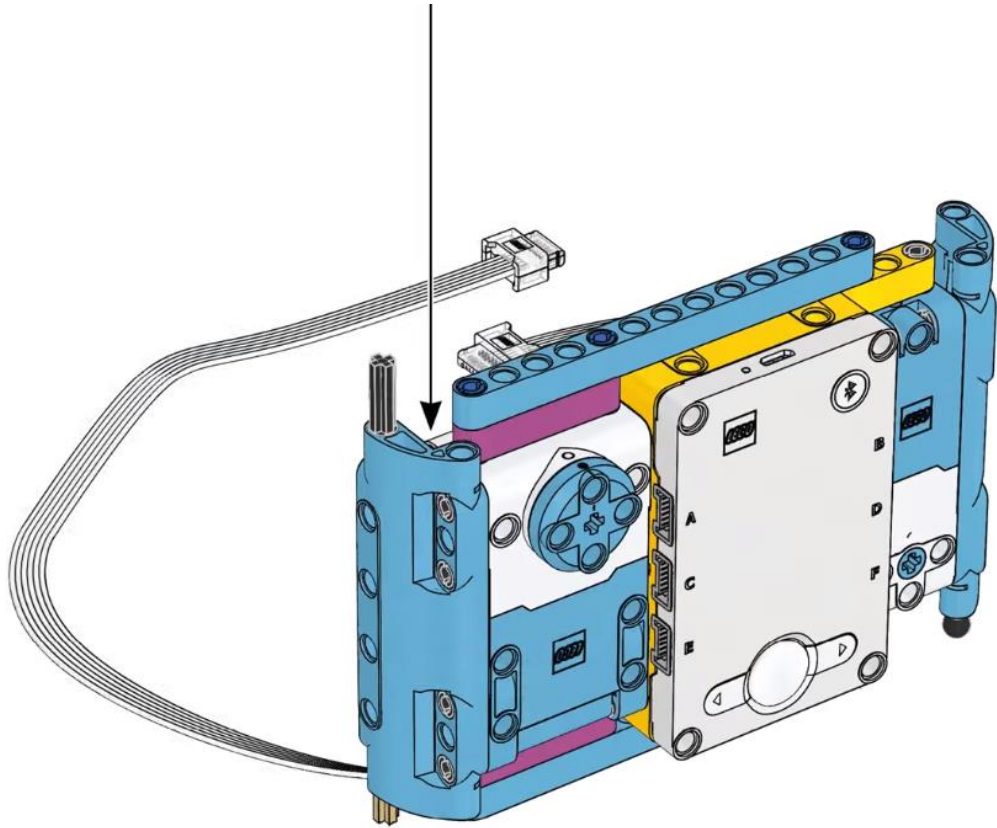
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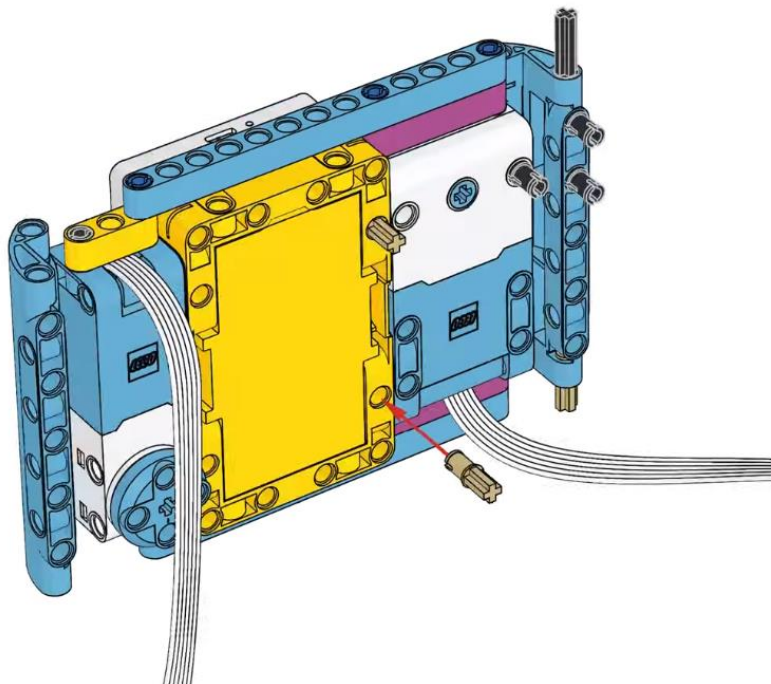
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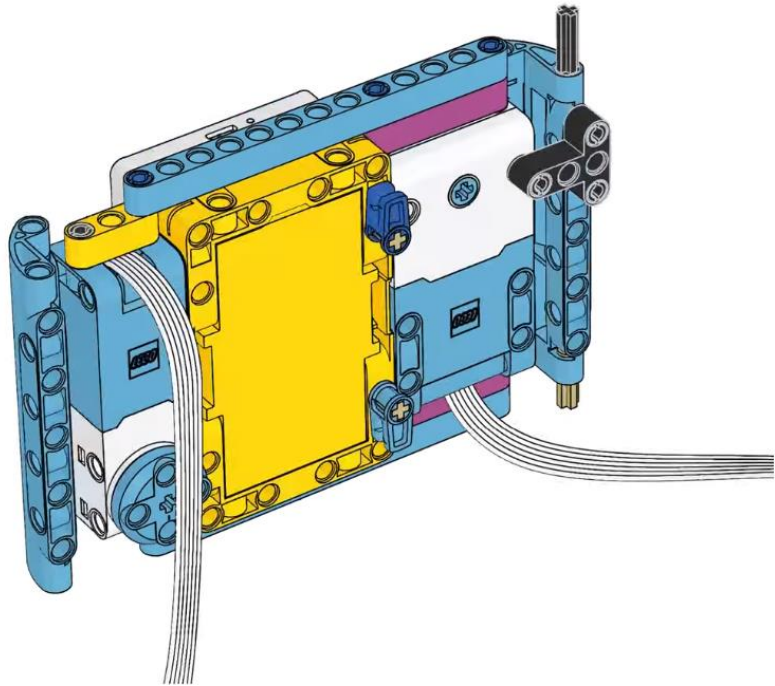


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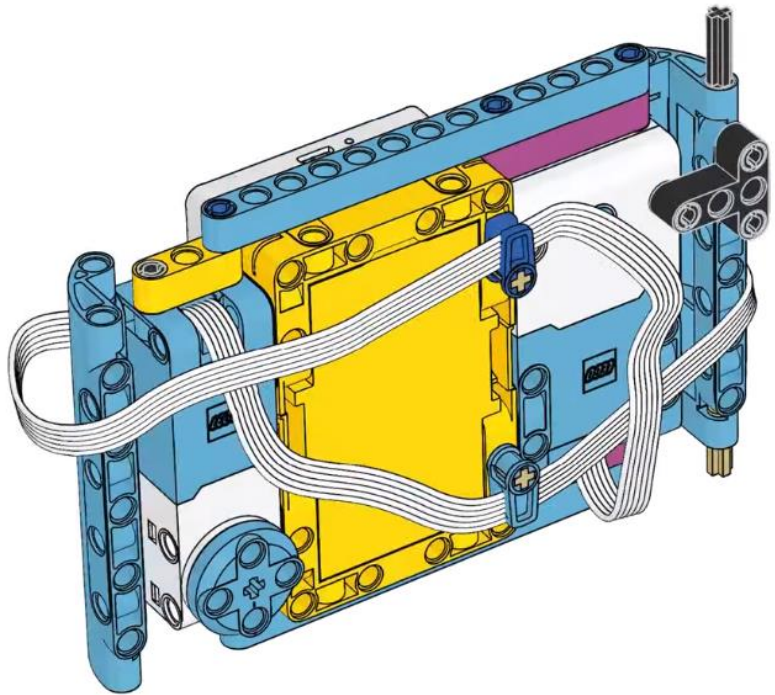




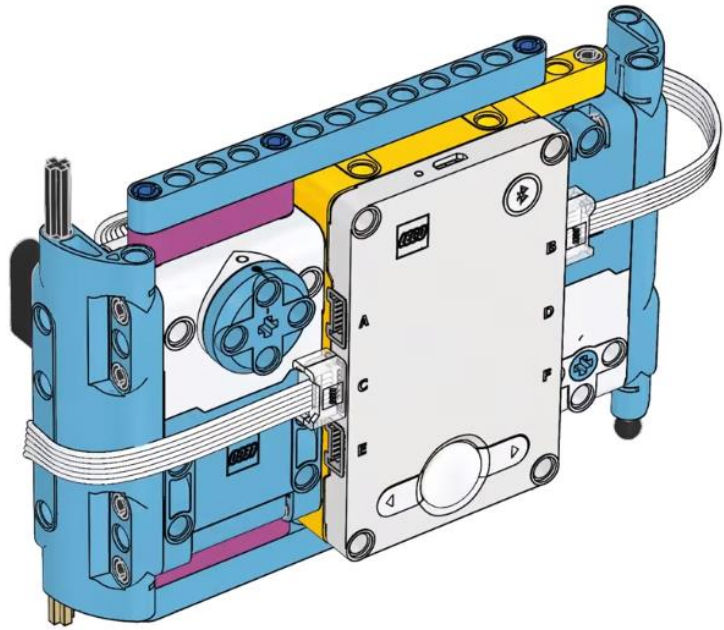
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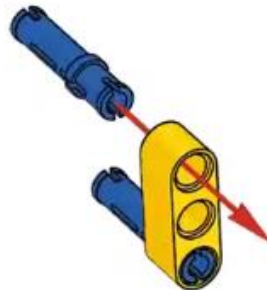
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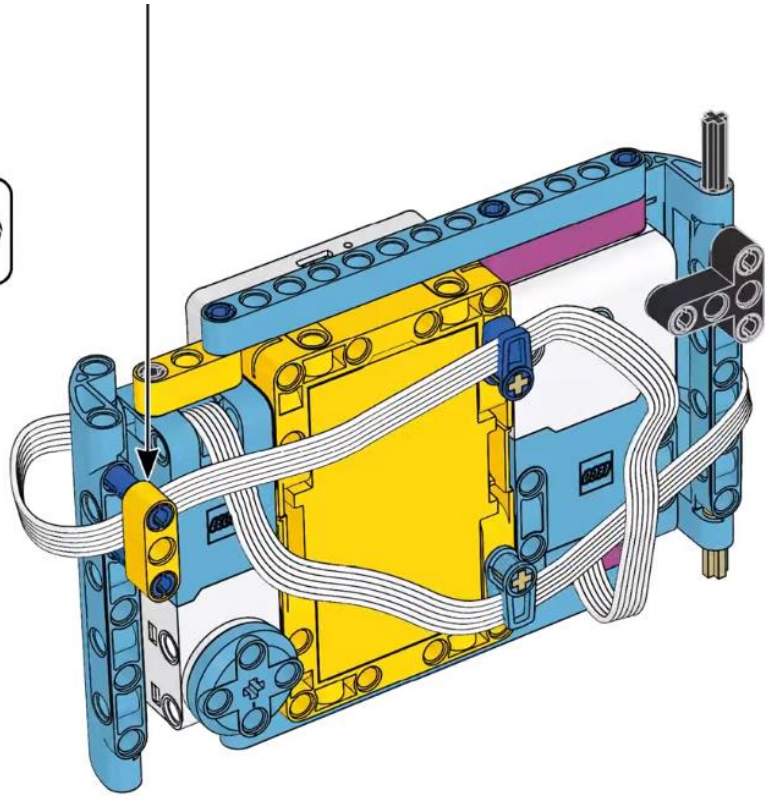
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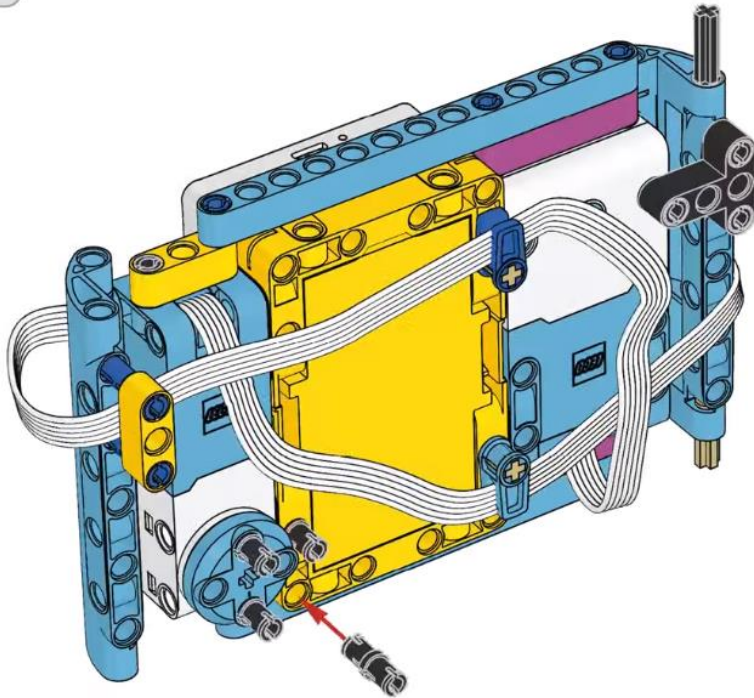
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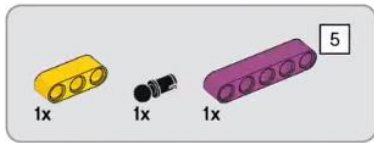


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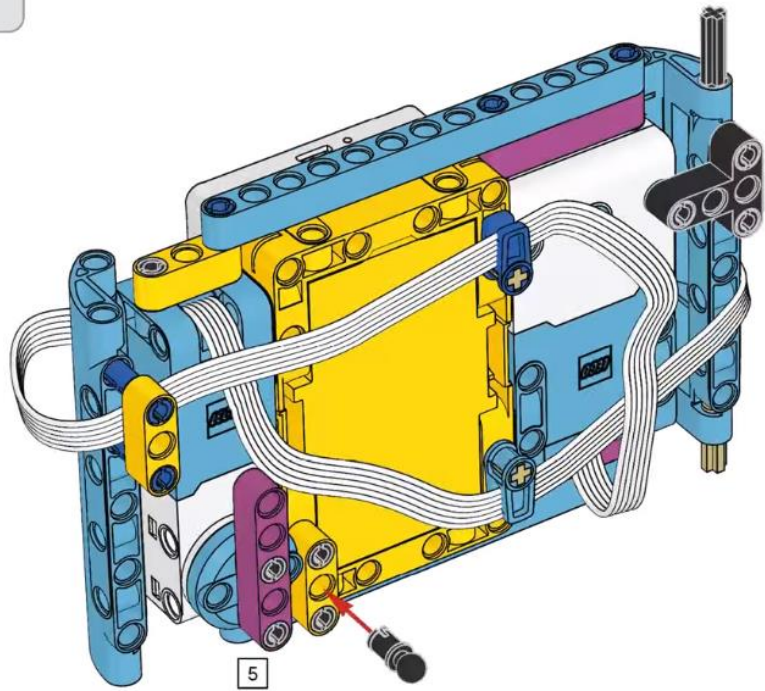


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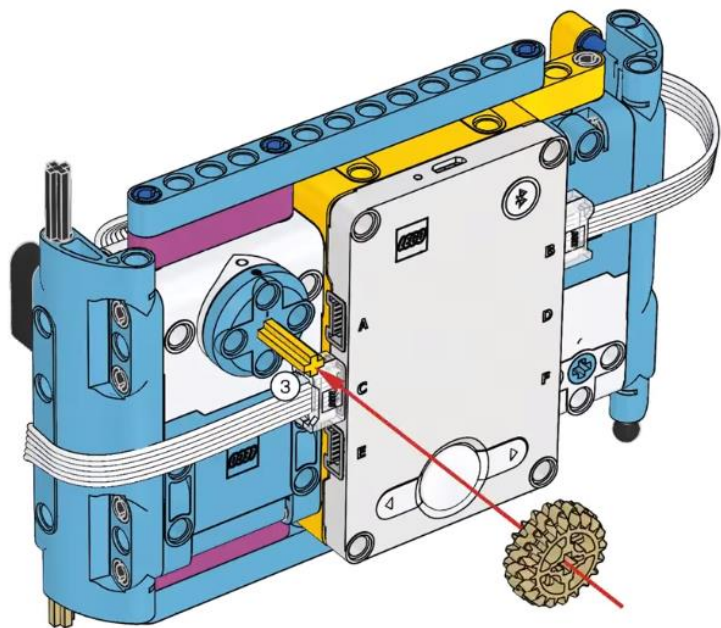




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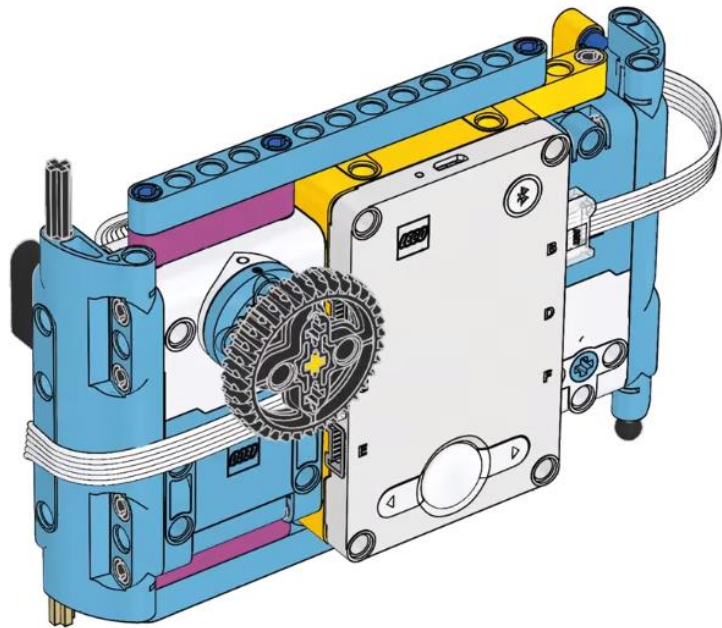


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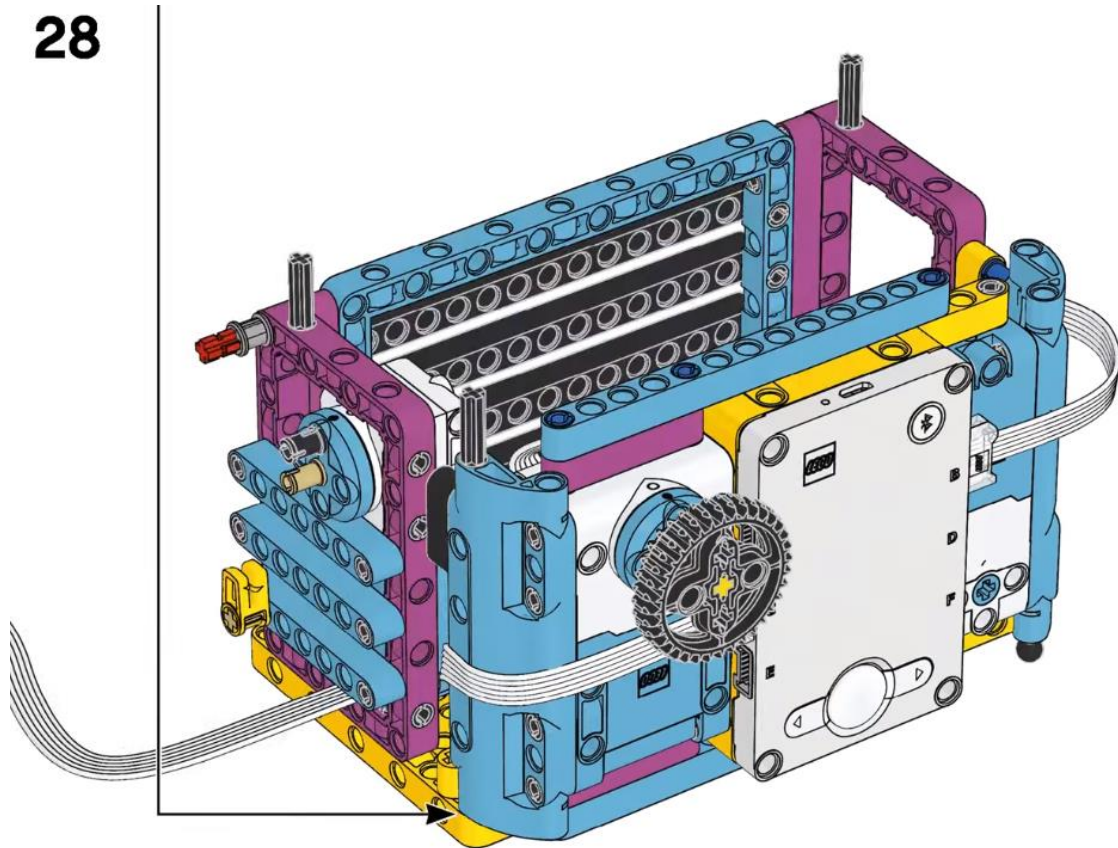




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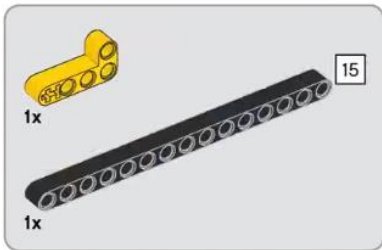
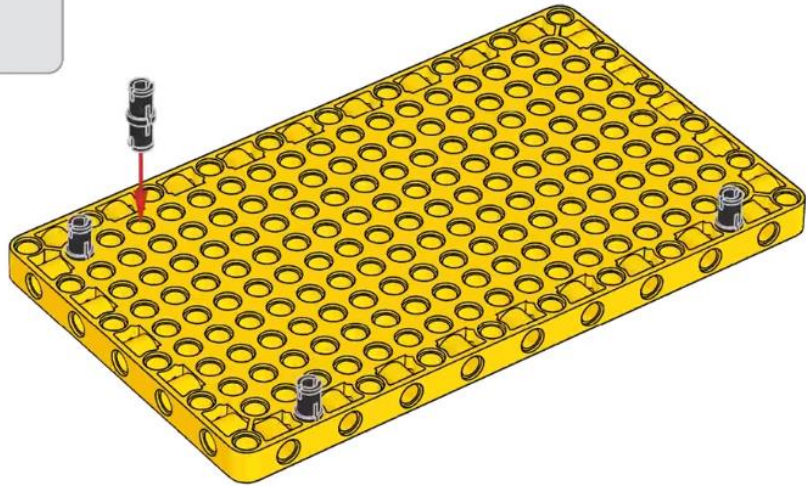


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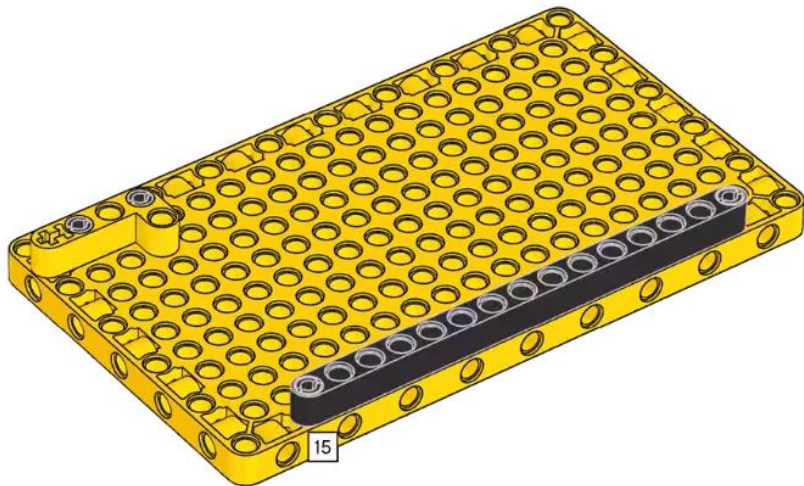




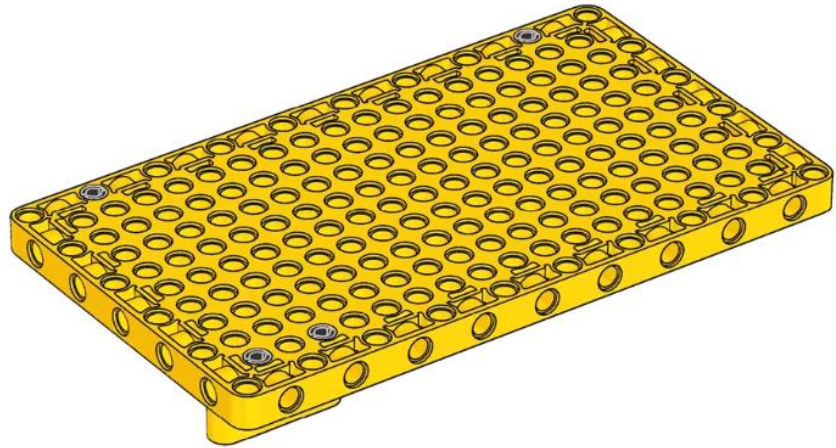
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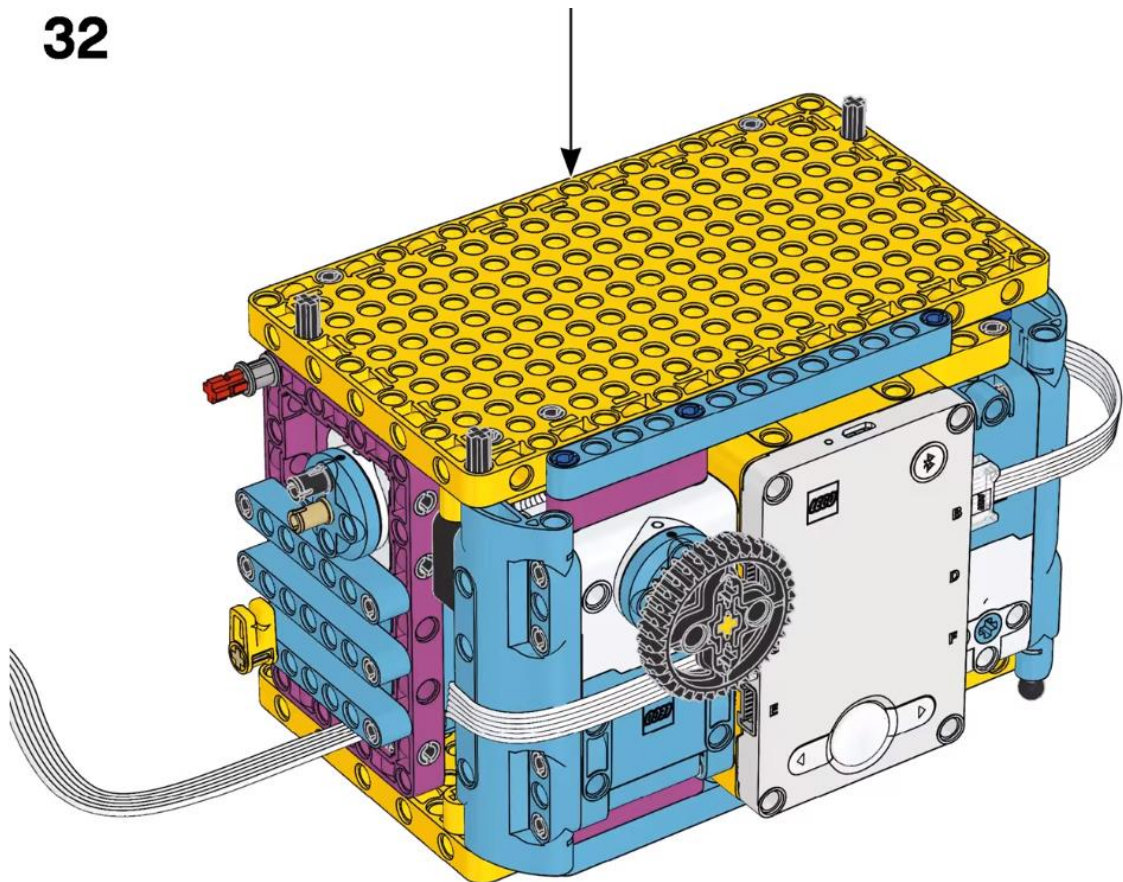
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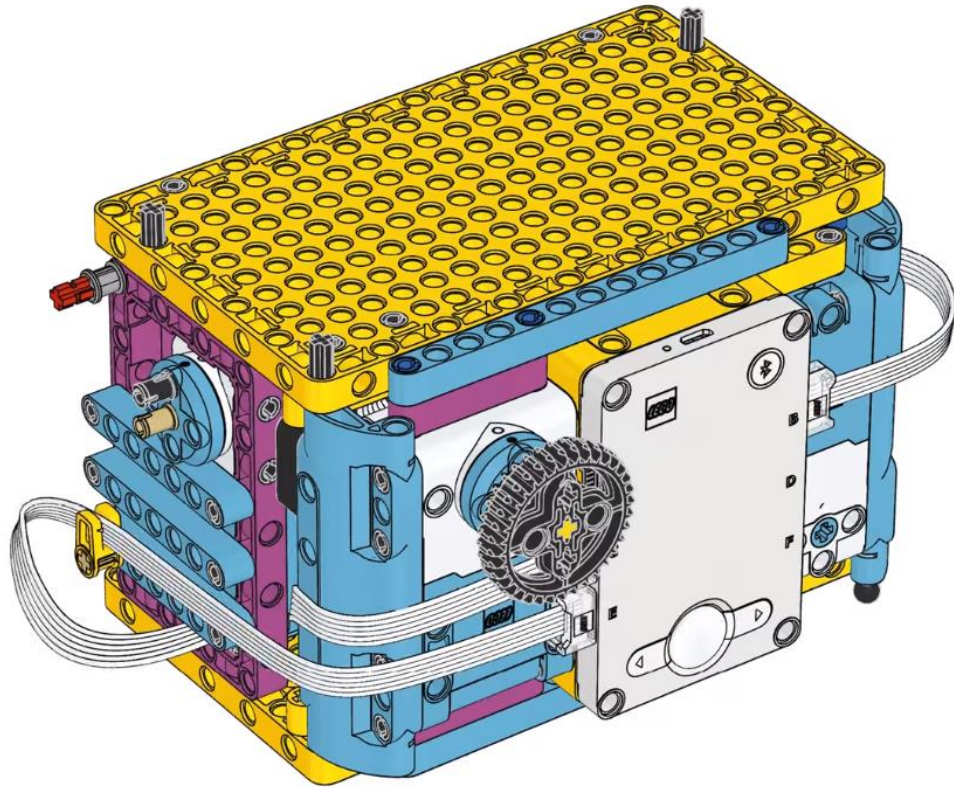
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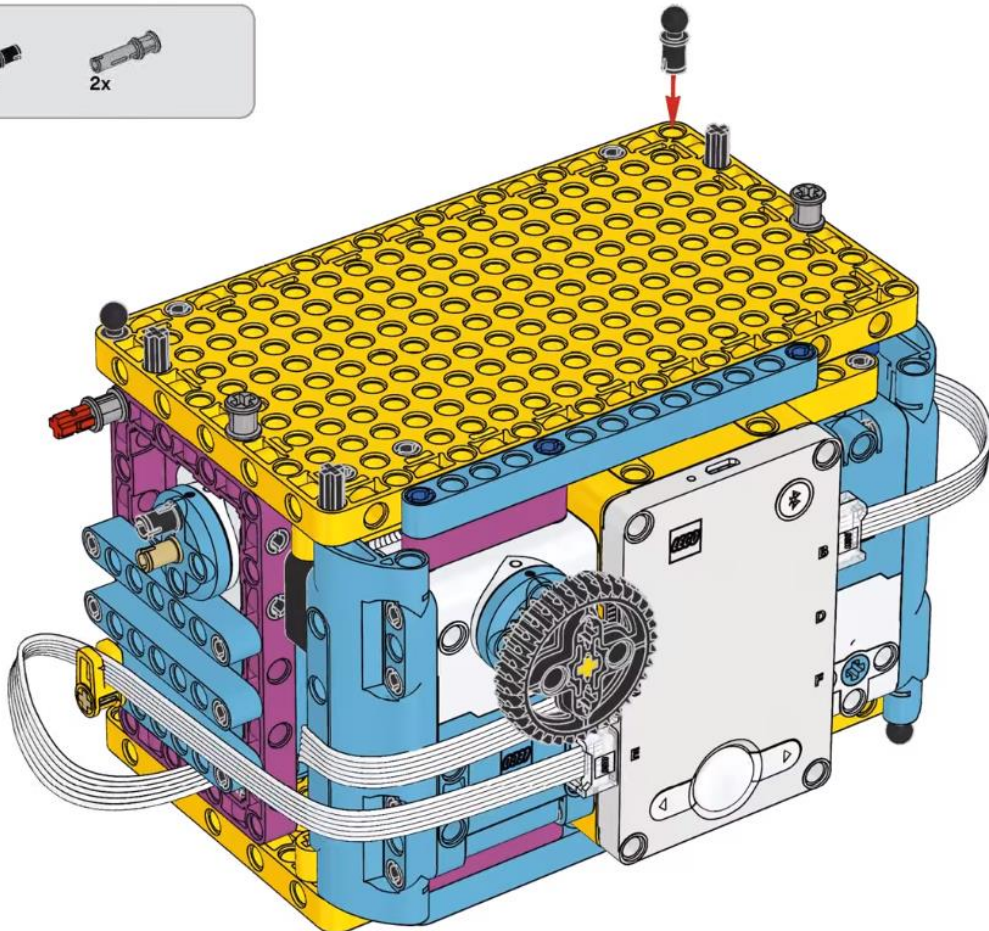
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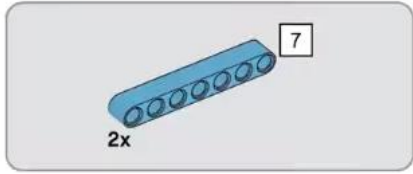


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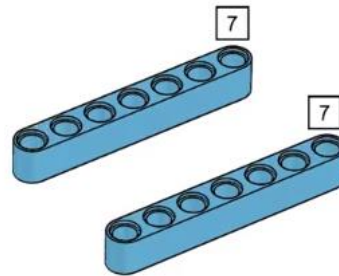


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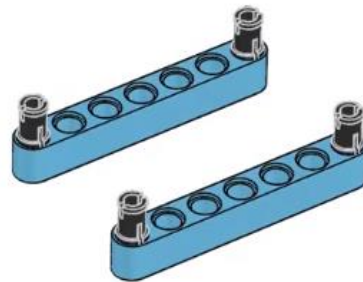




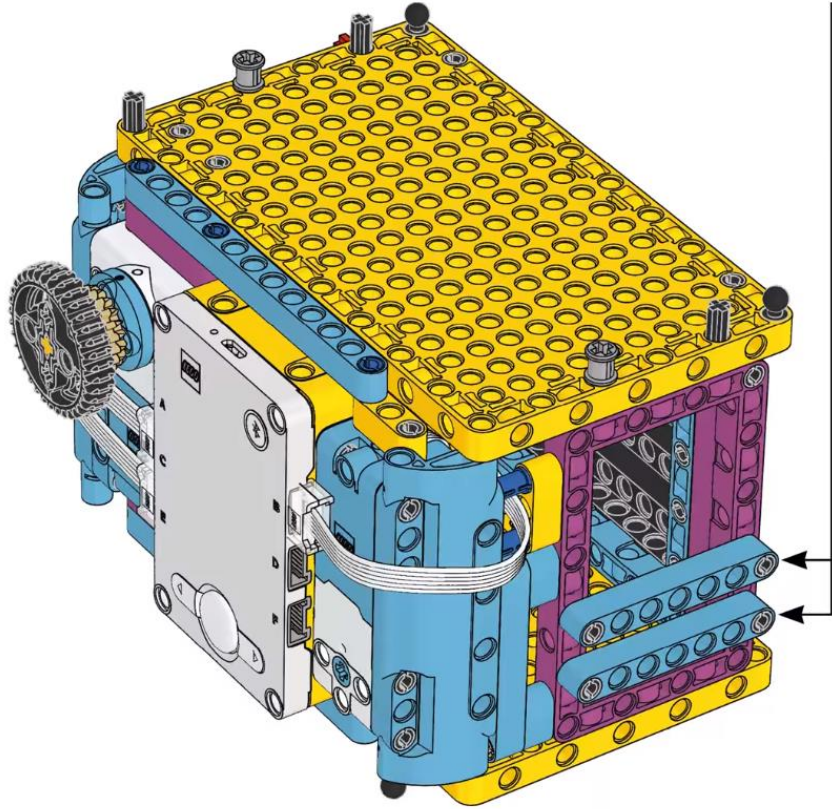
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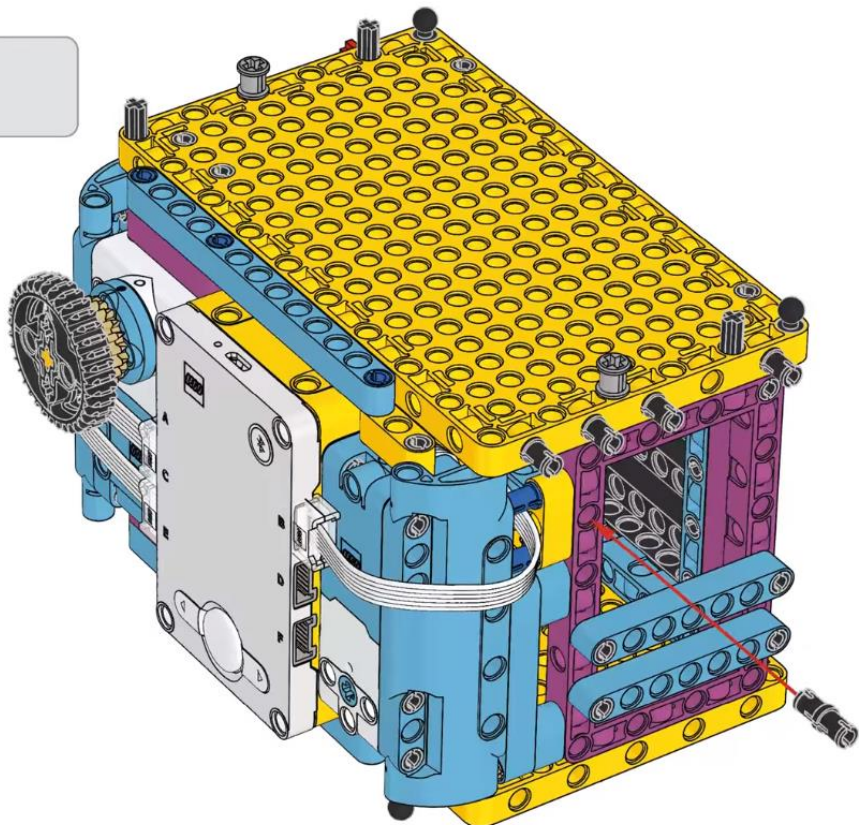
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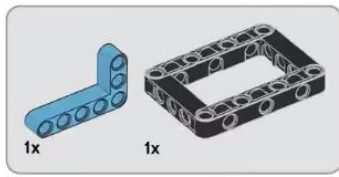


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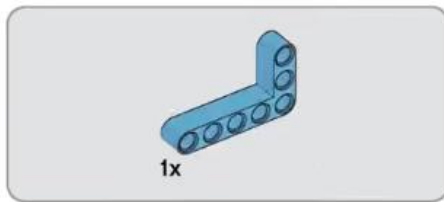
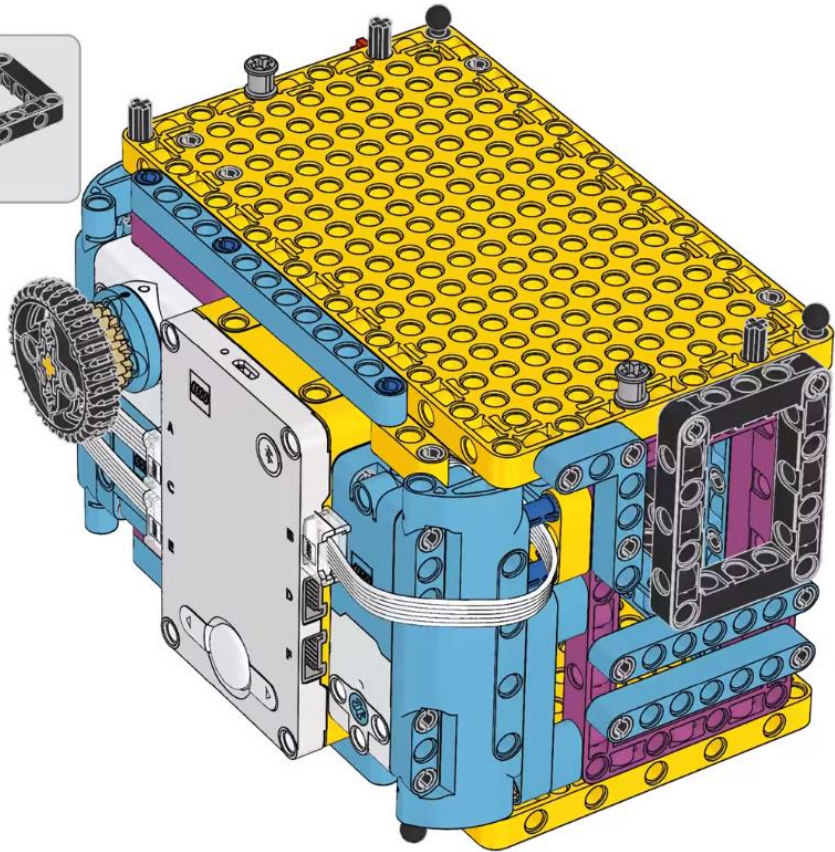


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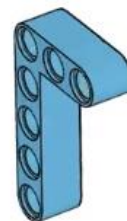




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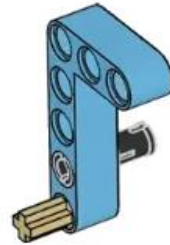


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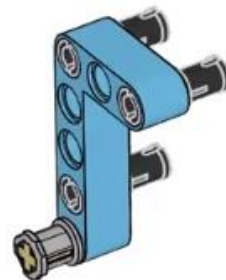




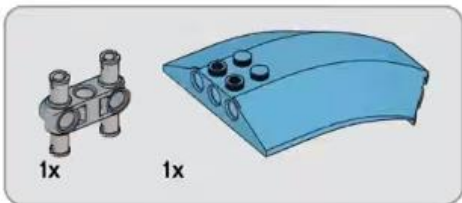
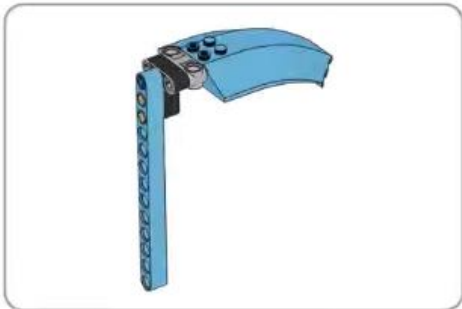
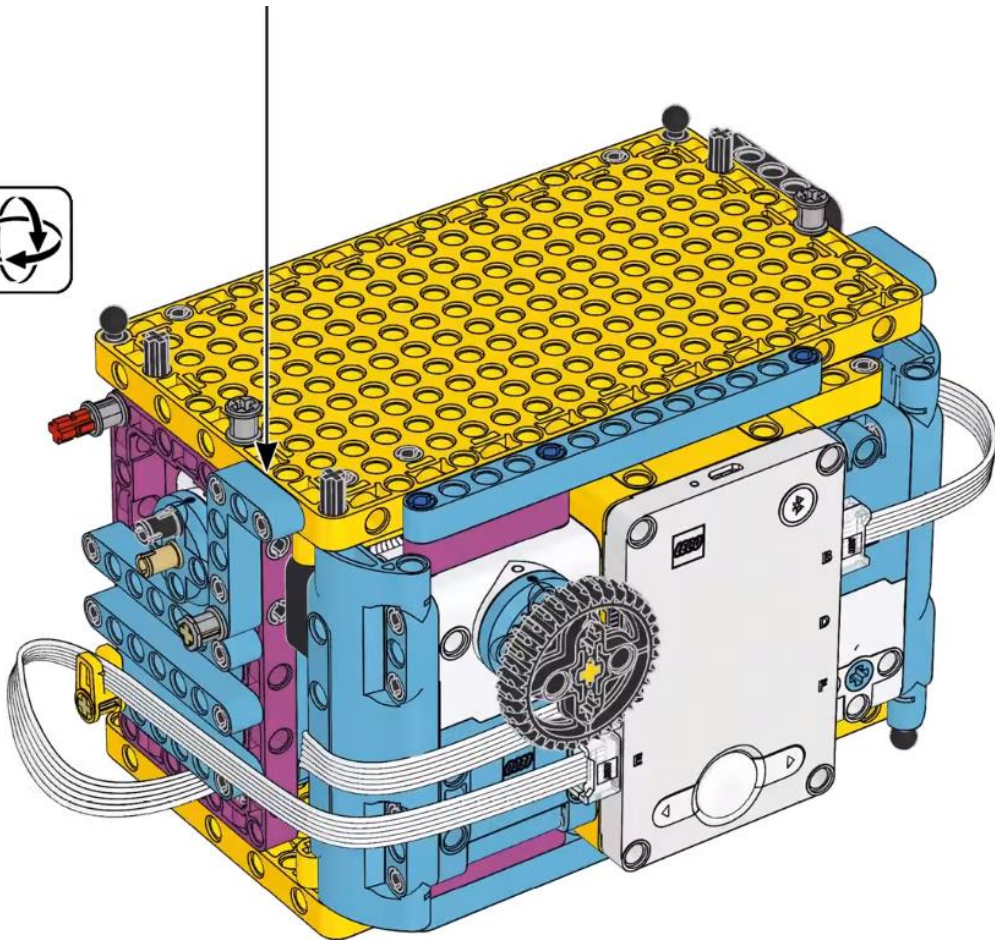
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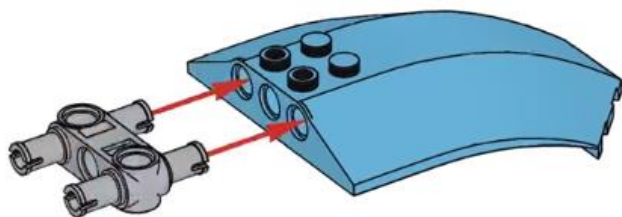
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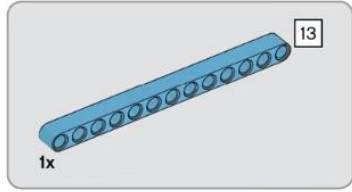


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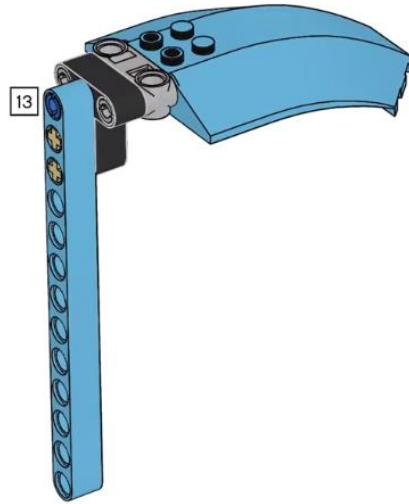


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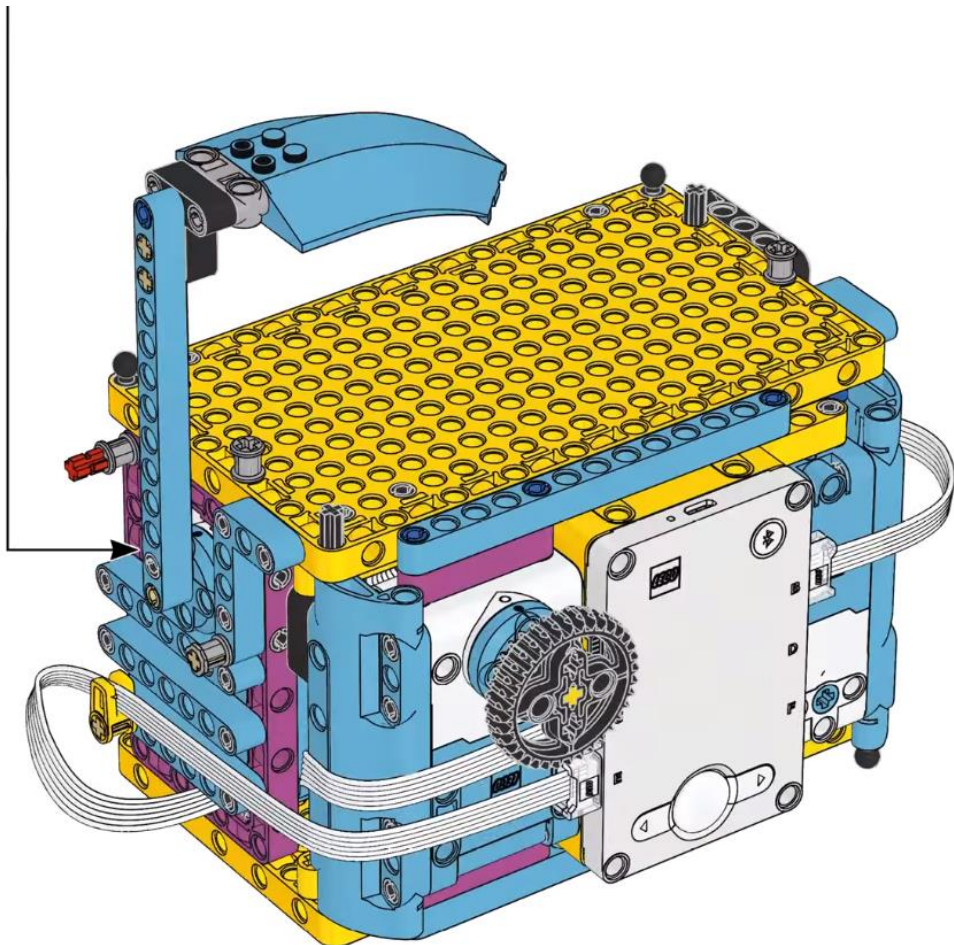


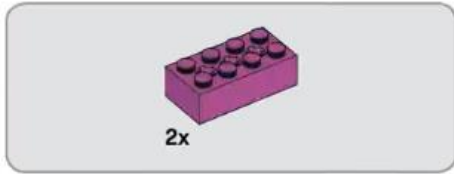


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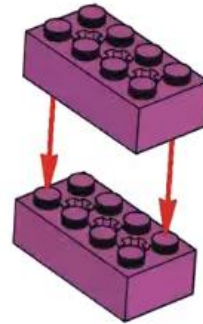


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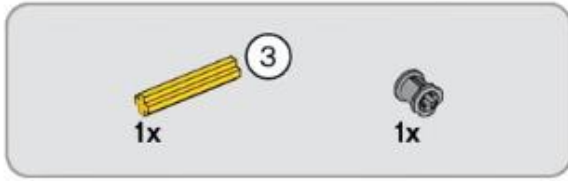


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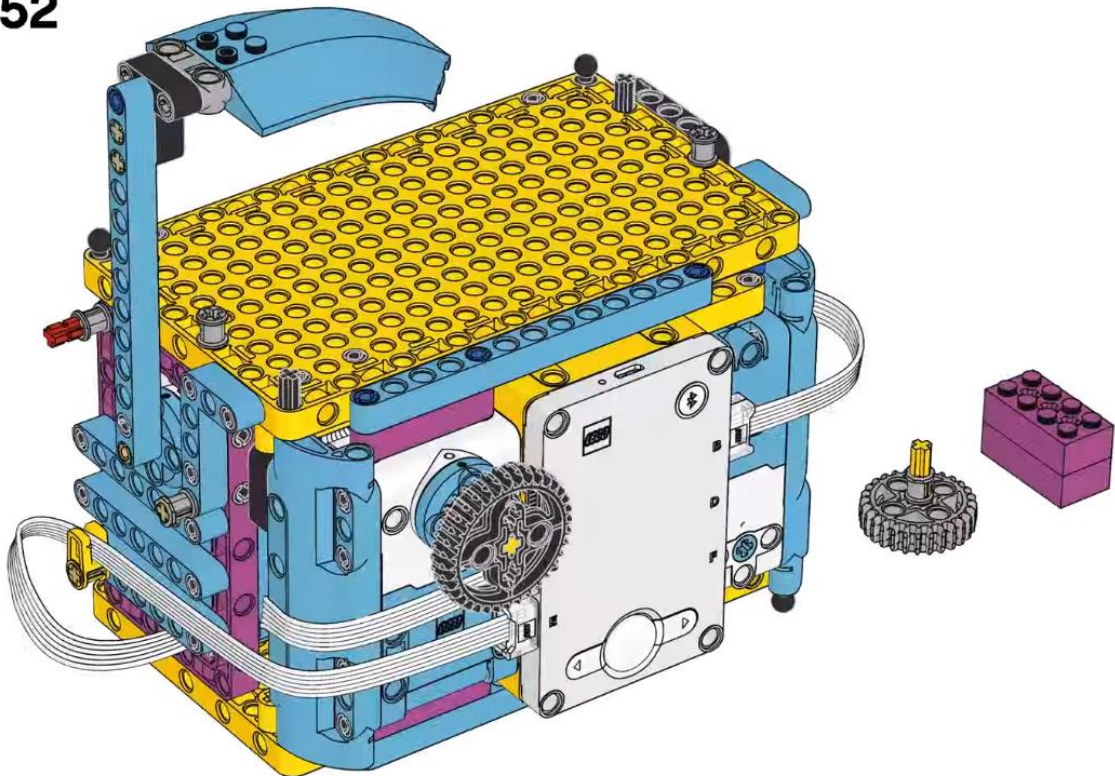


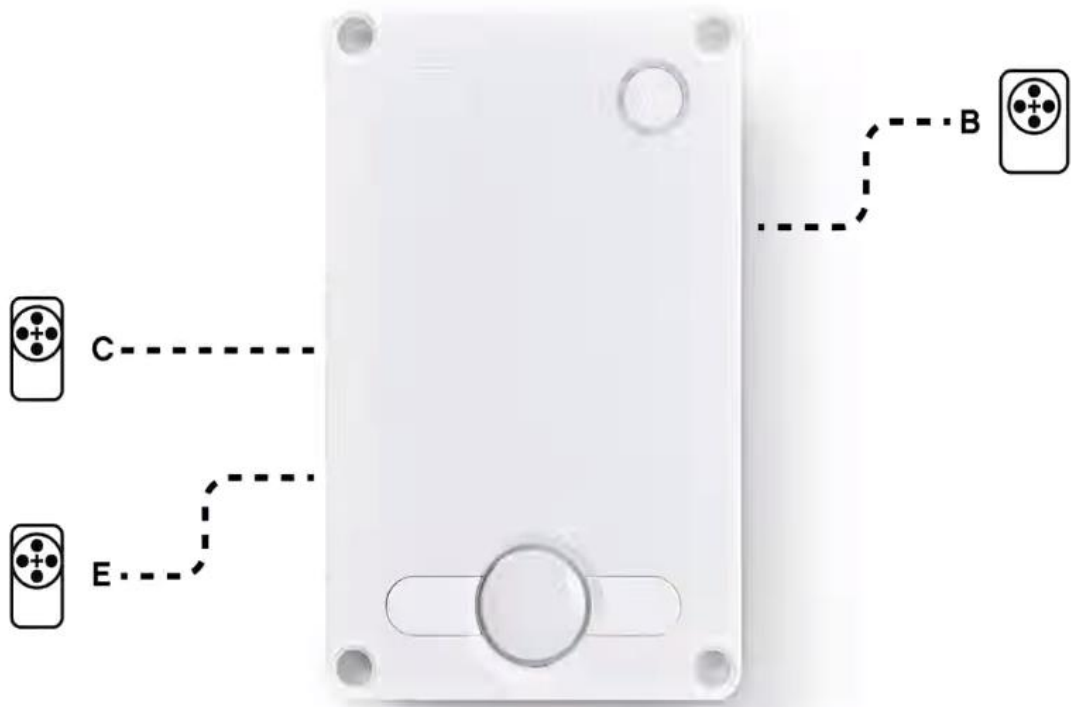
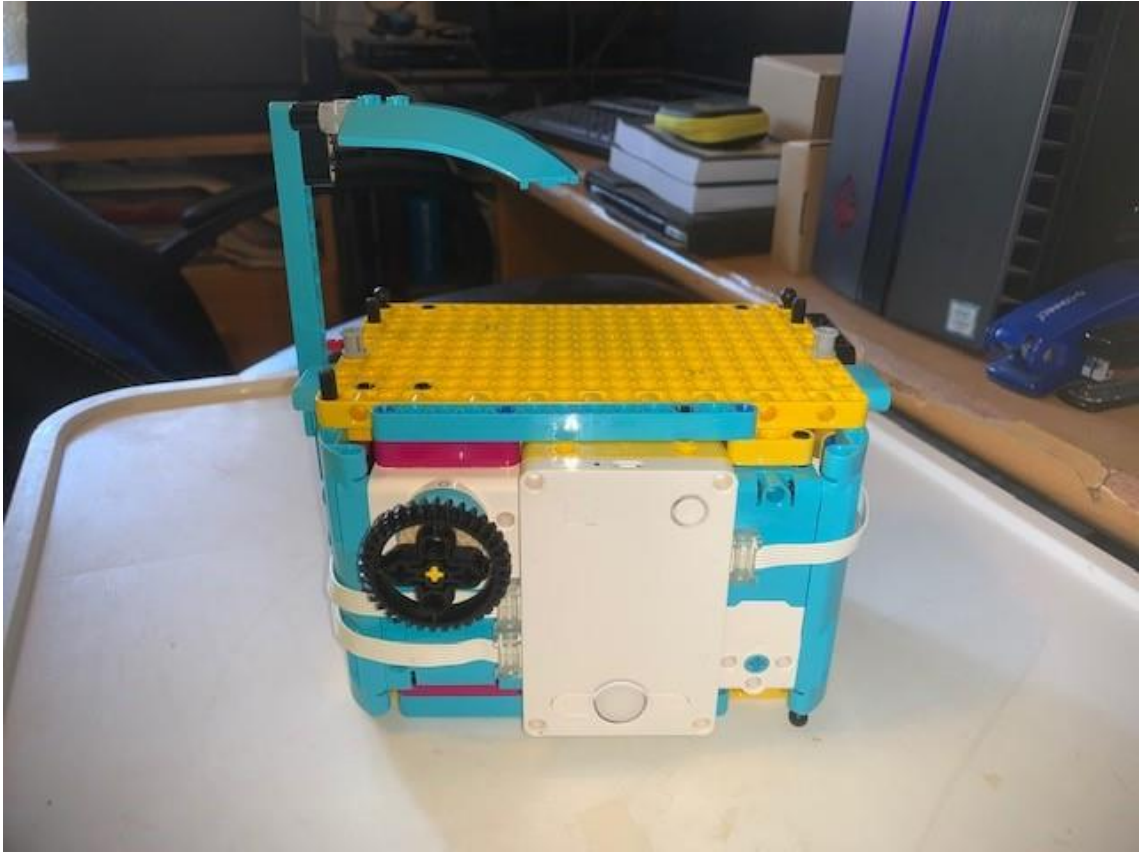


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Codificación

Cuando se inicia el programa

Tocar nota 60 durante 0.2 segundos.

Tocar nota 72 durante 0.2 segundos.

A los motores conectados en los puertos B+C+E fijar una potencia del 75%

El motor conectado en el puerto C girar en sentido inverso a las agujas del reloj durante un segundo.

Los motores conectados a los puertos B+E por la ruta más corta se posicionen a 0 grados.

El motor conectado al puerto B ajusta posición relativa a 0.

El motor conectado al puerto B para que se desplacen al parar, significa que su parada no será brusca parará por inercia.

Mostrar en los leds del Hub un candado cerrado.

Restablecer cronometro, este empieza a contar desde 0.

Enviar Unlock Significa que la ejecución empieza en otra pila, esta empieza al recibir seguido del nombre que hemos utilizado en Enviar.

cuando se inicia el programa

tocar nota 60 durante 0.2 segundos

tocar nota 72 durante 0.2 segundos

B+C+E fijar velocidad al 75 %

C ir en sentido contrario a las agujas del reloj durante 1 segundos

B+E ir por la ruta más corta a la posición 0

B ajustar posición relativa en 0

B fijar motores para que se desplacen al parar

encender

restablecer cronómetro

enviar Unlock

Esta pila bloquea la puerta y arranca el mecanismo de protección adicional.

La pila al recibir Unlock

Repetirá un bucle hasta que presionemos el botón izquierdo del Hub.

Tocar nota 60 durante 0.2 segundos.

El motor conectado en el puerto E mover dirección agujas del reloj 15 grados.

Esperar 0.8 segundos.

(Condición) si cronómetro mayor de 5 segundos.

Tocar sonido Bonk hasta acabar

Para todo (se detienen todos los programas en curso).

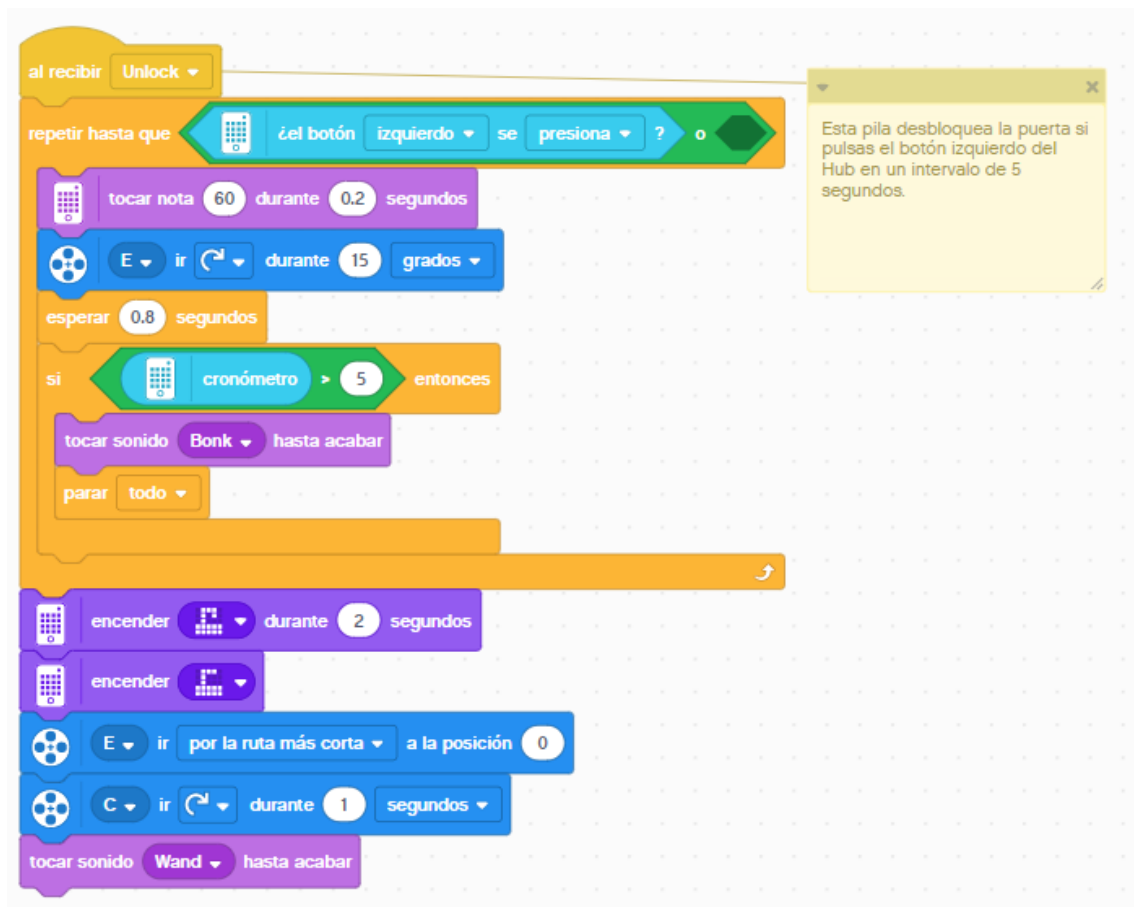
Fuera de bucle

Los leds del Hub muestran un candado abierto.

El motor conectado en el puerto E por la ruta más corta se sitúa en la posición 0 grados.

El motor conectado en el puerto C se mueve en sentido de las agujas del reloj durante un segundo.

Por último toca sonido Wand hasta acabar.



Ha llegado la hora de añadir un nivel más de seguridad.

Añade una condición compuesta a tu programa:

Haz que la caja solo se abra cuando se haya rotado la rueda más de 180 grados O se pulse el botón derecho.

The image shows a Scratch script with the following blocks:

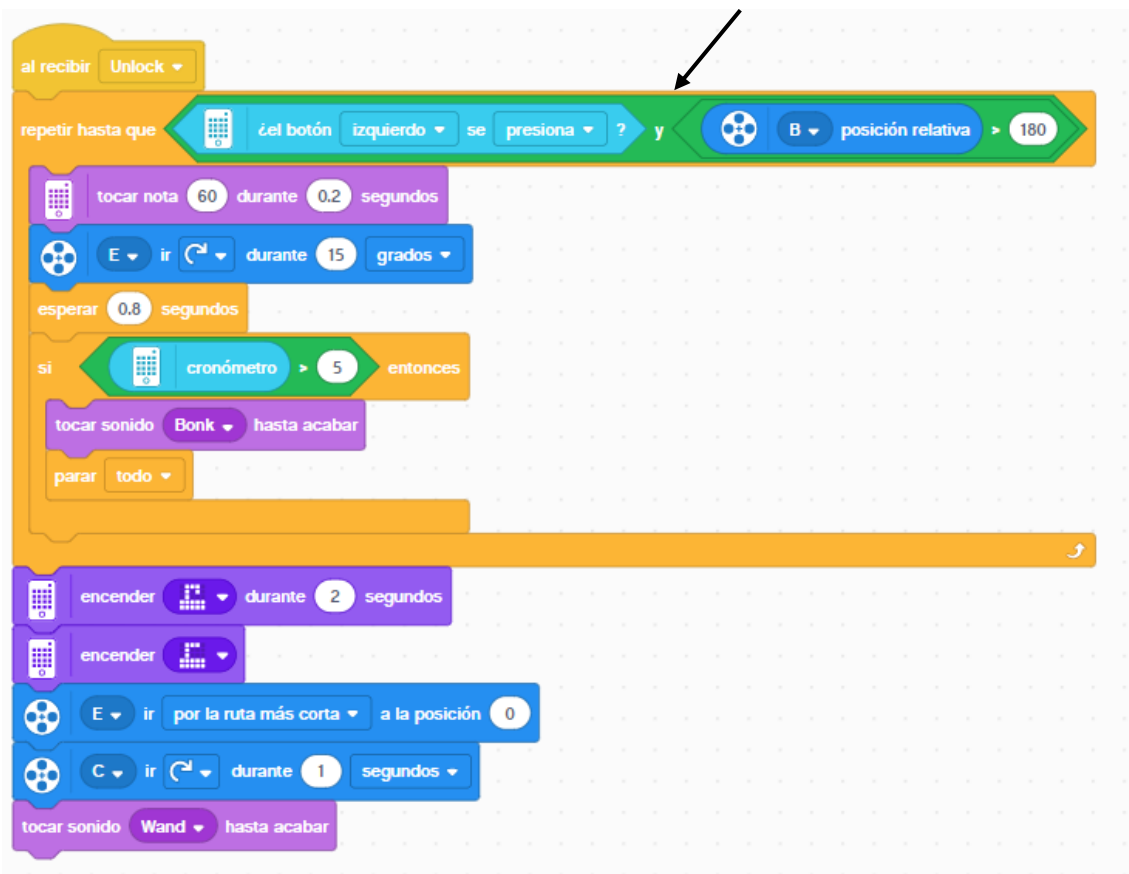
- al recibir** Unlock
- repetir hasta que** ¿el botón izquierdo se presiona? o B posición relativa > 180
- tocar nota** 60 durante 0.2 segundos
- E ir** durante 15 grados
- esperar** 0.8 segundos
- si** cronómetro > 5 entonces
 - tocar sonido** Bonk hasta acabar
 - parar** todo
- encender** durante 2 segundos
- encender**
- E ir** por la ruta más corta a la posición 0
- C ir** durante 1 segundos
- tocar sonido** Wand hasta acabar

An arrow points to the 'o' operator in the 'repetir hasta que' block.

Ahora cambia el «O» por «Y».

Compara la seguridad de los dos programas.

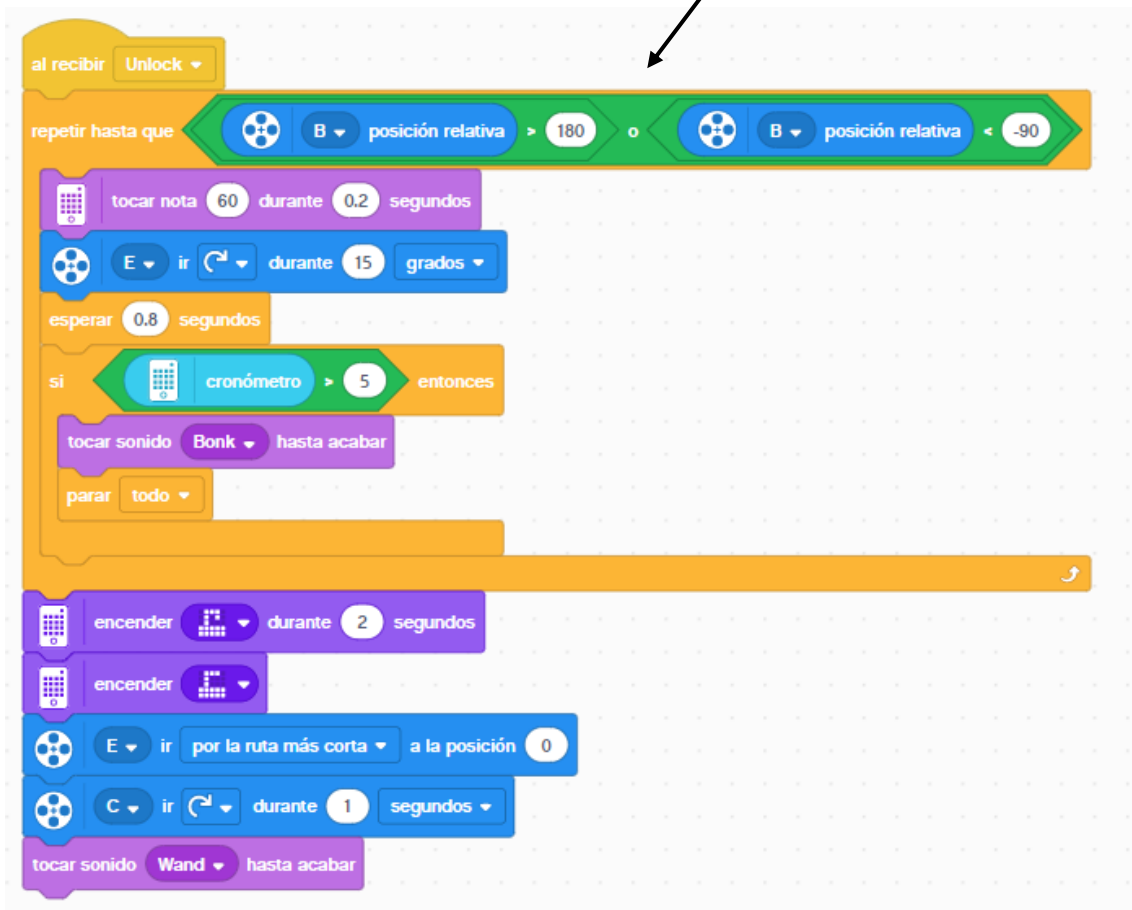
¿Cuál es la opción más segura?



Ahora para que se abra la caja simultáneamente que se presiona el botón izquierdo del Hub hay que rotar la rueda a 180 grados.

¡Personalízalo!

Crea tu propia secuencia secreta con condiciones compuestas y pide a alguien que intente abrir tu caja superfuerte.



Se puede abrir girando a la izquierda 90 grados o girando a la derecha 180 grados.