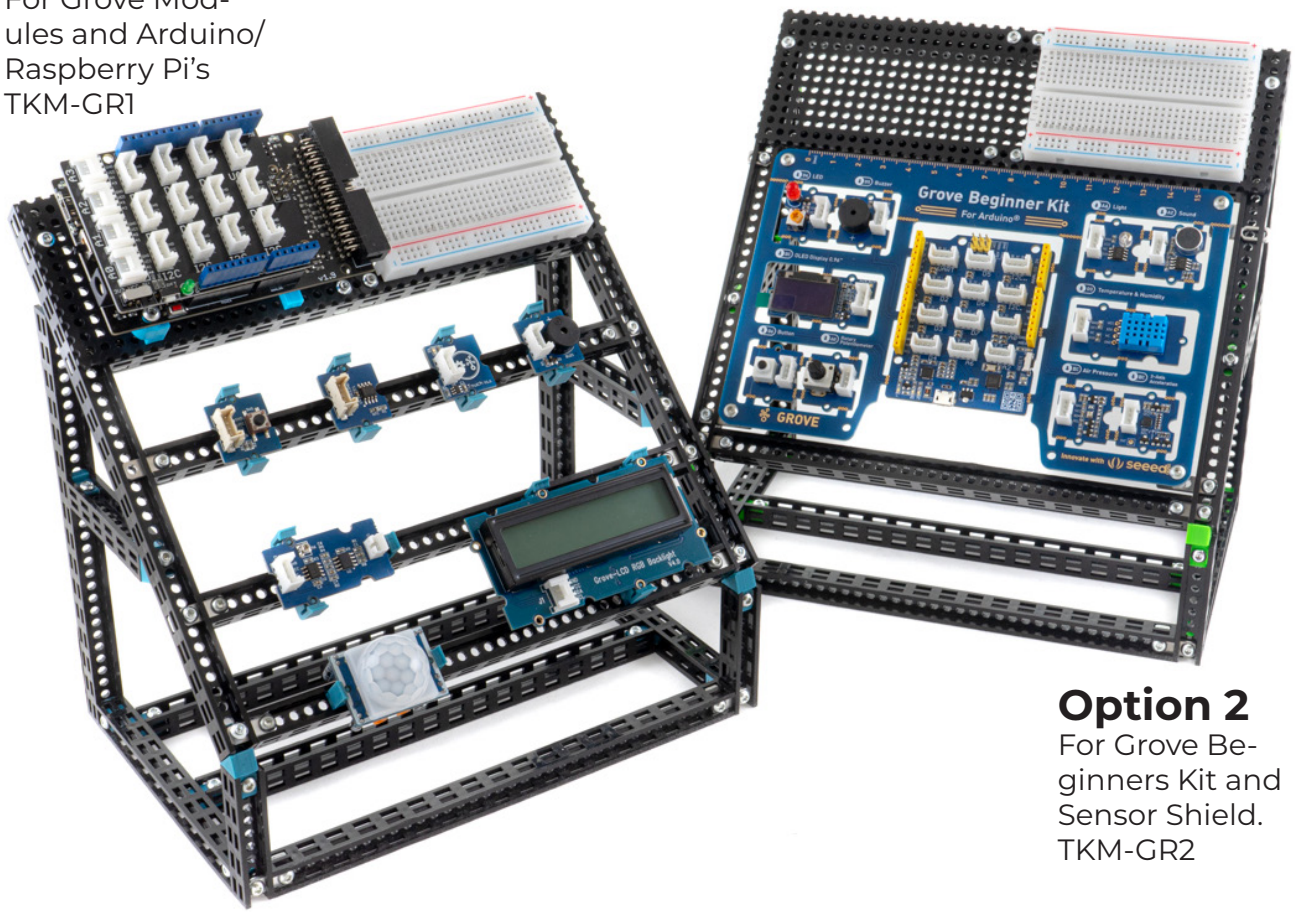
Totem Rack for Seeed studios Grove Modules. Building instructions.

Option 1
For Grove Modules and Arduino/ Raspberry Pi's
TKM-GR1

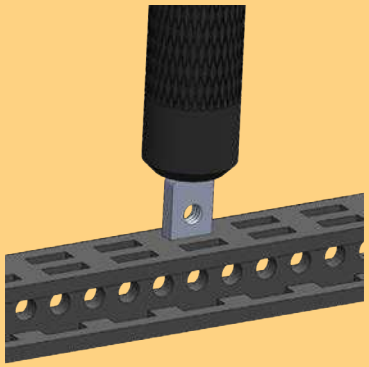


Option 2
For Grove Beginners Kit and Sensor Shield.
TKM-GR2

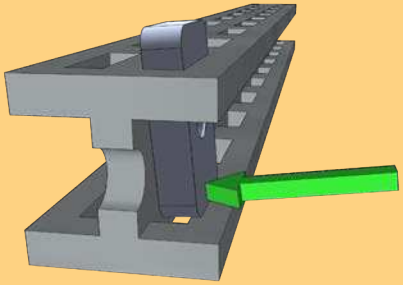
Version 1.0
Oct 2021

totem

Starting tips.

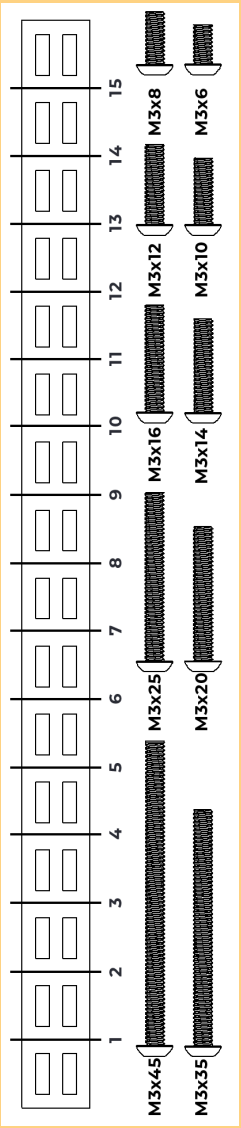


Use the back of the screwdriver to push the nuts into the slots.



After entering the nut, it sometimes is stuck at the next slot. Use your thumb to push it straight, then continue to push it through.

Some of the nuts (~1%) are missing threads. This is a manufacturing issue. We are trying to minimize the fault. In the mean time, we supply extra nuts in your kit.
We apologize for the in-convenience.



Use Beam/Bolt ruler to help you find the right lengths of the bolts and beams.

For more tips, please go to the link below:
https://totemmaker/blog/totem-mechanics-for-beginners/

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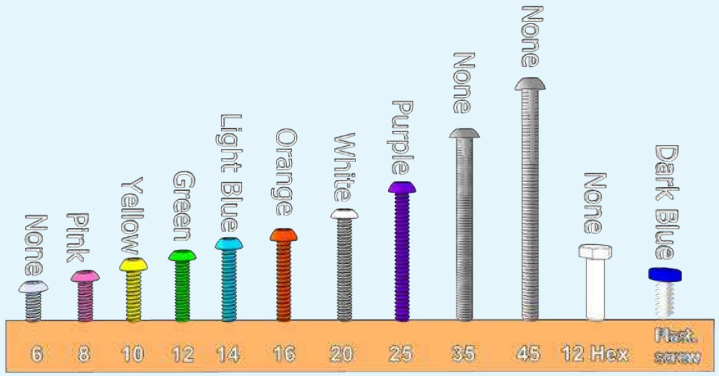
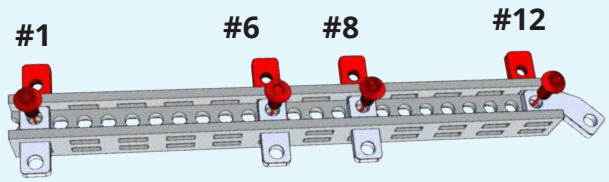
BEFORE YOU START BUILDING:



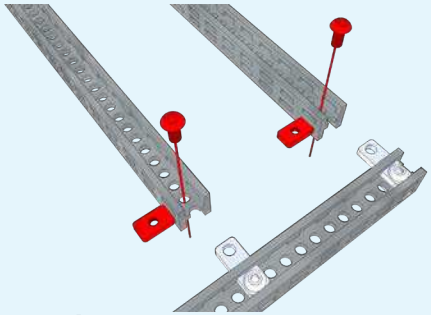
Bolt colours codes:

We have put some colours on bolts to make instructions more clear.



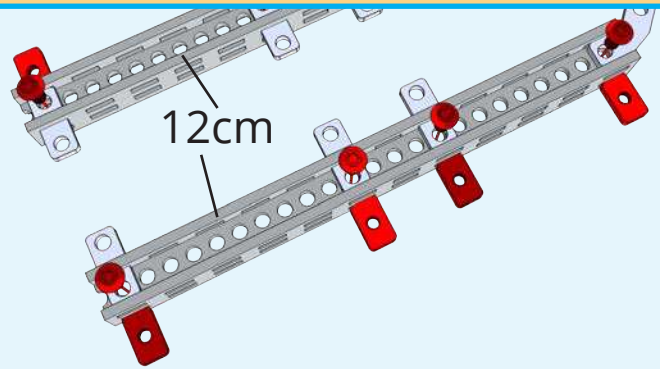
Positions for nuts with #-symbol.

When it is helpful, the slot-number is indicated in the Totem beam. Starting from #1 and counting slots.



6mm bolts and 6x10mm nuts:

When starting on a building step, the 6mm bolts and 6x10 nuts are coloured RED. It makes it easier to see where the new bolts and nuts are placed.



I-beams lengths.

When a new Totem beam is needed in a step, the length is indicated.

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Parts list for Seeed Studios Grove Modules rack (option 1)

30x

Bolt M3x6

54x

Screw for Plastic 7.5mm

4x

Bolt M2.5x8mm

28x

Nut M3 6x10

12x

2-hole Simple

2x

2-hole Simple

2x

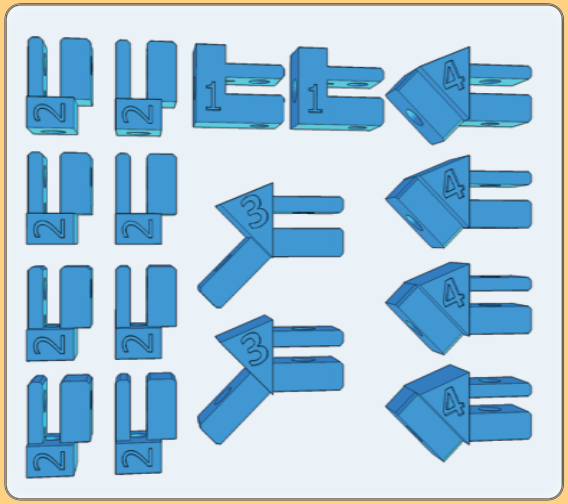
2-hole Simple

Tools:

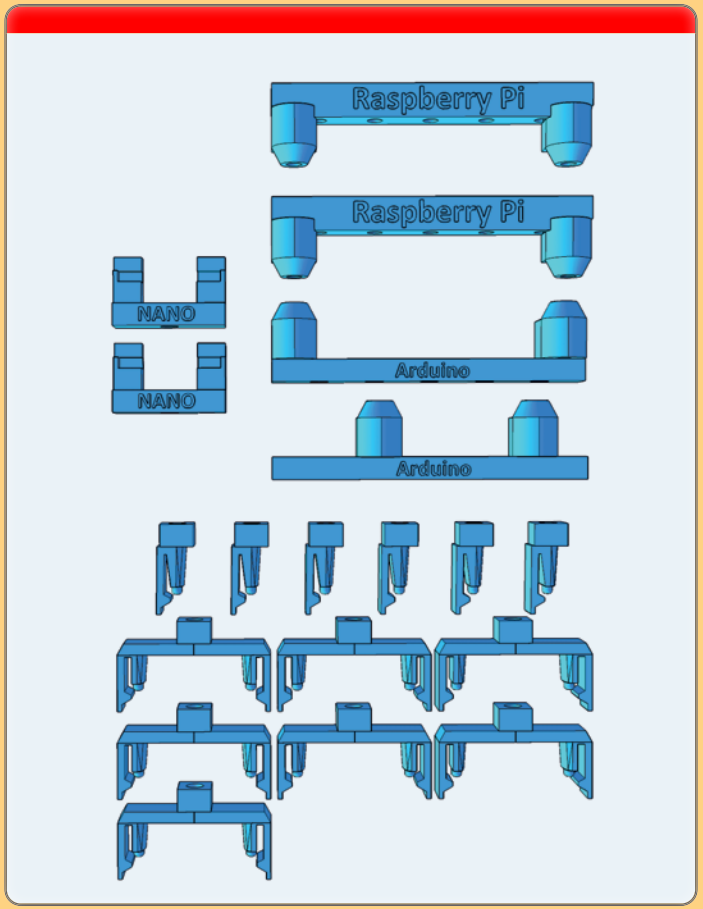
1x

Totem Screw Driver

Brackets for building the rack.



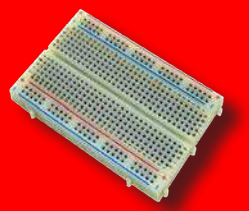
Microprocessor boards brackets and Grove Module brackets.



Totem Beams:

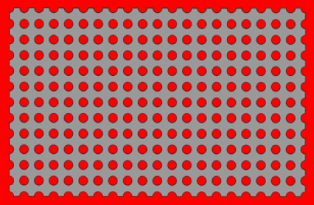
5 cm	2 x
6 cm	2 x
11 cm	2 x
16 cm	2 x
18 cm	10 x
19 cm	2 x

1x



Electronics Breadboard

2x



Perforated board 100x60mm

totem

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Parts list for Grove Sensor Shield/beginners Kit rack (option 2)

30x

Bolt M3x6

32x

Screw for Plastic 7.5mm

24x

Nut M3 6x10

8x

2-hole Simple

2x

2-hole Bracket

2x

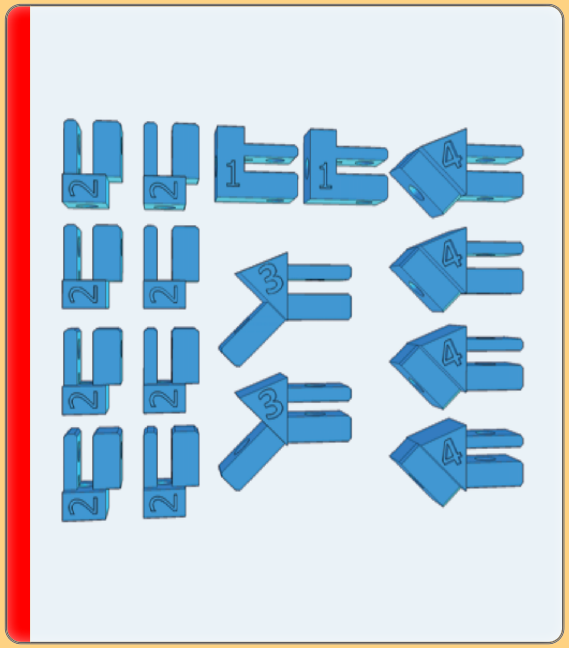
L-bracket

Tools:

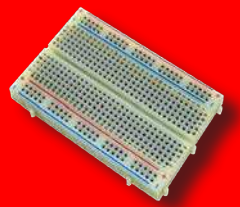
1x

Totem Screw Driver

Brackets for building the rack.

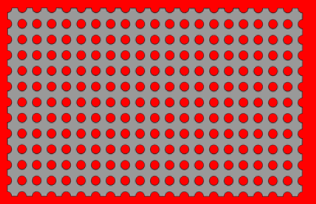


1x



Electronics Breadboard

2x



Perforated board 100x60mm

Totem Beams:

5 cm	2 x
6 cm	2 x
11 cm	2 x
16 cm	2 x
18 cm	8 x
19 cm	2 x

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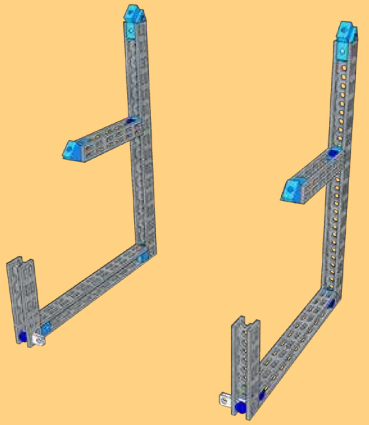
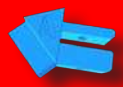
PART 1



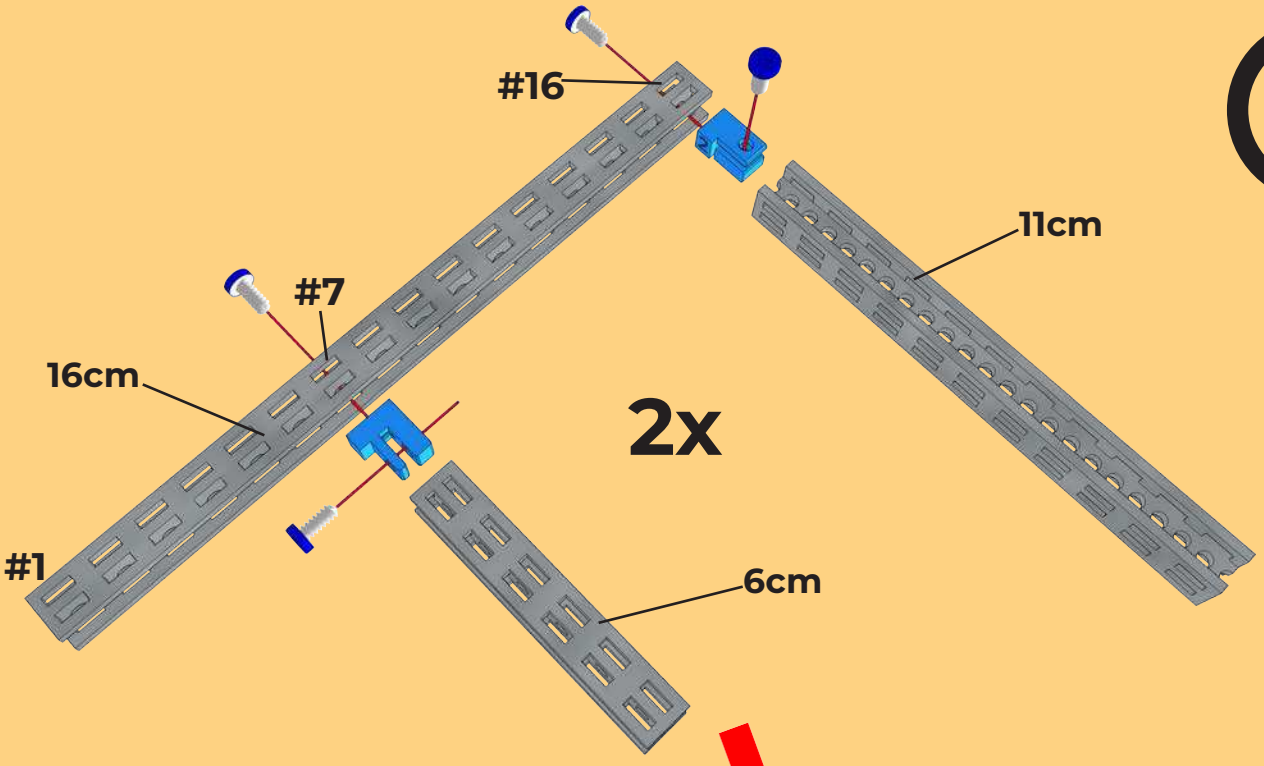
16x	2x	2x
		
Screw for Plastic 7.5mm	2-hole Simple	Bracket Nr. 1

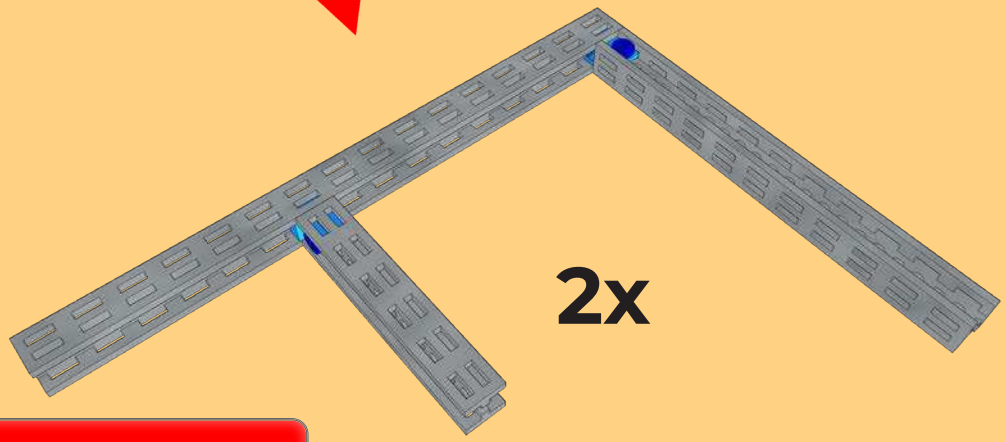
4x	4x
	
Bracket Nr. 2	Bracket Nr. 4

5 cm	2x
6 cm	2x
11 cm	2x
16 cm	2x

totem

6 cm	2x
11 cm	2x
16 cm	2x





2x	2x	8x
		
Bracket Nr. 1	Bracket Nr. 2	Screw for Plastic 7.5mm

1

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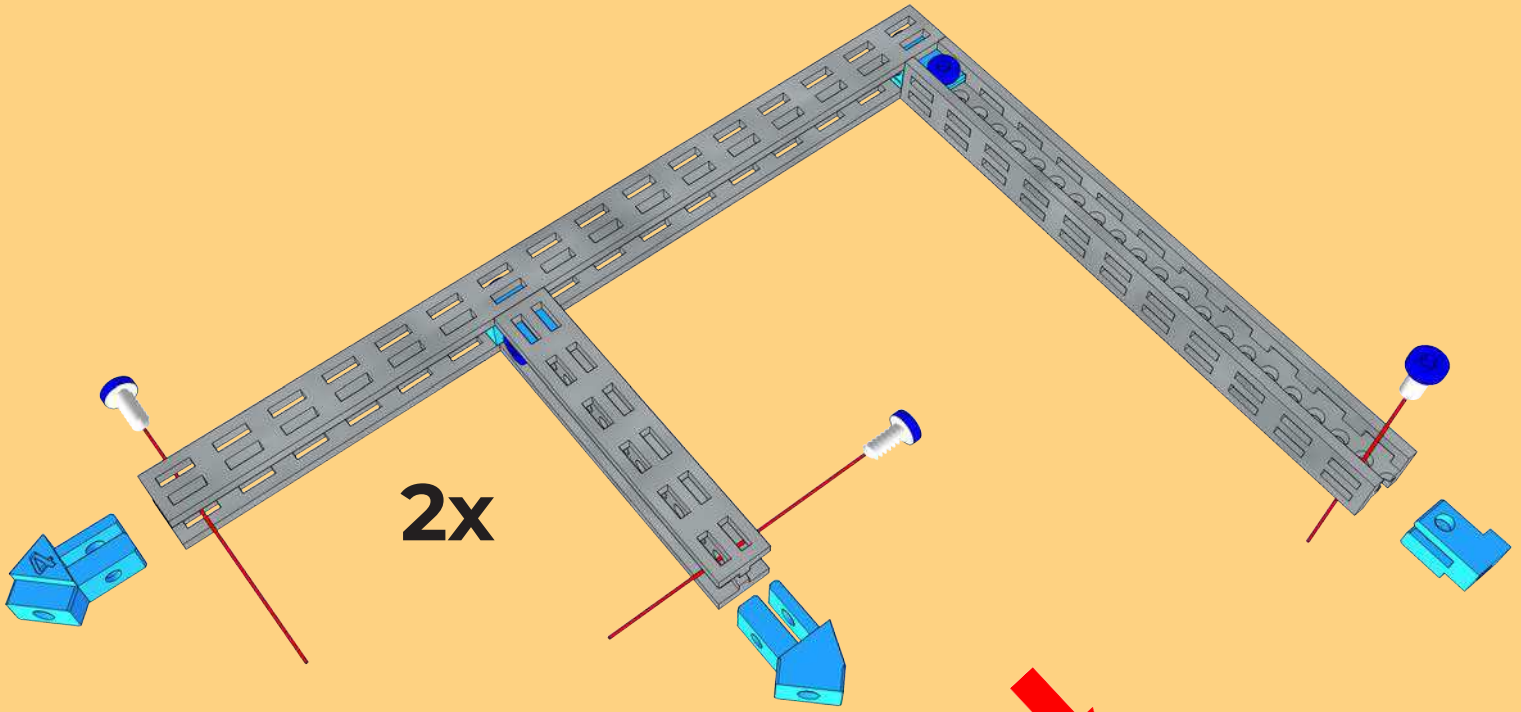
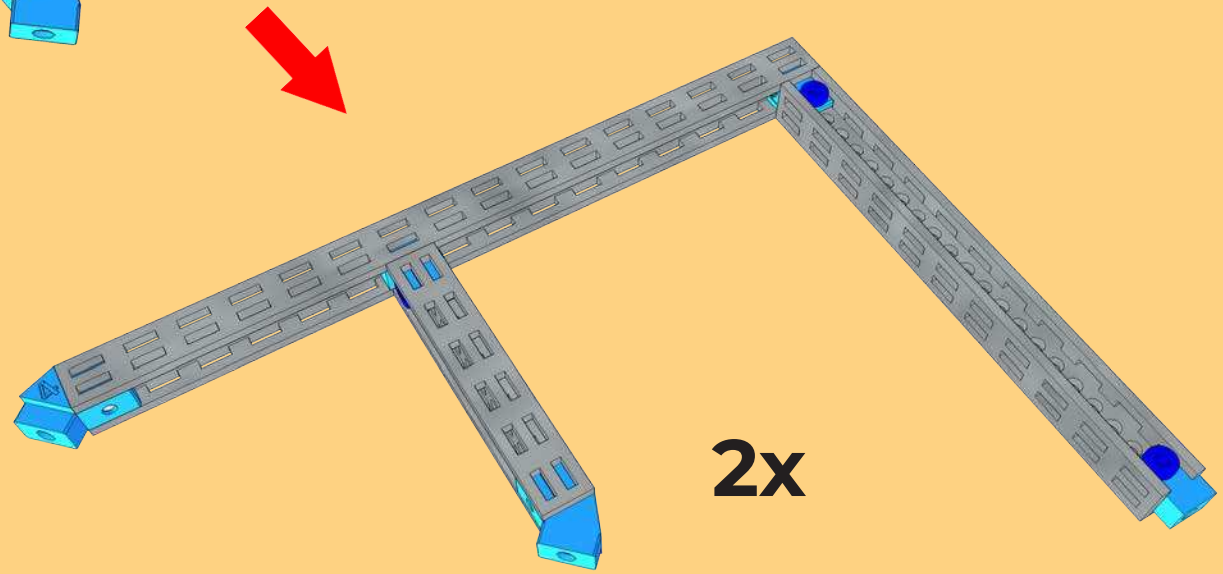
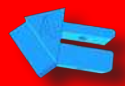




4x



Bracket Nr. 4

2x

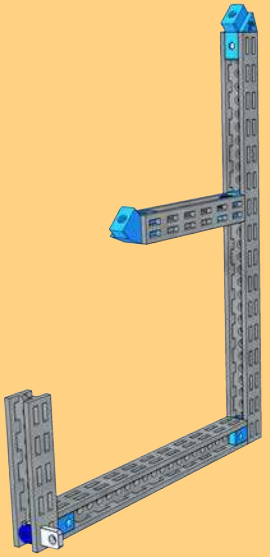
Bracket Nr. 2

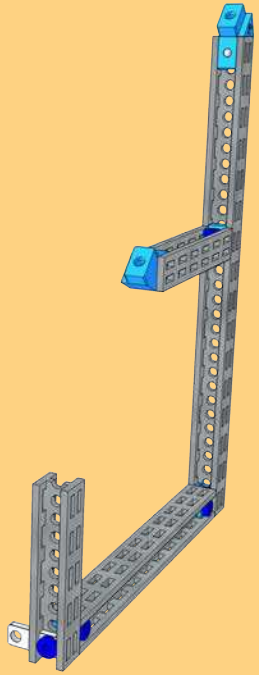
6x

Screw for Plastic 7.5mm

totem

5 cm	2x





PART 1

totem

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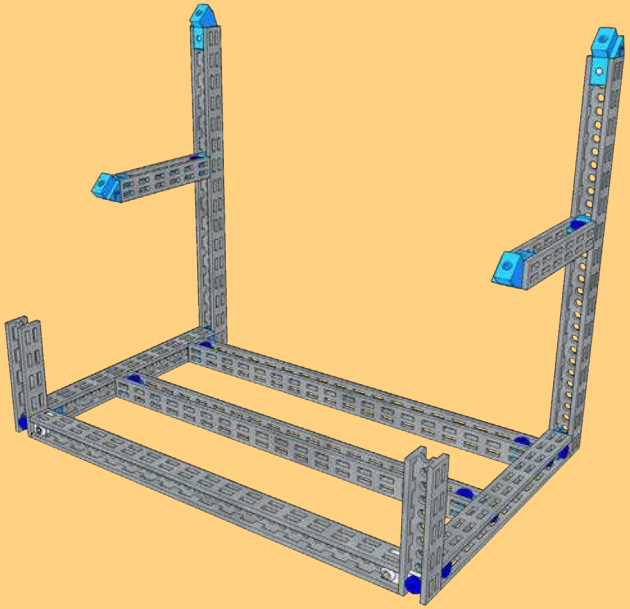
PART 2

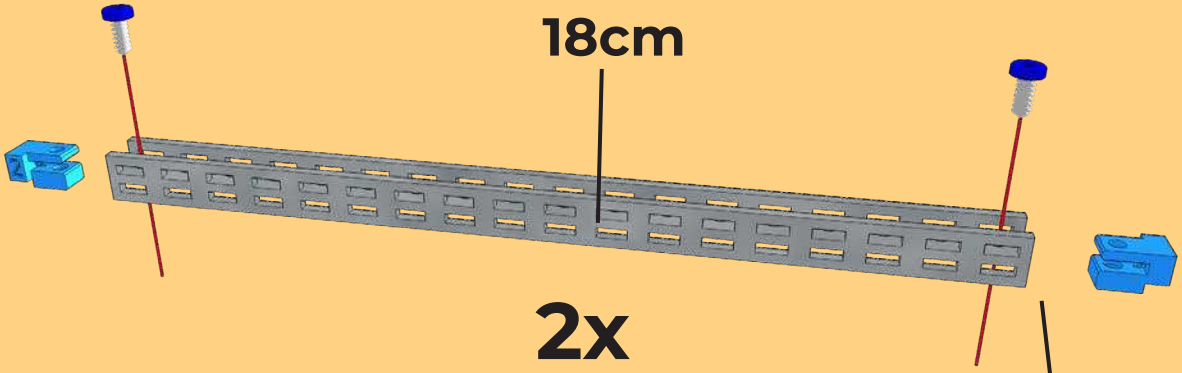


2x	2x	4x	4x
Bolt M3x6	Nut M3 6x10	Screw for Plastic 7.5mm	Bracket Nr. 2

18 cm	3x

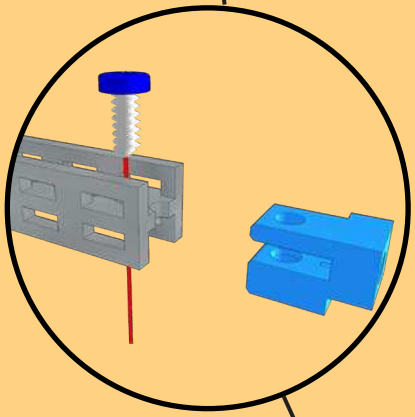
totem

1

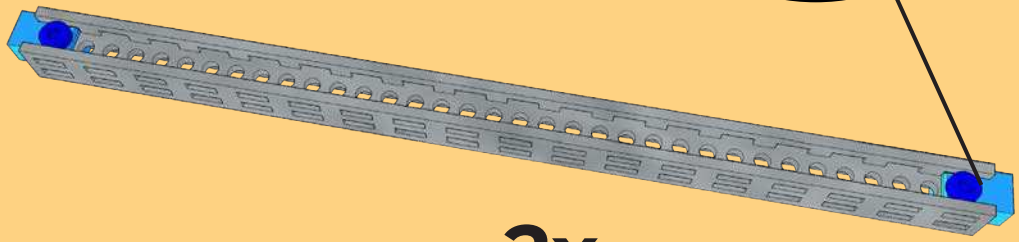


2x

18 cm	2x

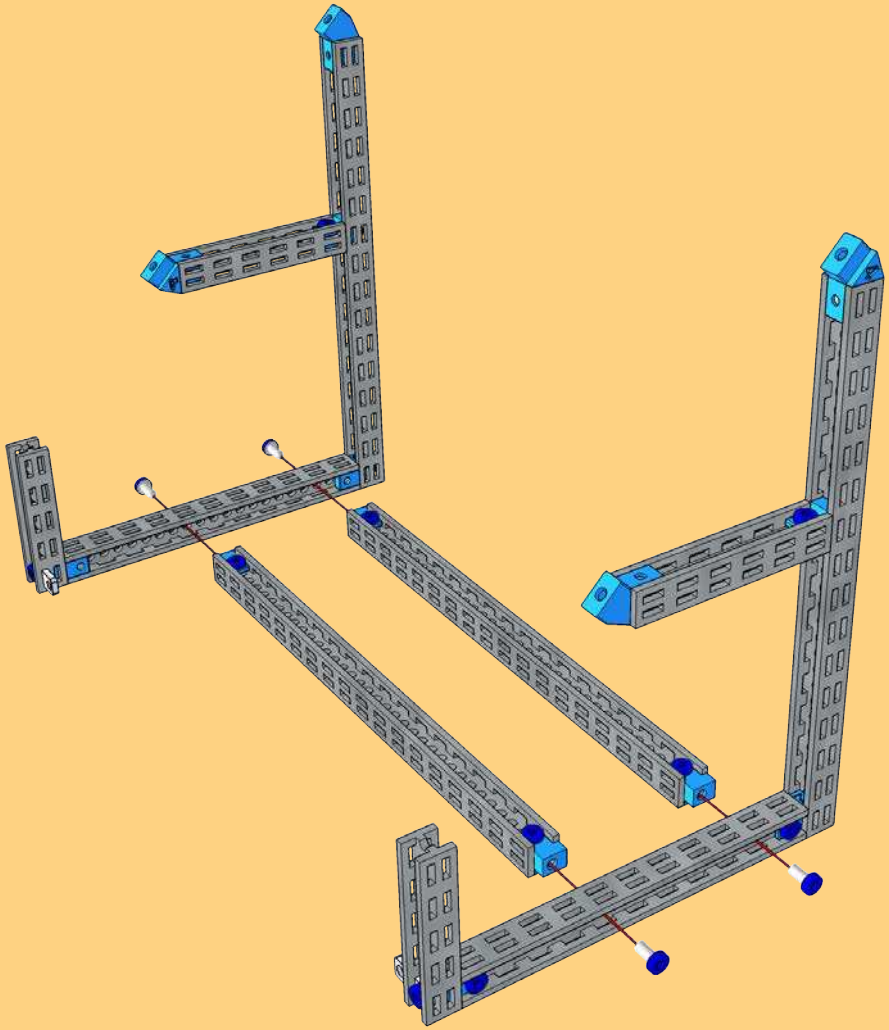


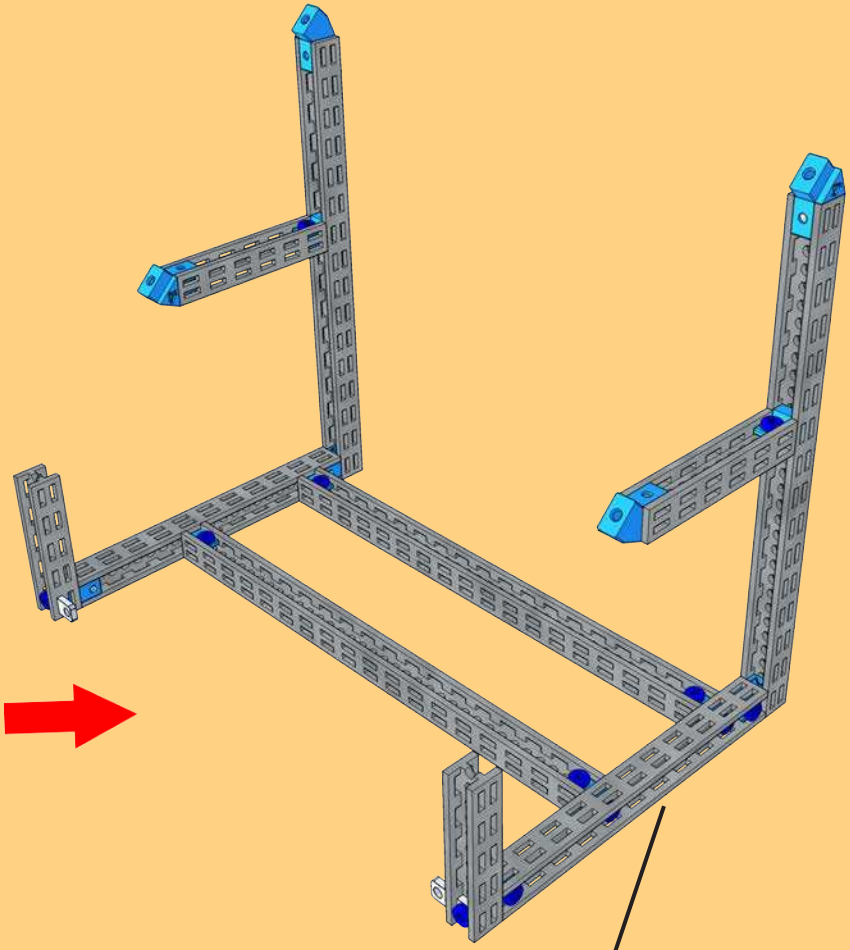
4x	4x
Screw for Plastic 7.5mm	Bracket Nr. 2

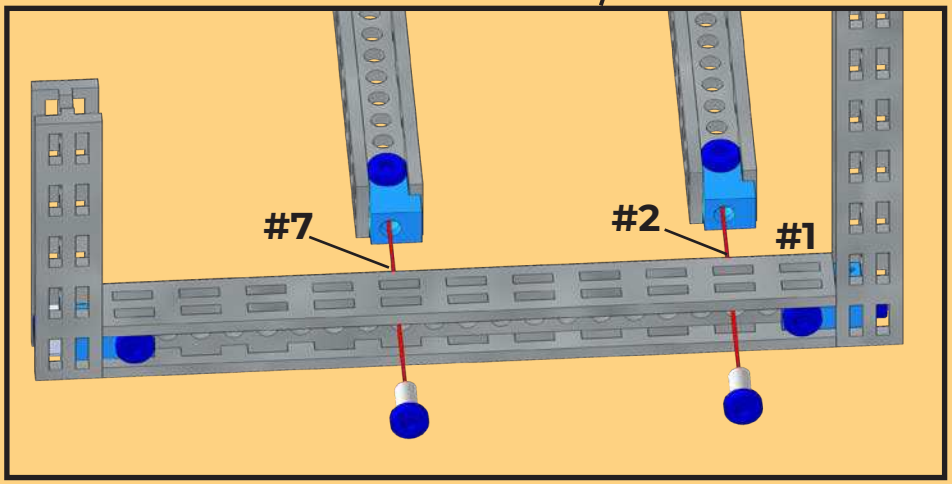


2x

v1.0







4x

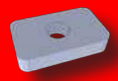
Screw for Plastic
7.5mm

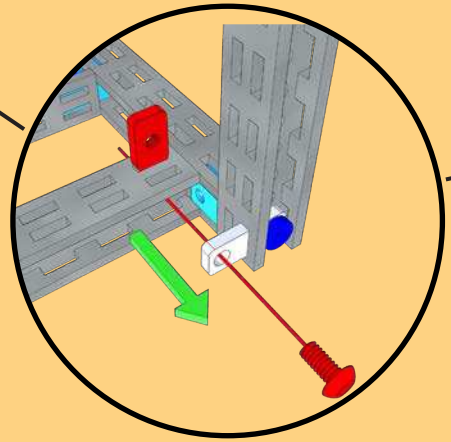
totem

v1.0

3

18 cm	1x

2x	2x
	
Nut M3 6x10	Bolt M3x6

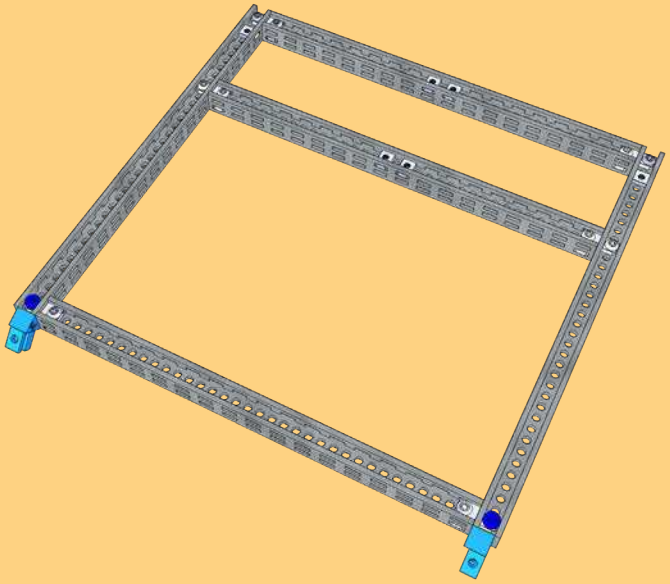


PART 2

totem

v1.0

PART 3



10x	2x	12x
Bolt M3x6	Screw for Plastic 7.5mm	Nut M3 6x10

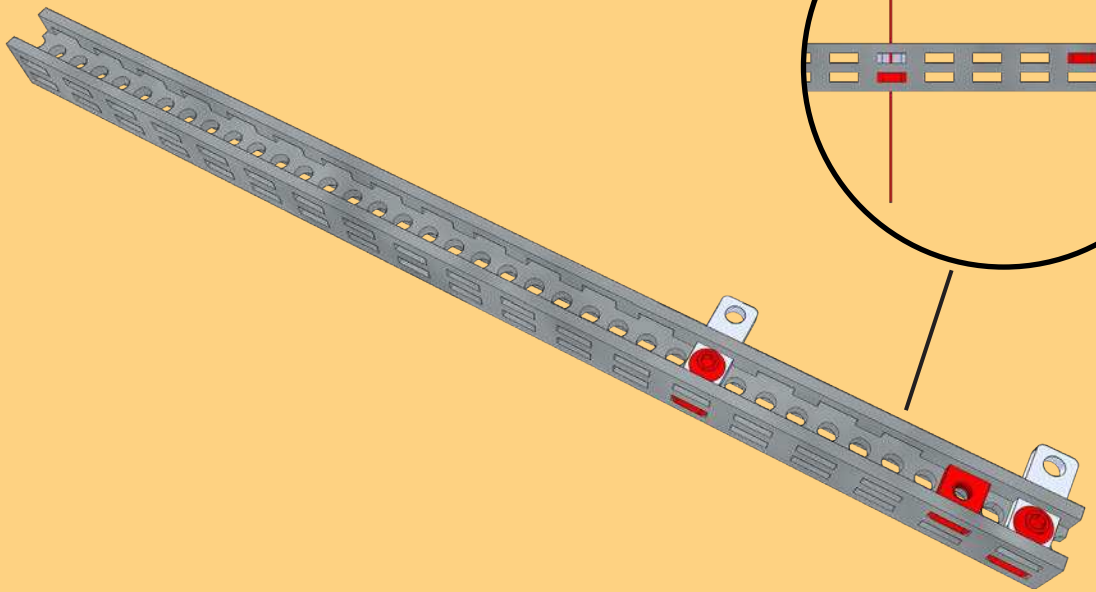
6x	2x
2-hole Simple	Bracket Nr. 3

18 cm	3x
19 cm	2x

totem

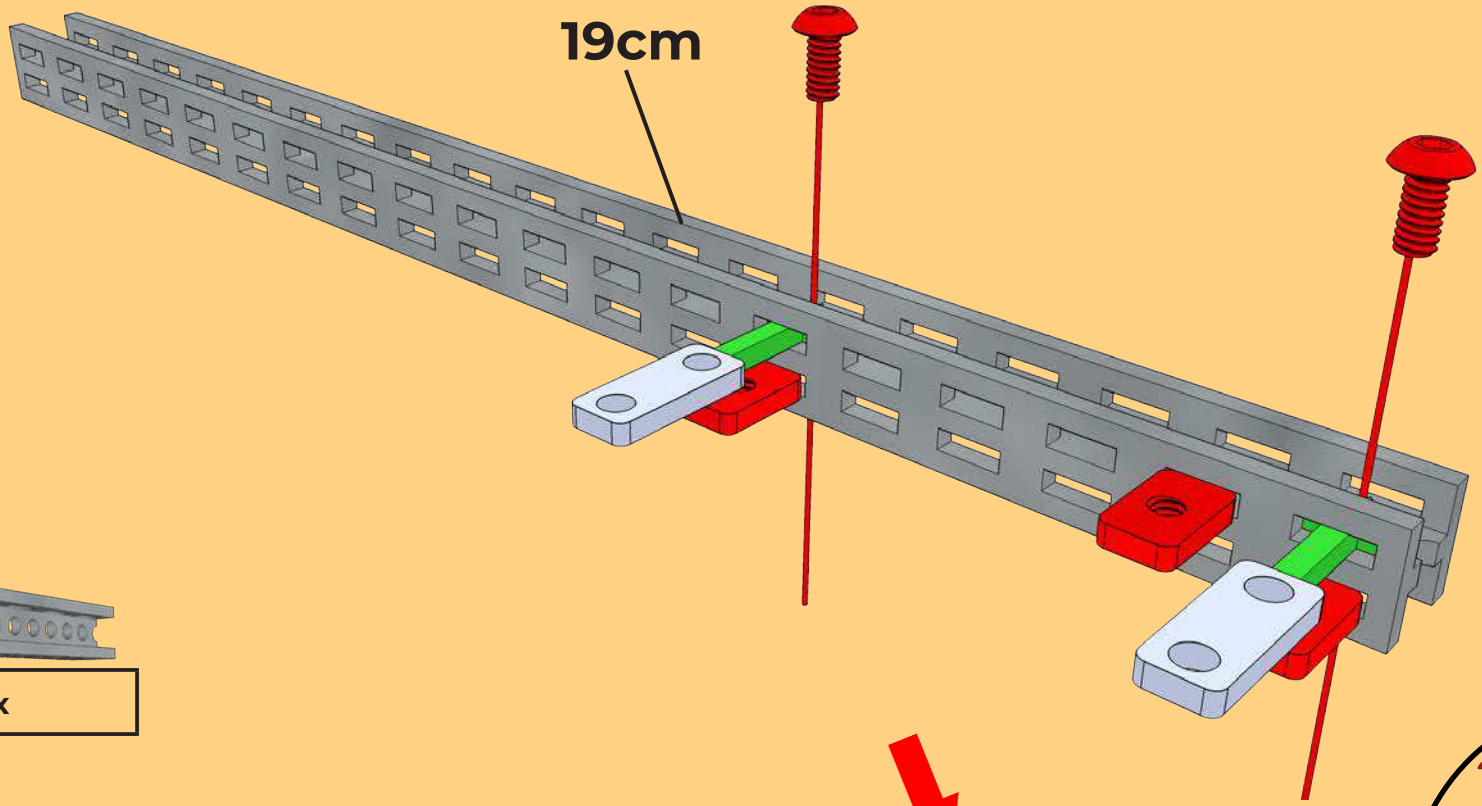
19 cm	1x

3x	2x	2x
Nut M3 6x10	Bolt M3x6	2-hole Simple



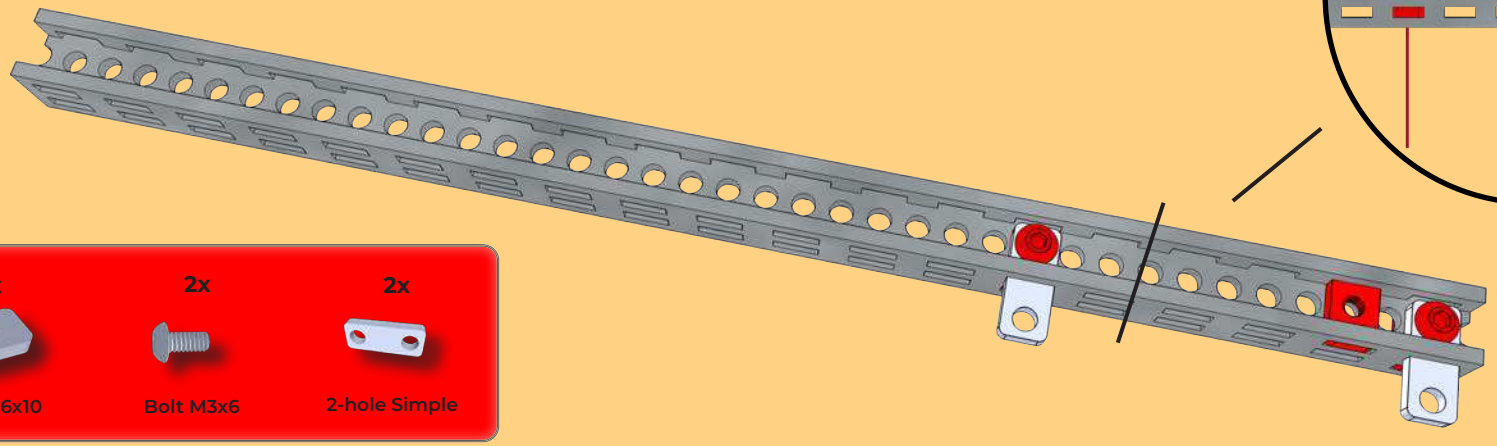
1

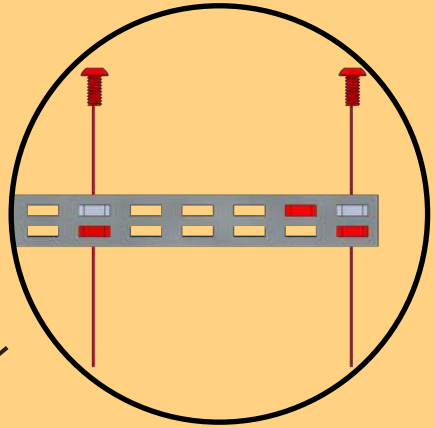
v1.0



2

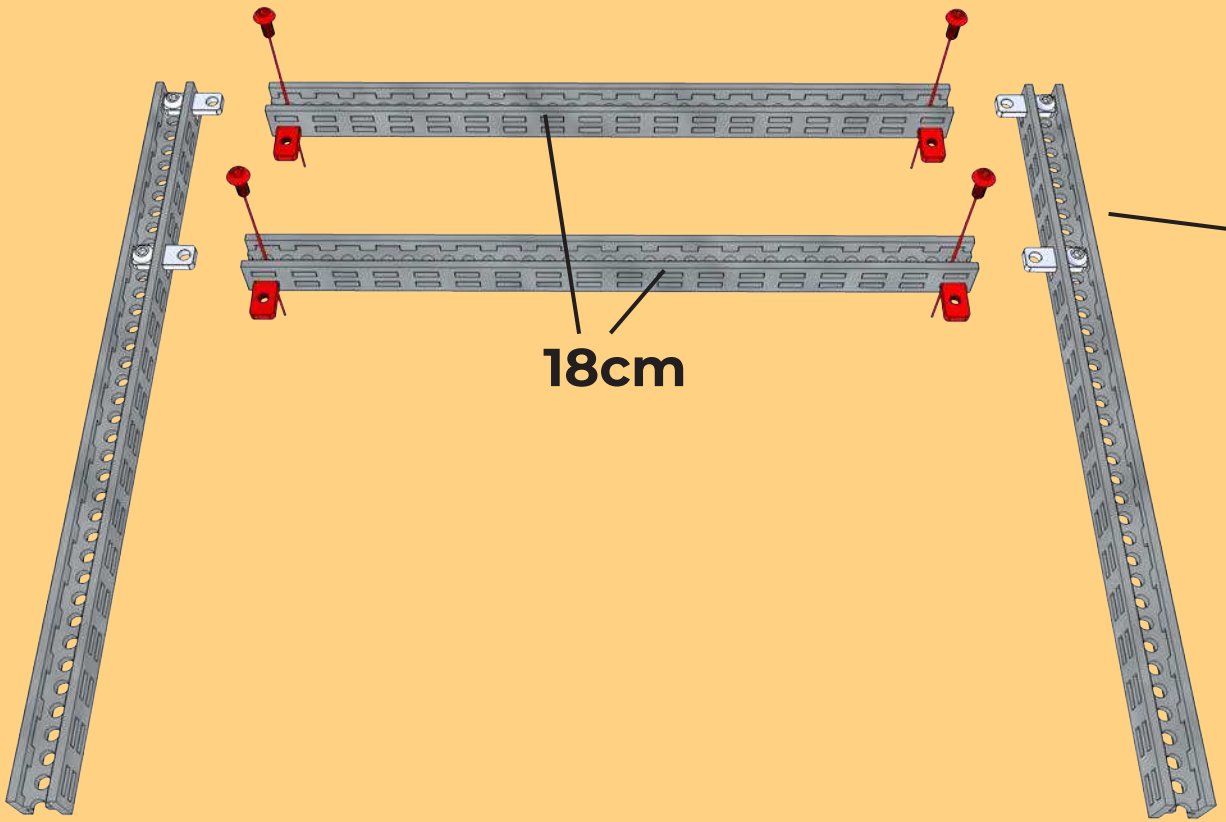
19 cm	1x

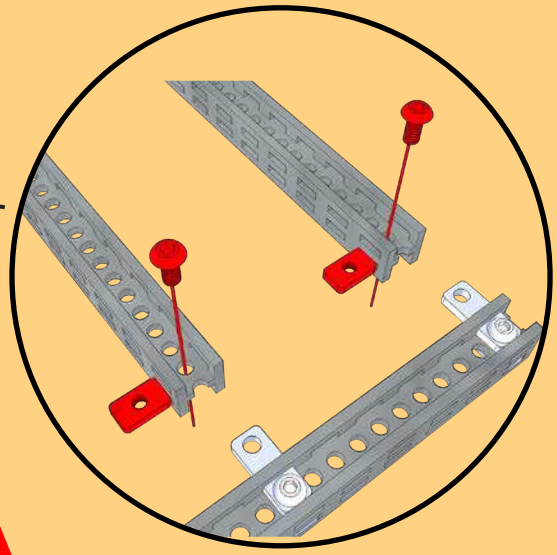


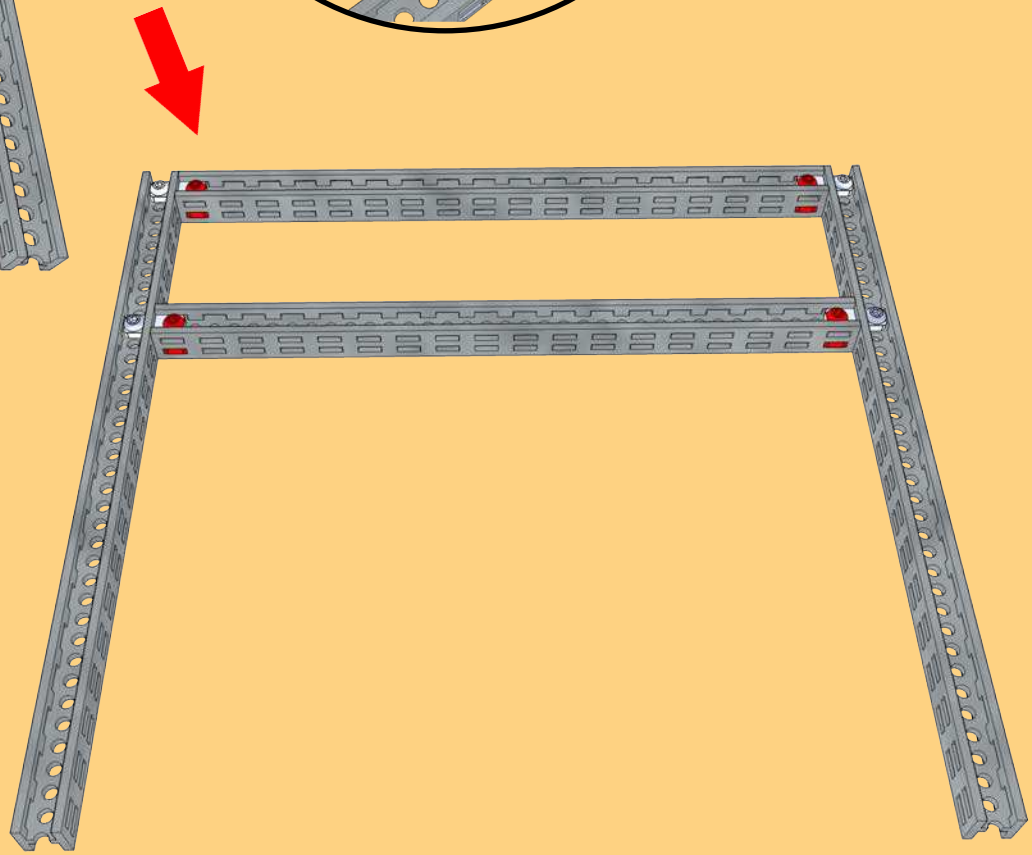


totem

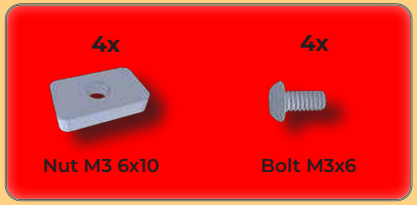
v1.0





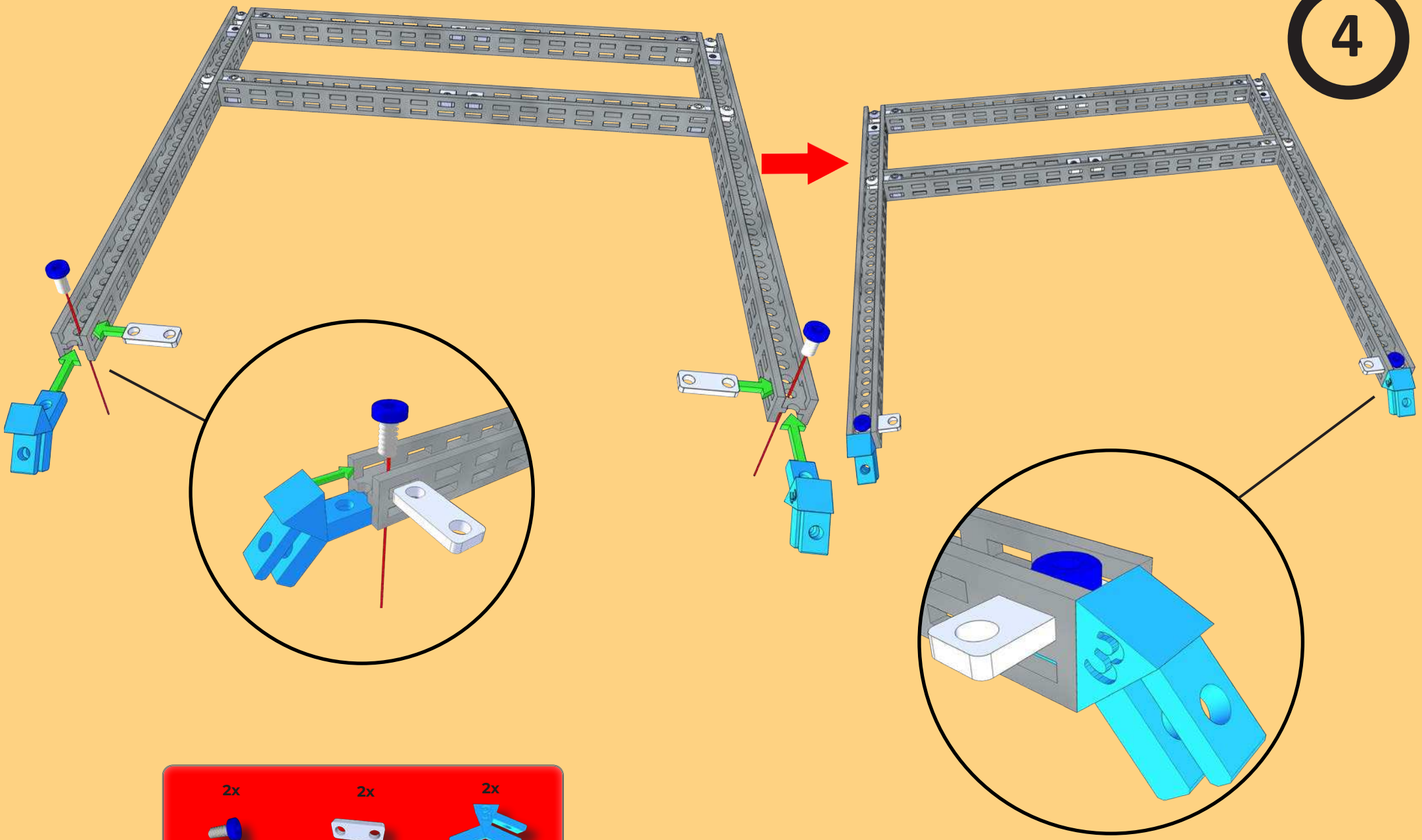


18 cm	2x



totem

v1.0



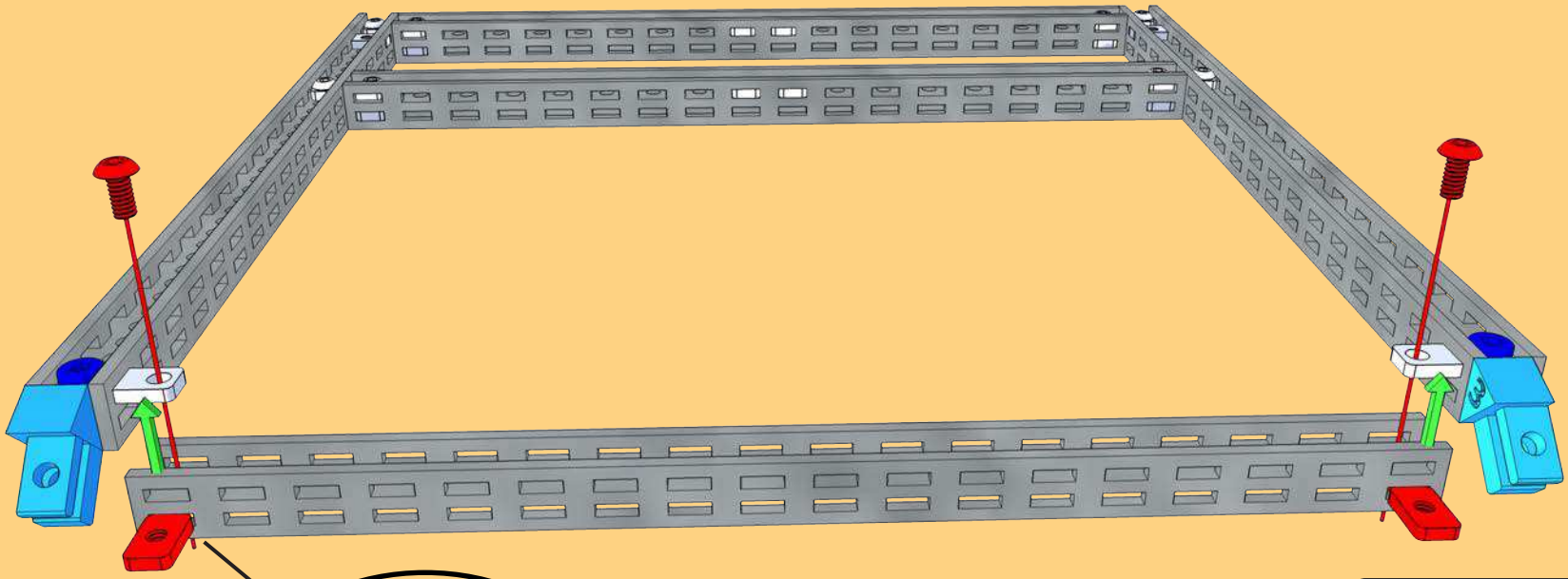
4

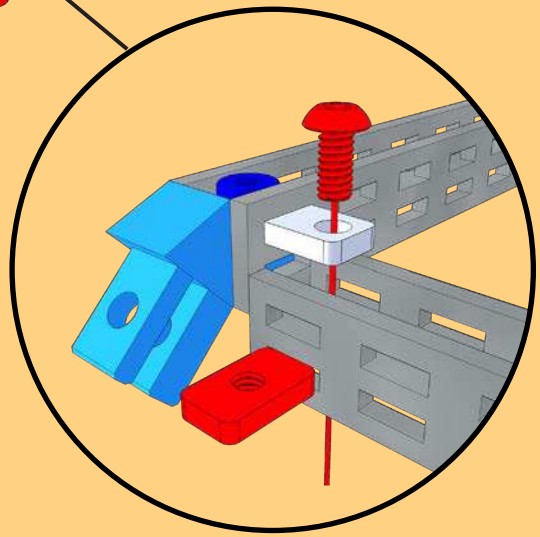
2x	2x	2x
Screw for Plastic 7.5mm	2-hole Simple	Bracket Nr. 3

totem

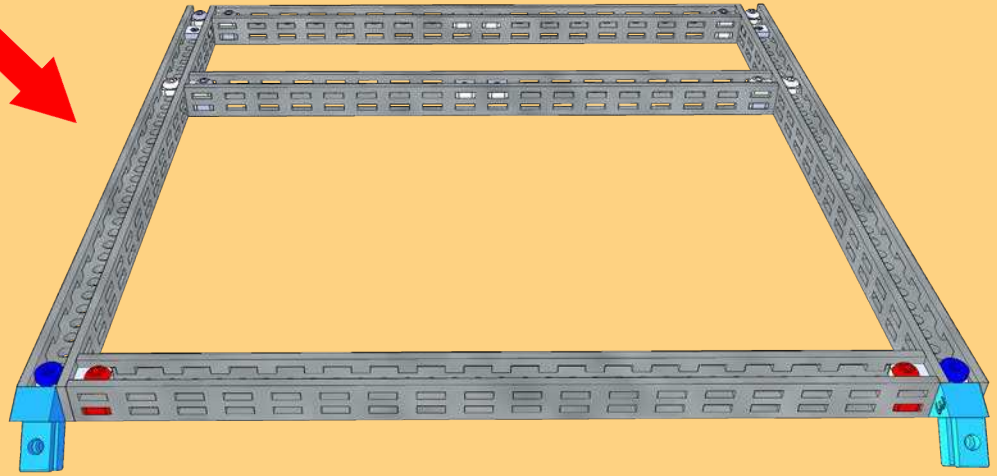
v1.0

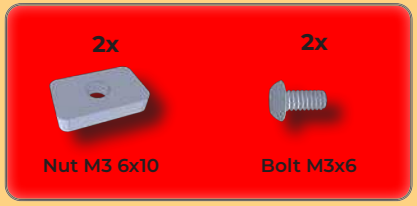
5





PART 3



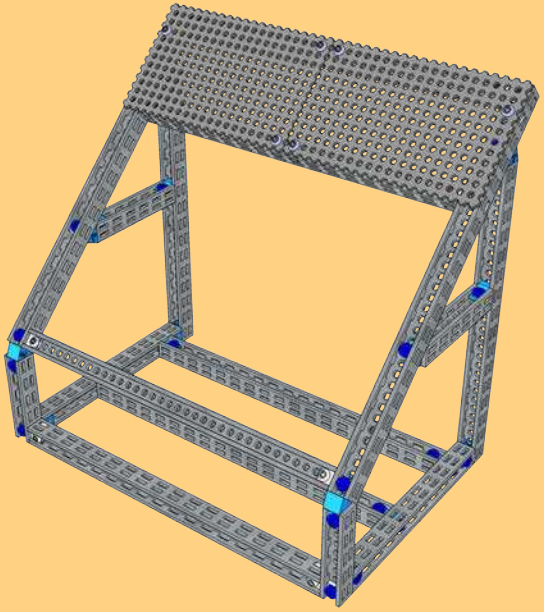


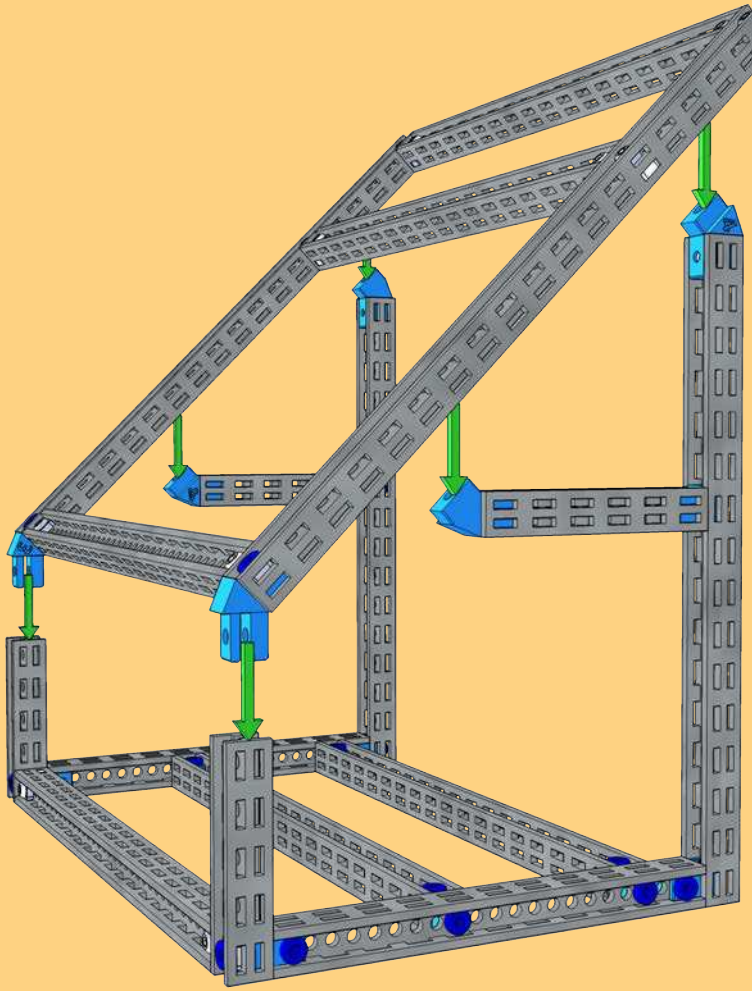
18 cm	1x

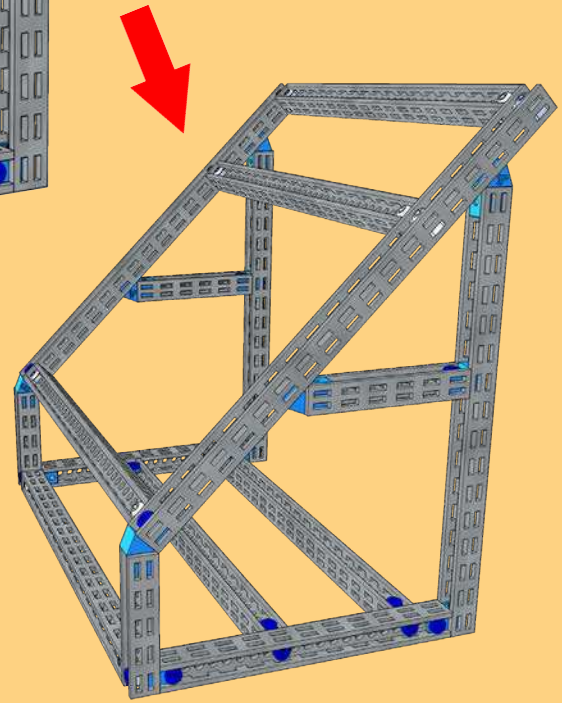
totem

v1.0

PART 4







1

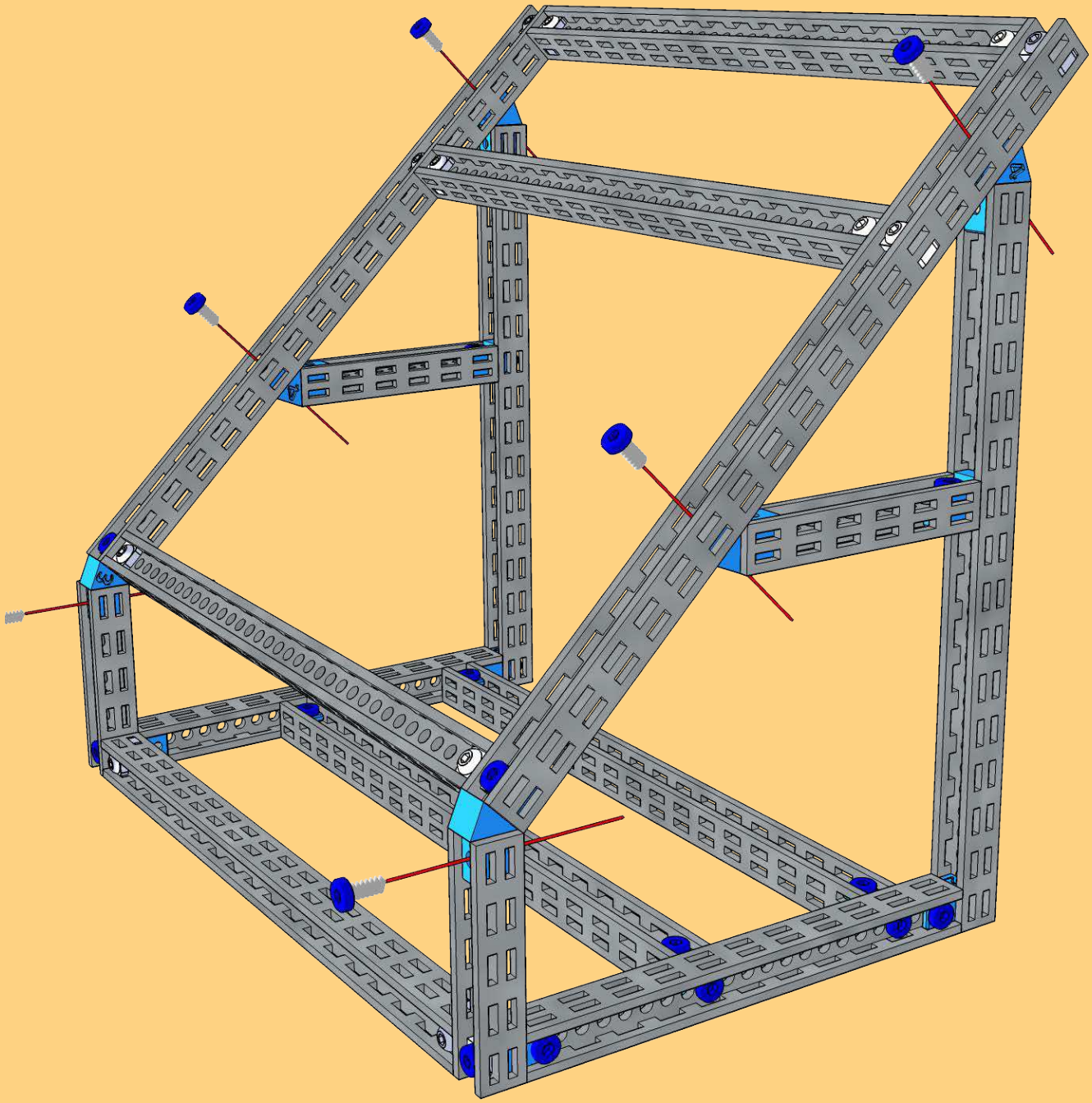
8x	2x	12x
Nut M3 6x10	Bolt M3x6	2-hole Simple

18 cm	3x
19 cm	2x

totem

v1.0

2



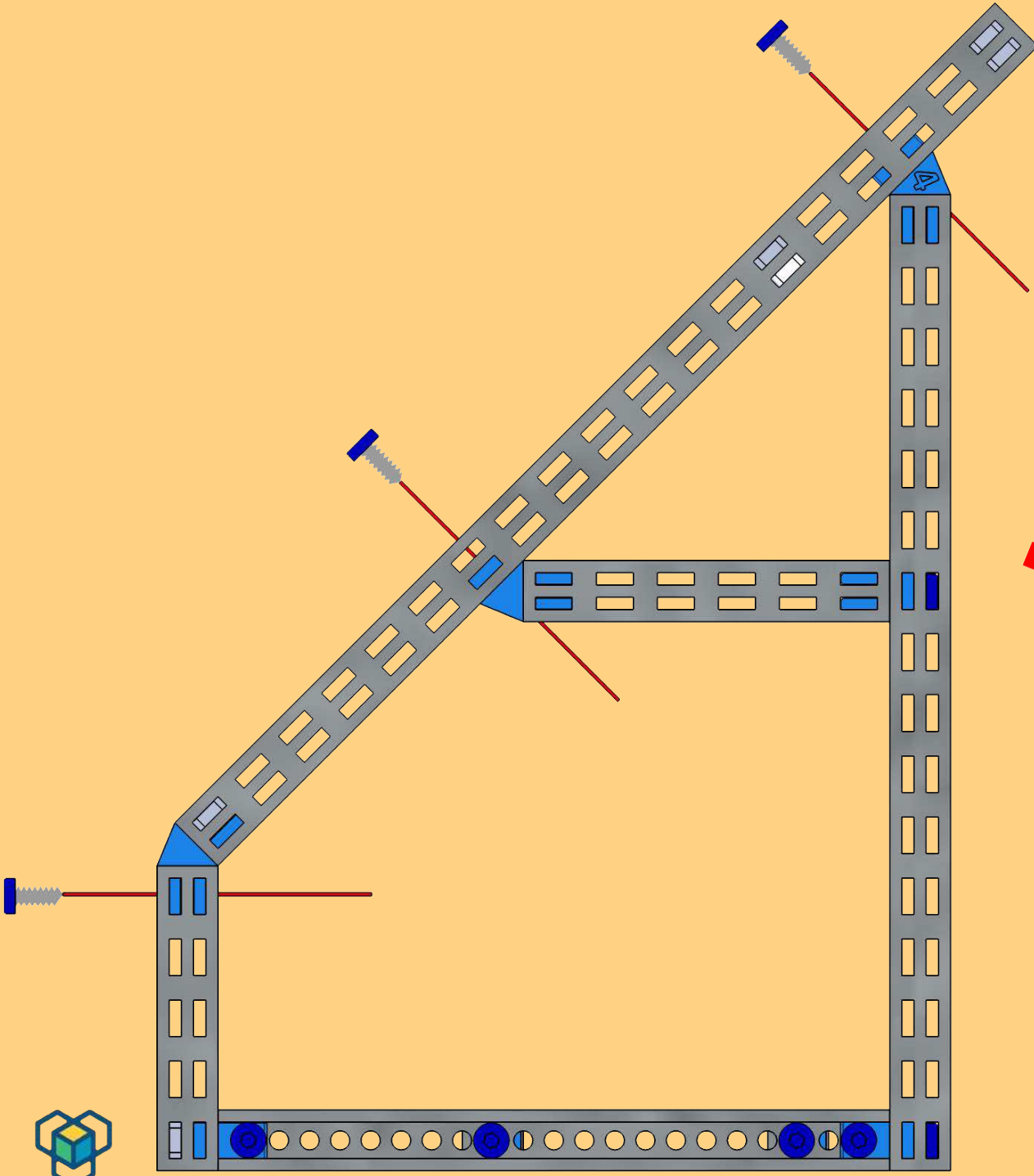
2x

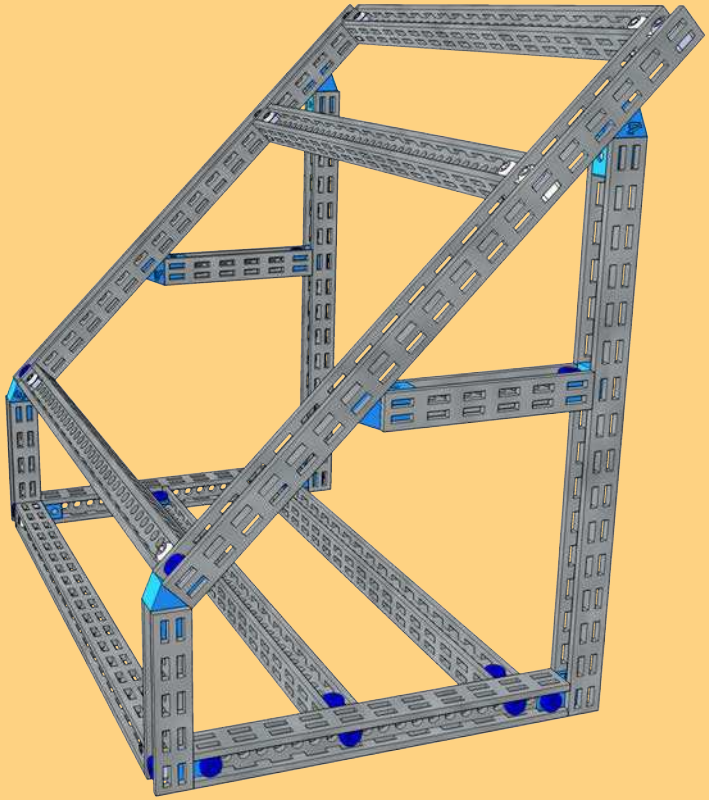
Screw for Plastic
7.5mm

totem

v1.0

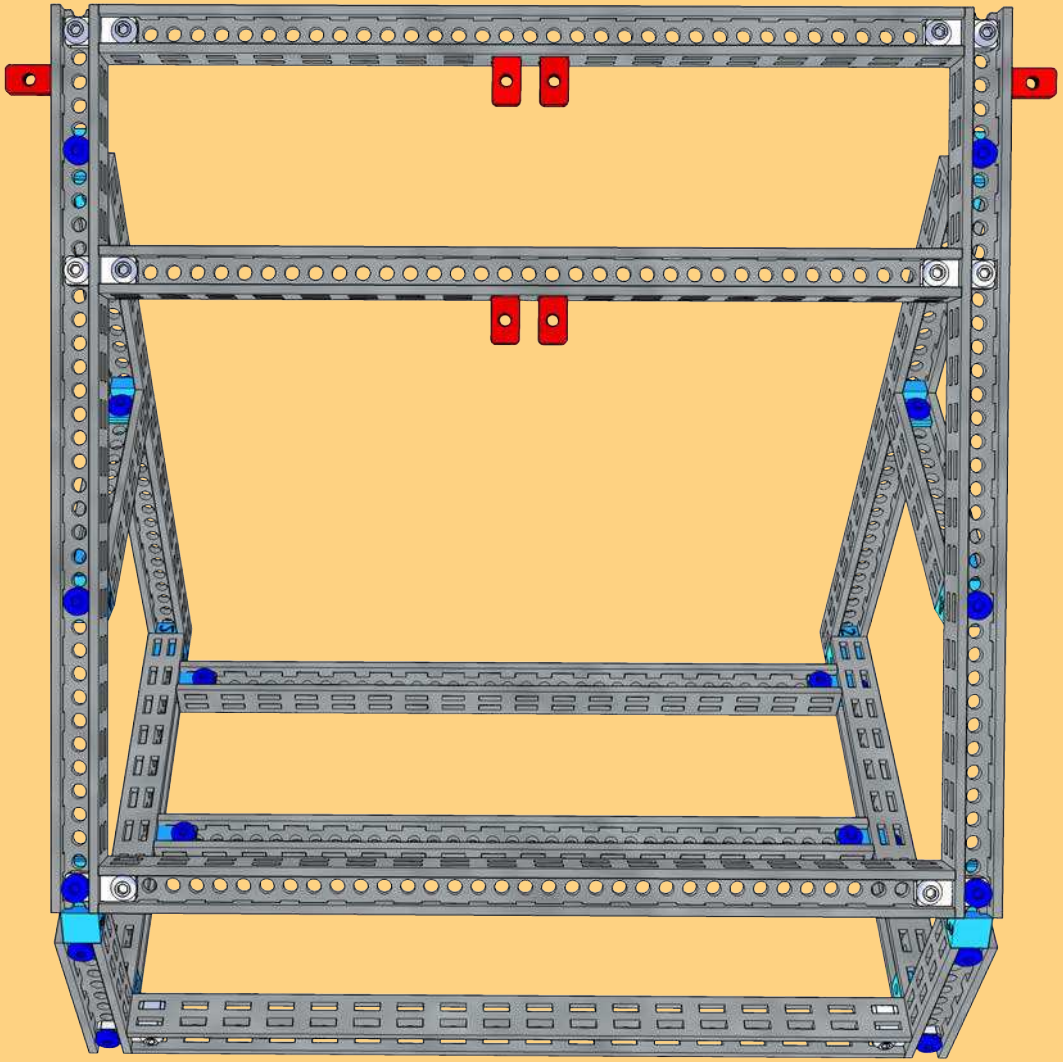
3

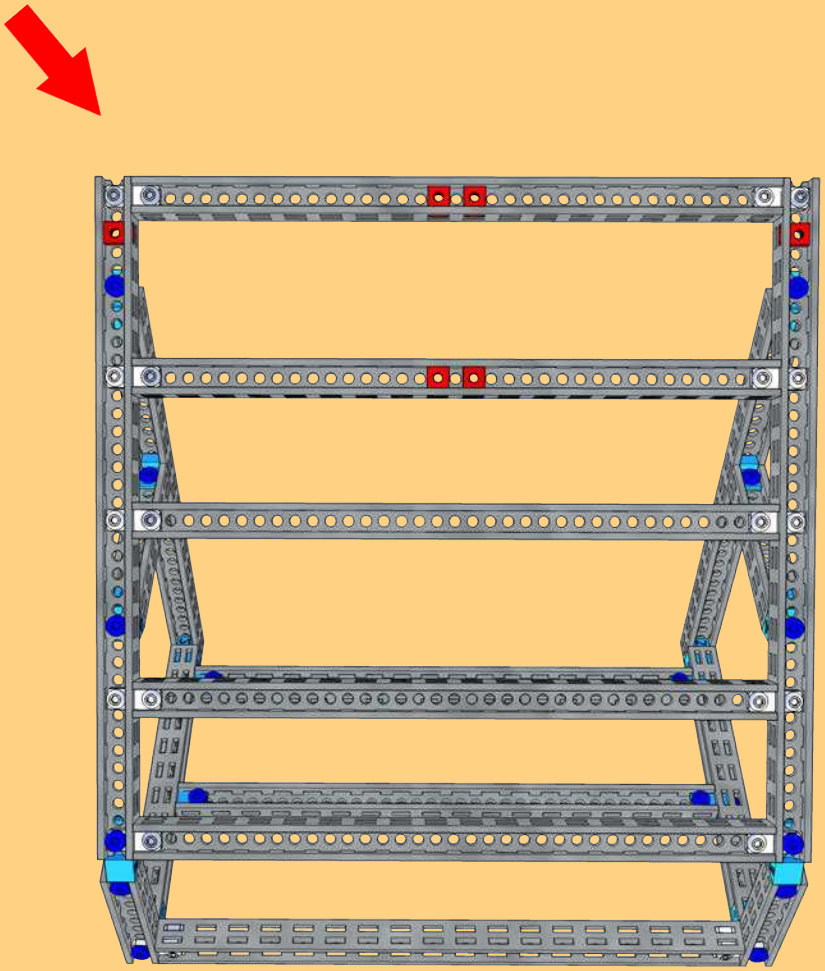




totem

v1.0





6x

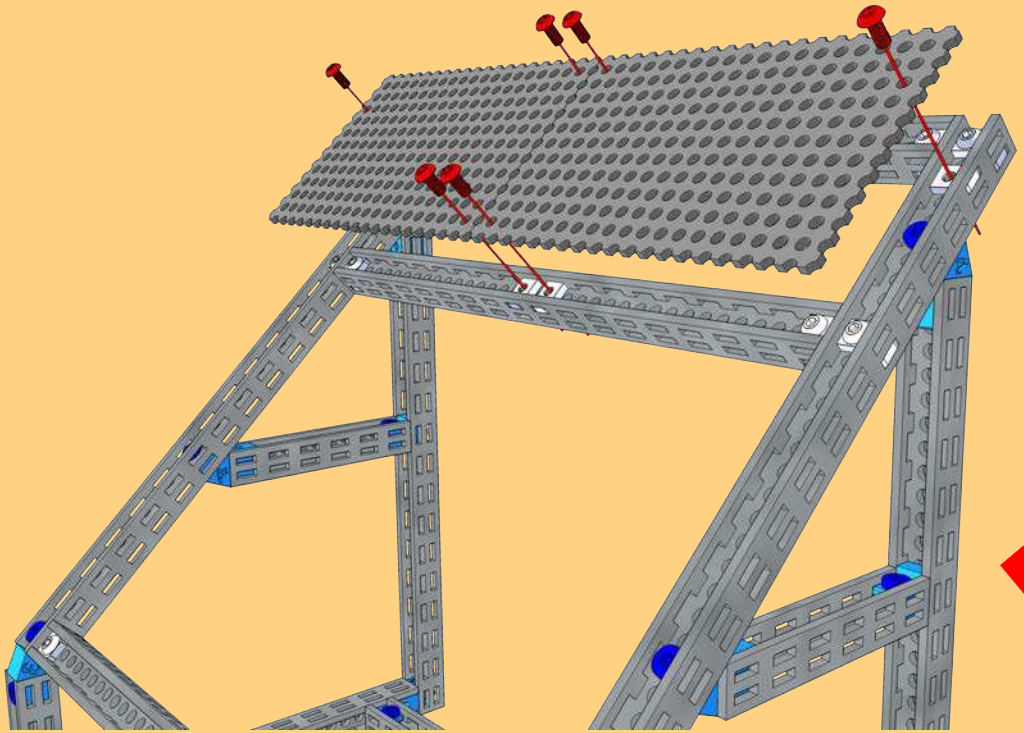
Nut M3 6x10

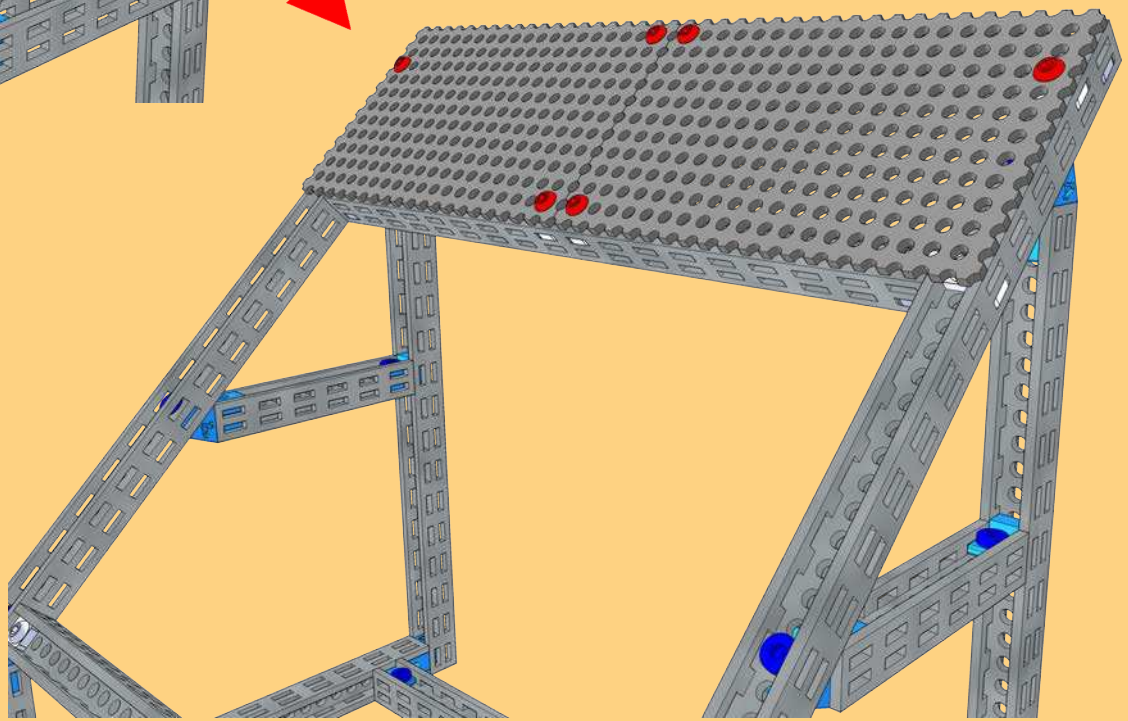
4

totem

v1.0

5



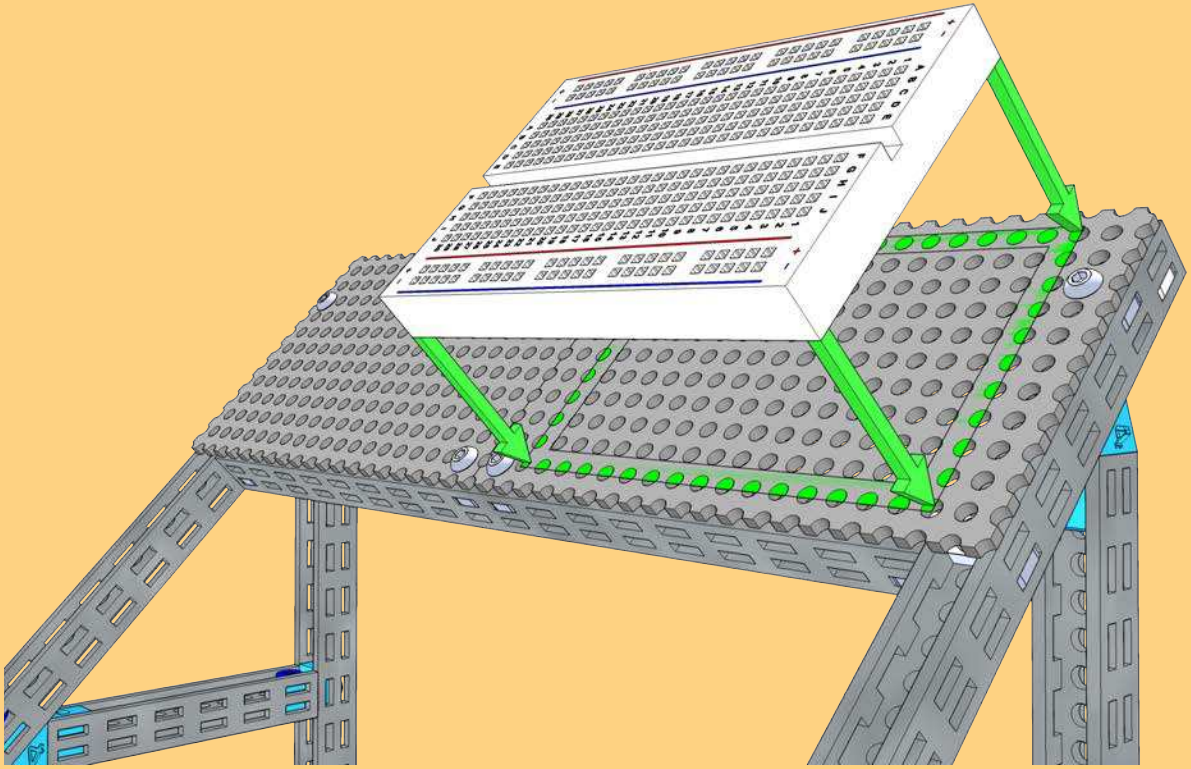


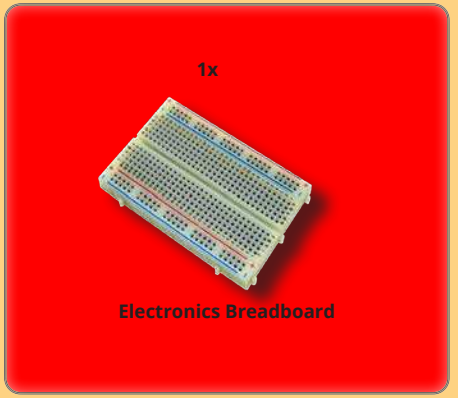
6x

Bolt M3x6

totem

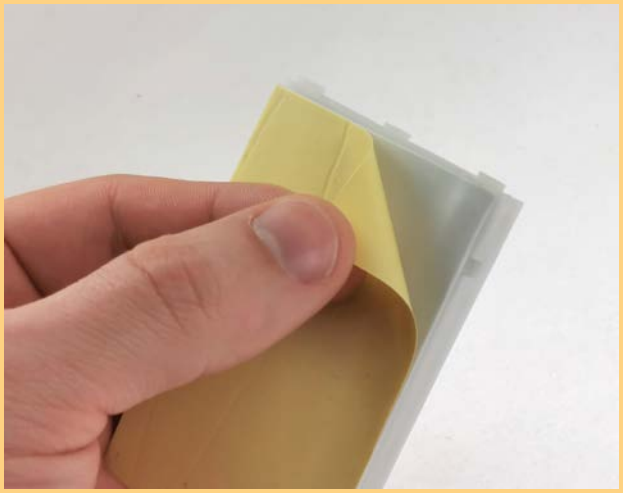
v1.0

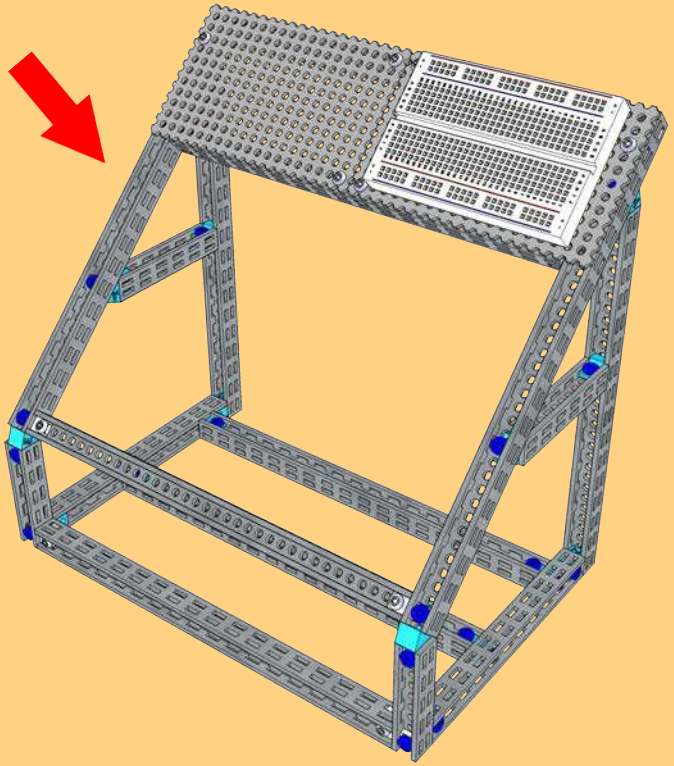




6

PART 4



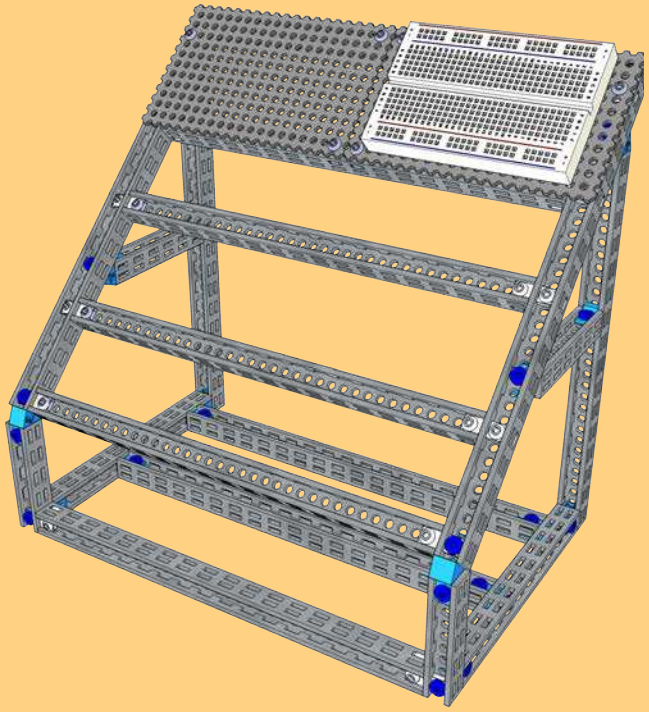


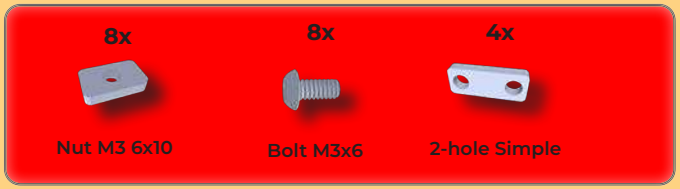
Peel off the double sided tape under the breadboard. Then carefully place it on the boards where you like it to be.

totem

v1.0

PART 5

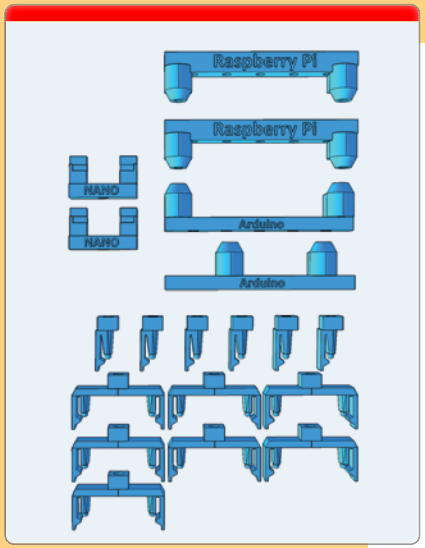


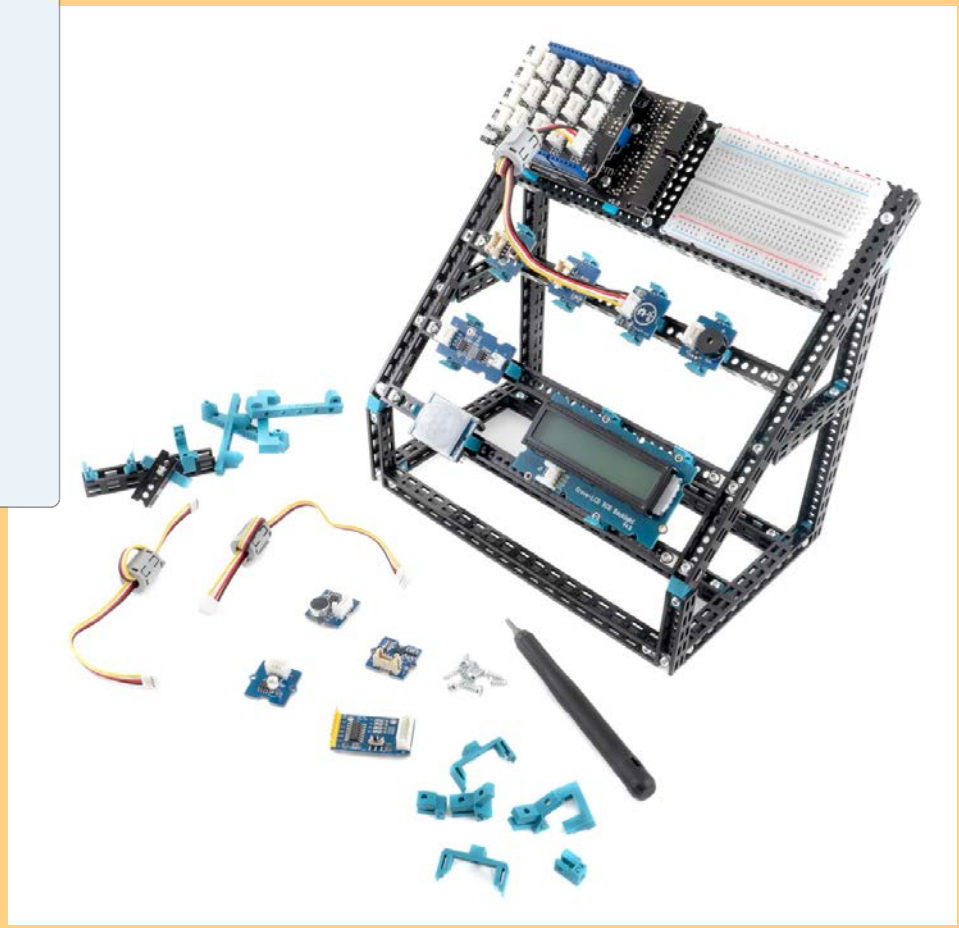


18 cm	2x

totem

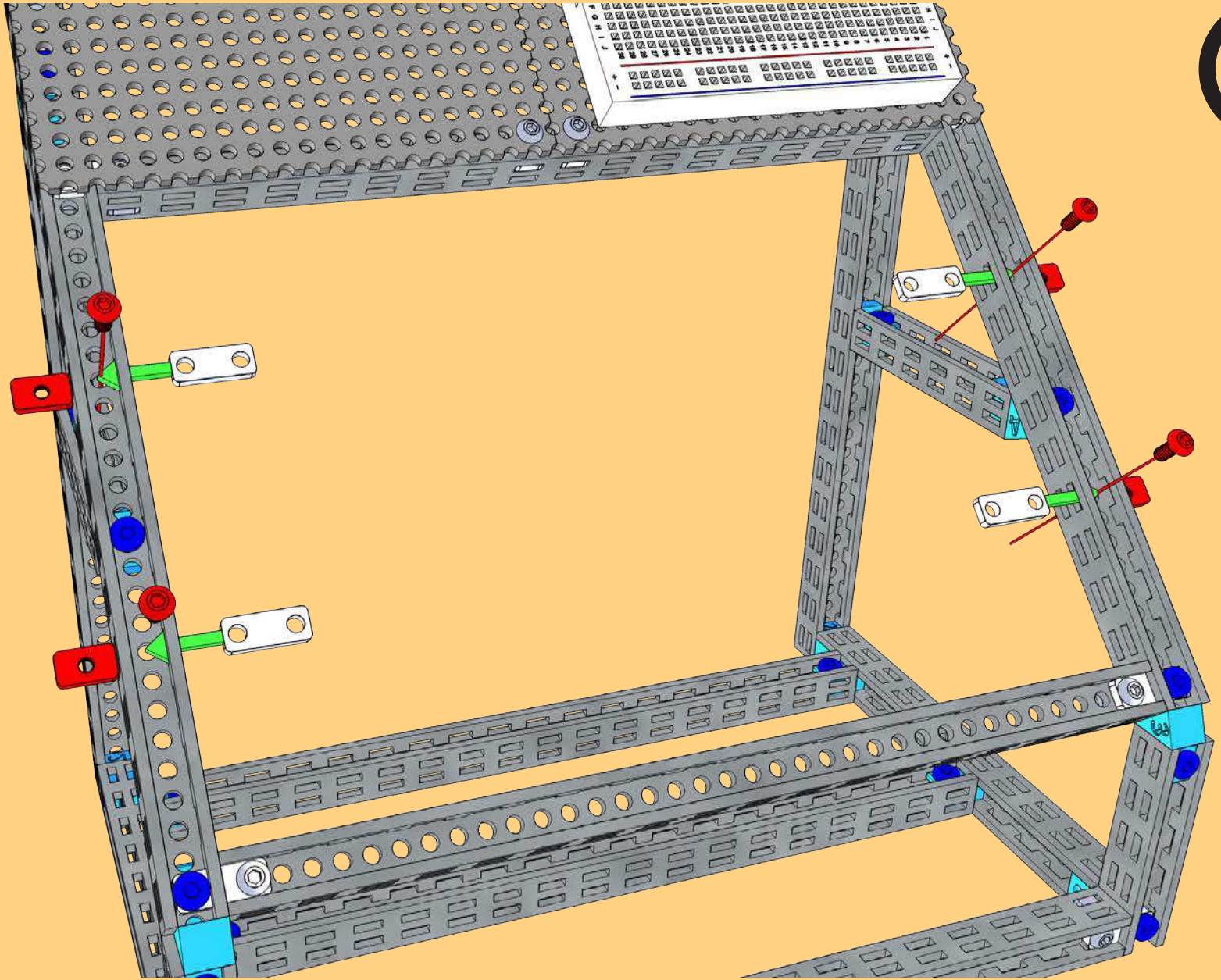
OPTION 1 :
Rack for SEED studios Grove Modules and ARDUINO/Raspberry Pi.





For OPTION 2 , go to : PART 7

v1.0



1

4x

Bolt M3x6

4x

Nut M3 6x10

4x

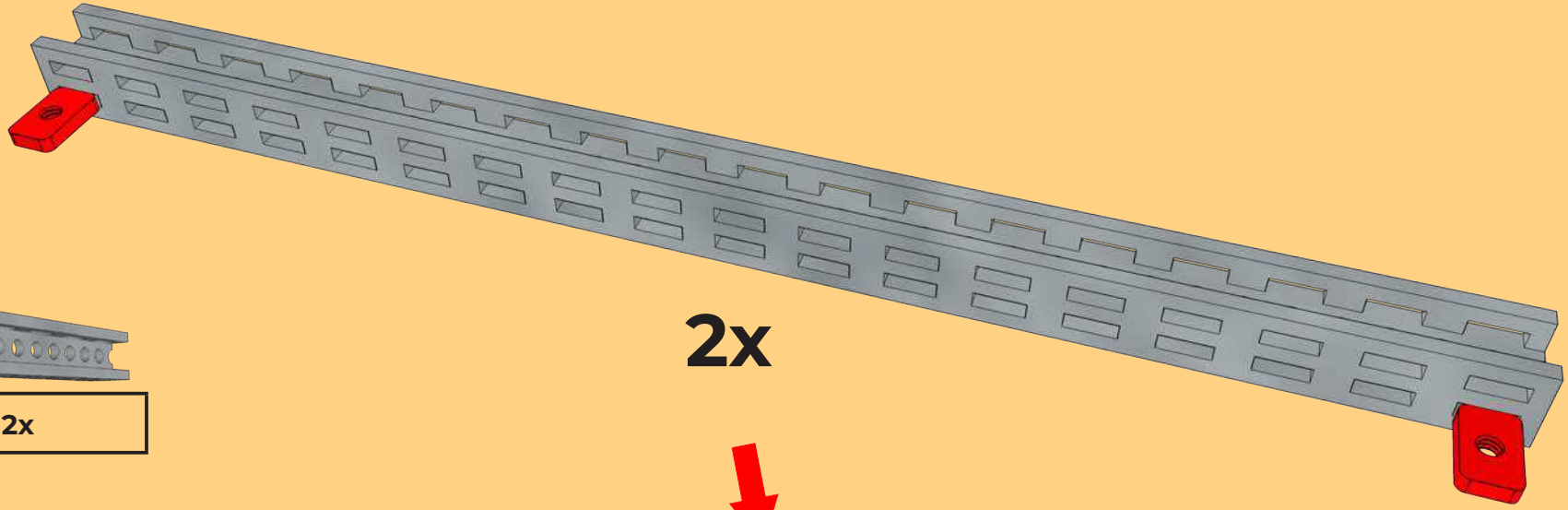
2-hole Simple

Tip:
You can put the beams in several positions along the side, if it suits your purpose better.

totem

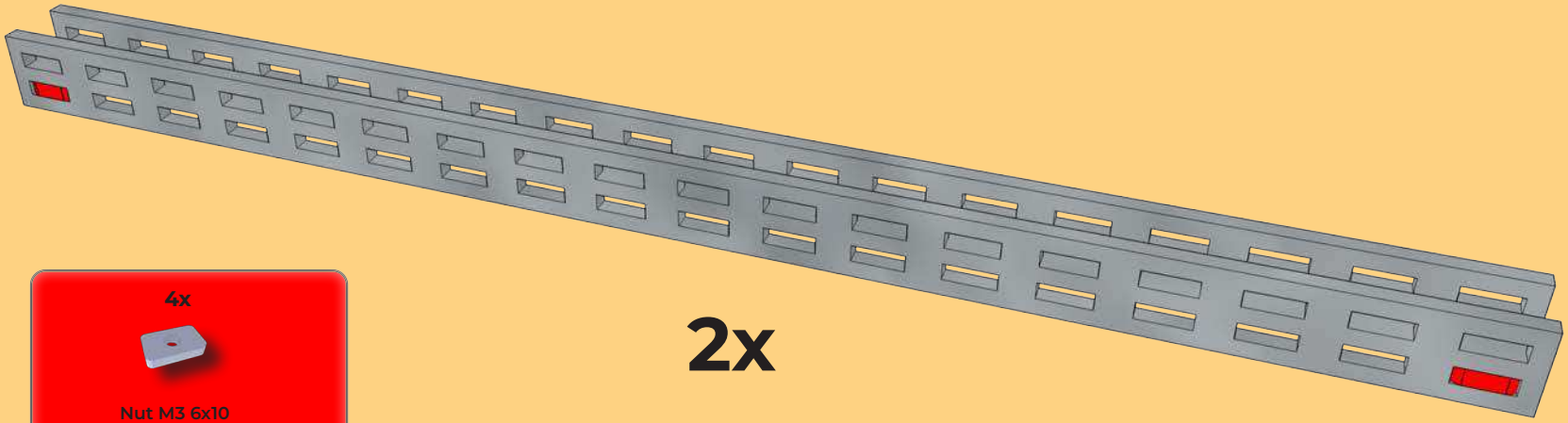
v1.0

2



2x

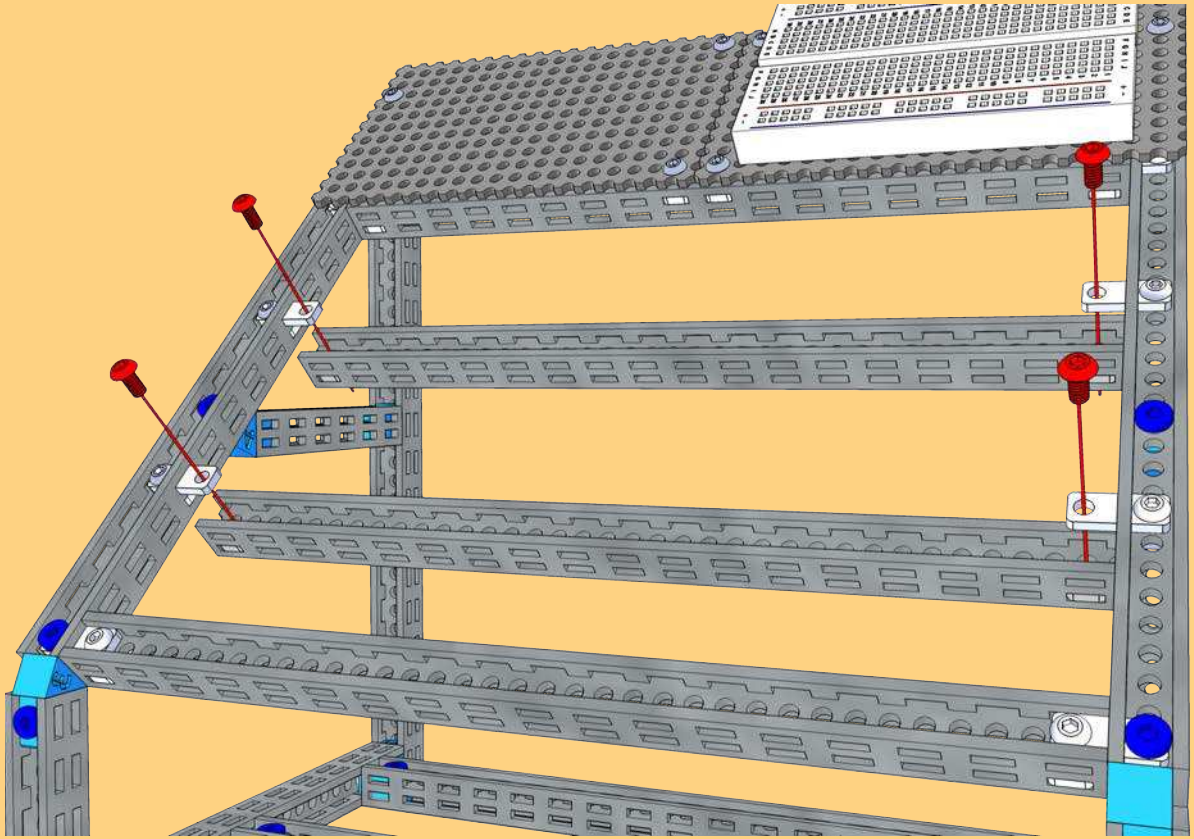
18 cm	2x



2x

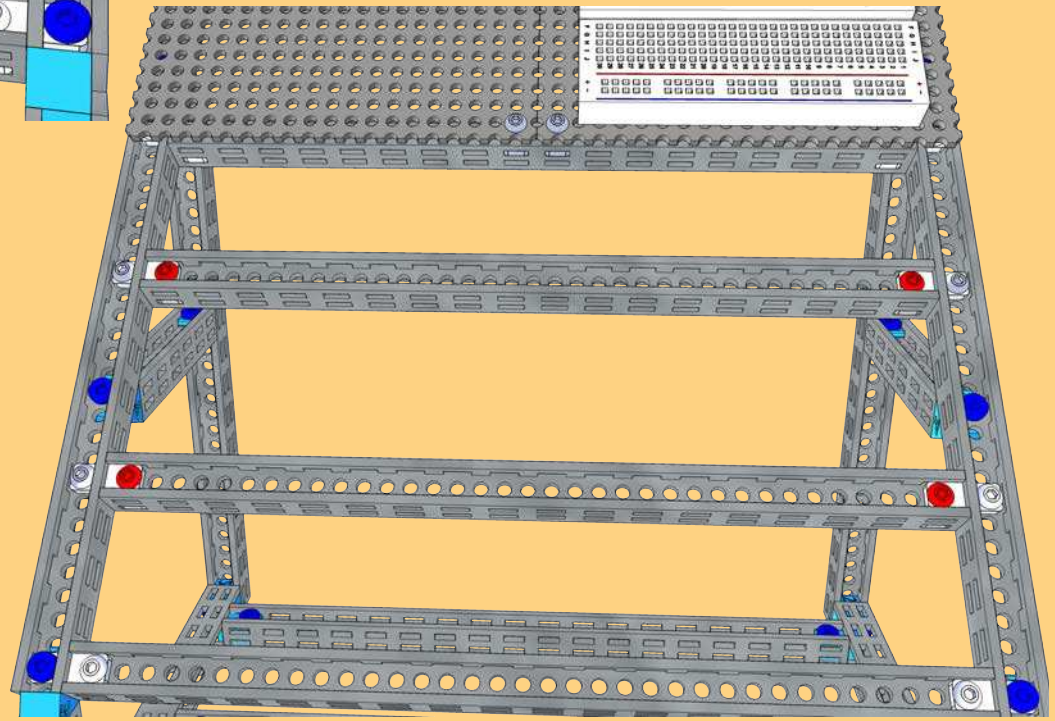
totem

v1.0



3

PART 5



4x

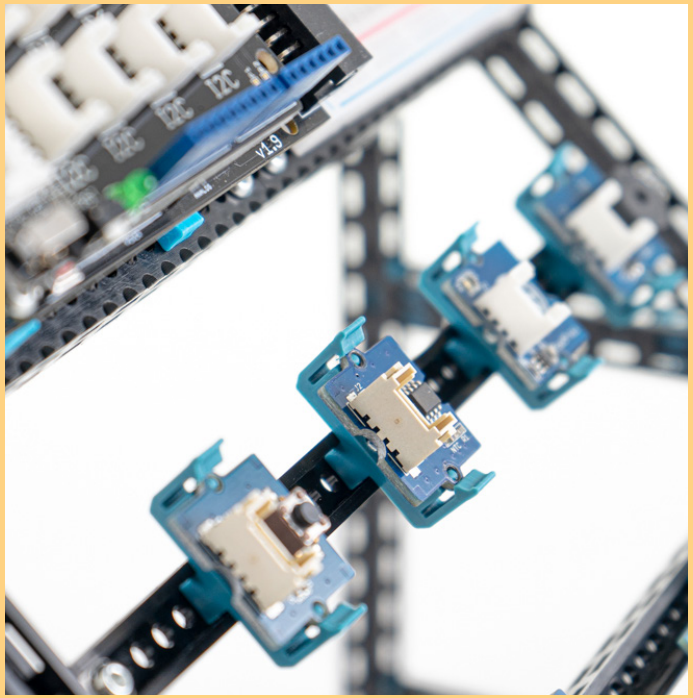
Bolt M3x6

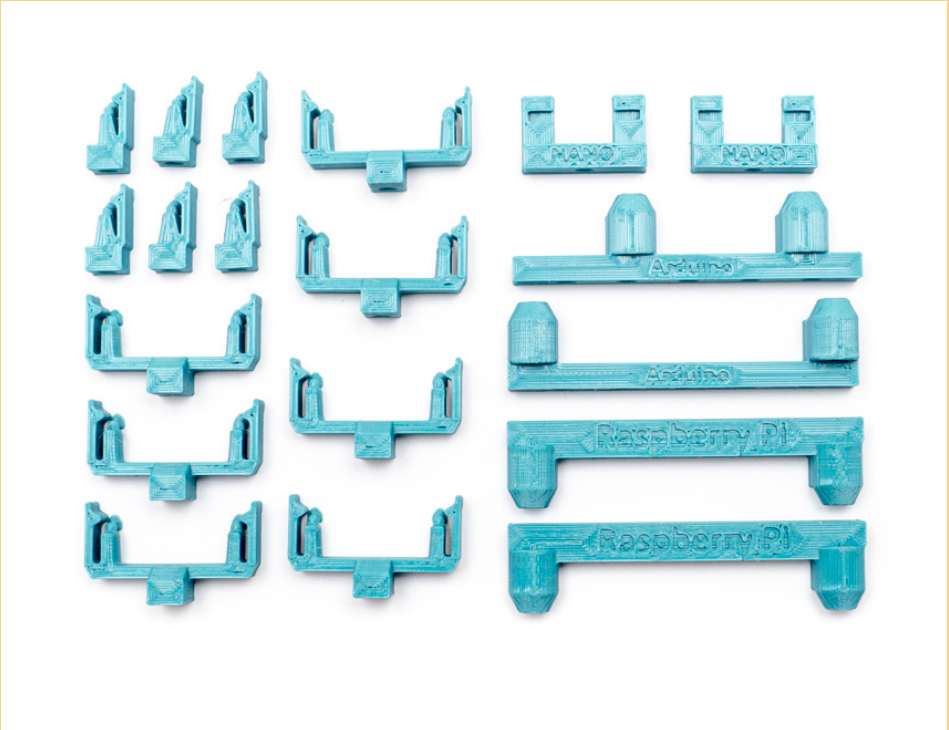
totem

v1.0

PART 6

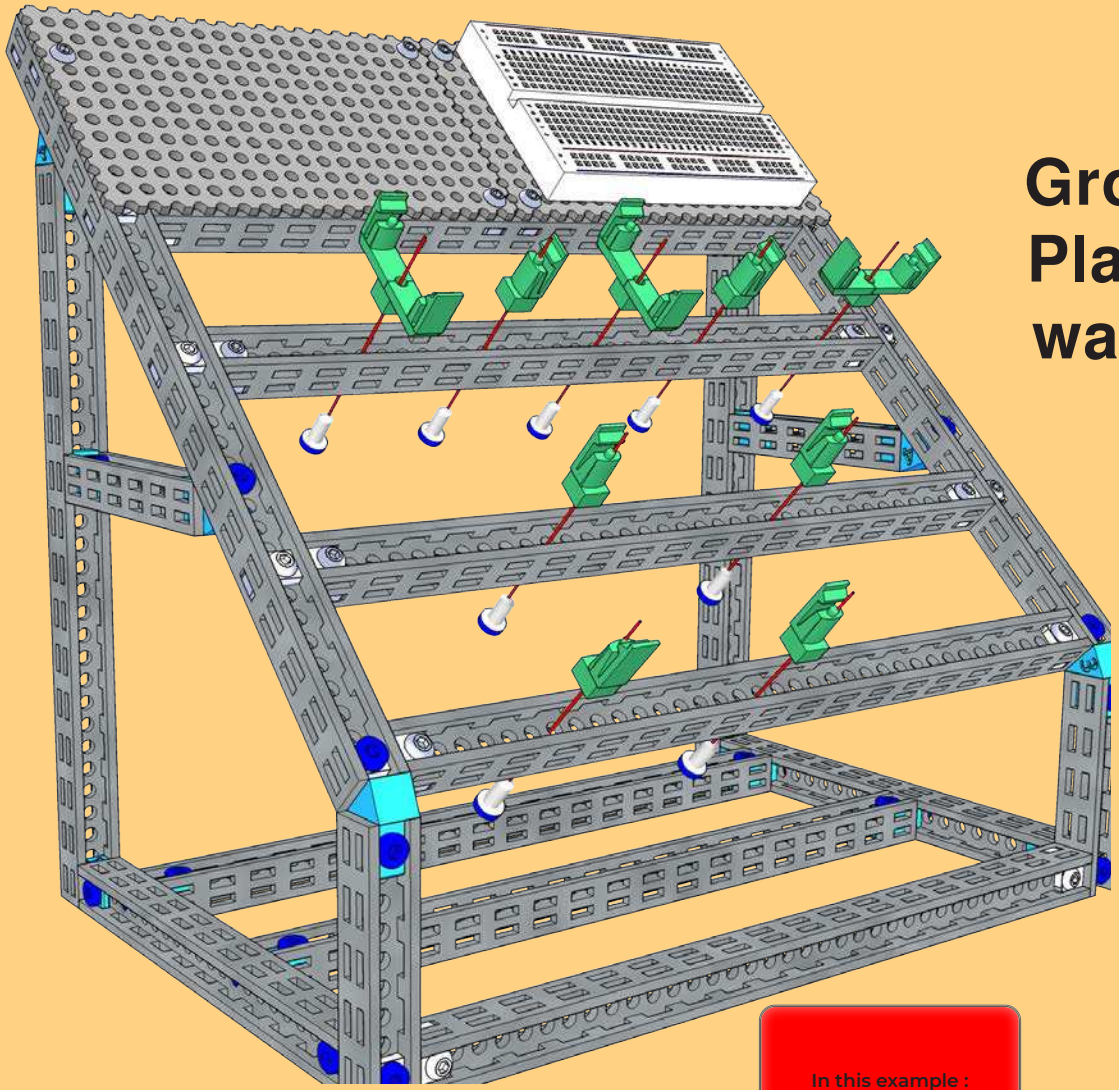
Using the brackets for microprocessor boards and Grove modules.





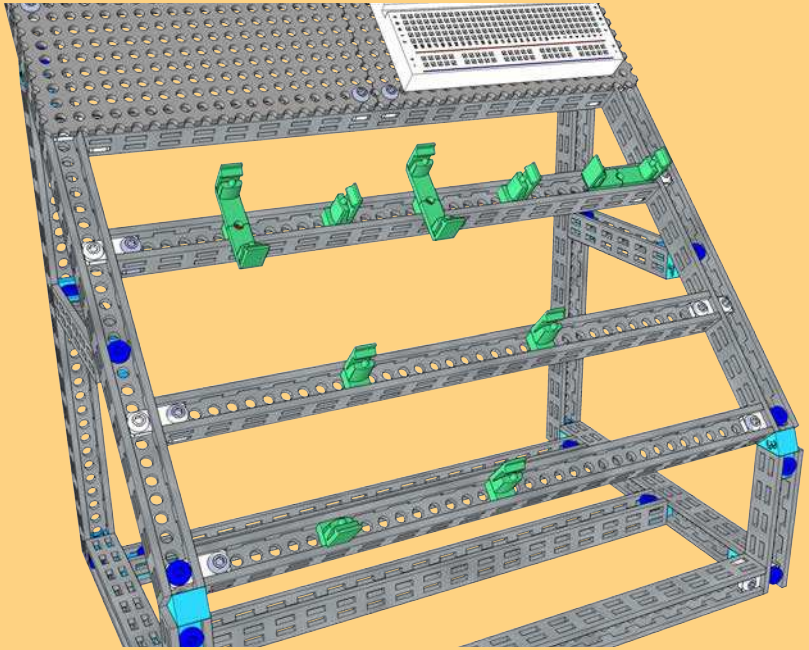
totem

v1.0



1

Grove module brackets. Place them where you want.



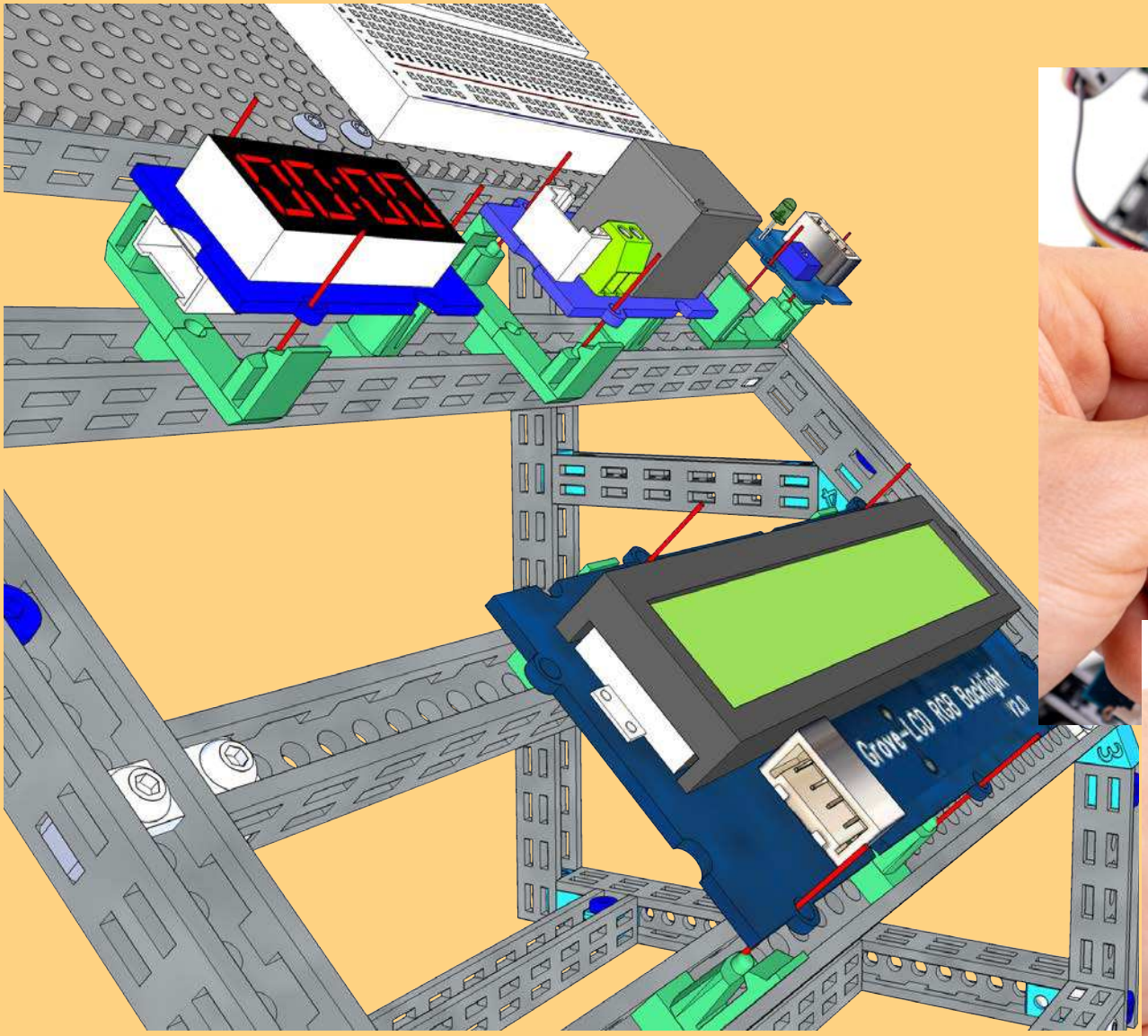
In this example :

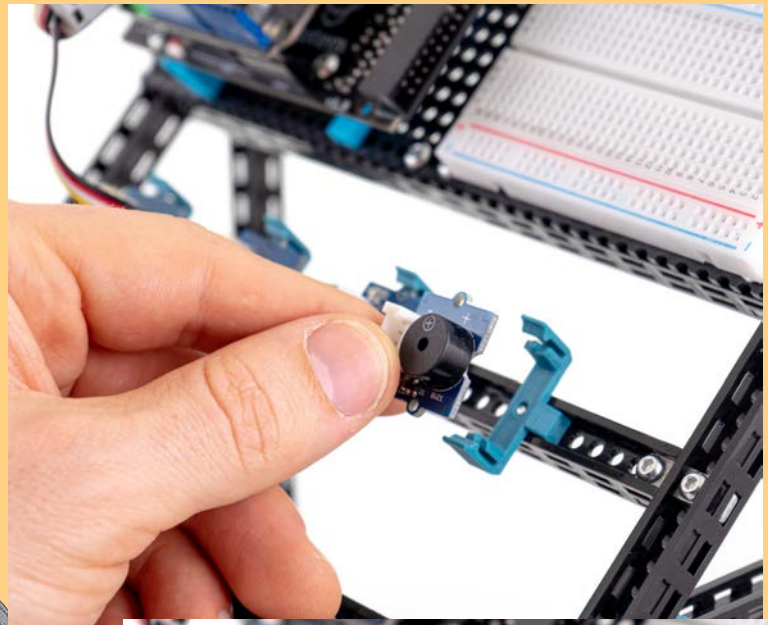
9x

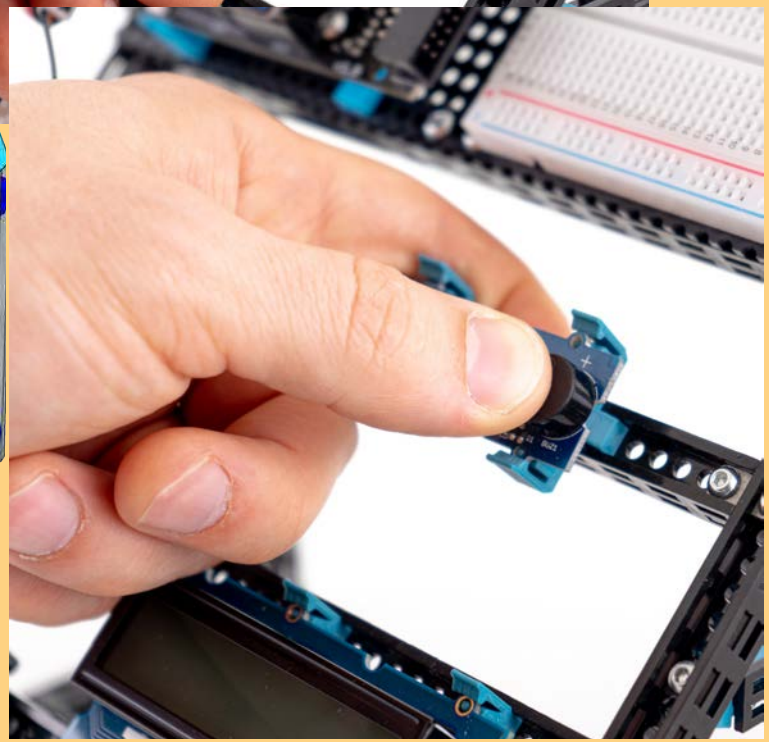
Screw for Plastic 7.5mm

totem

v1.0







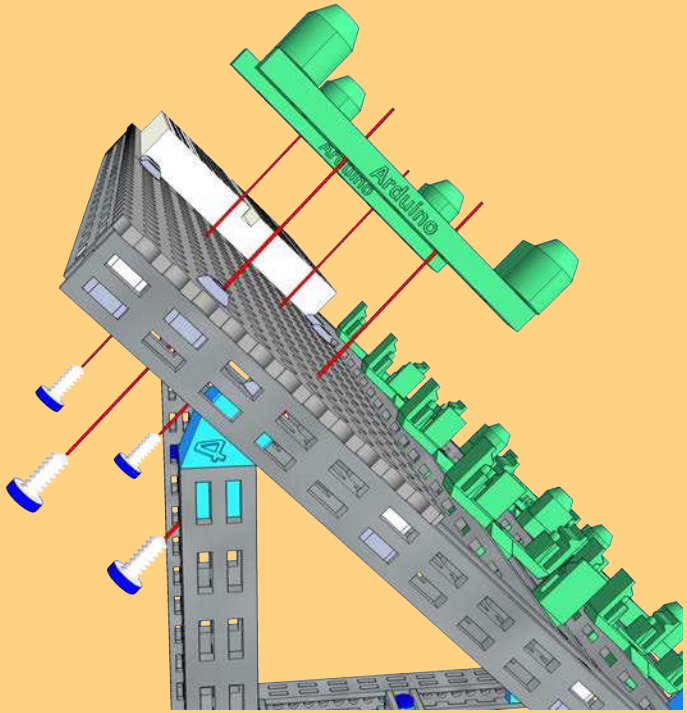
2

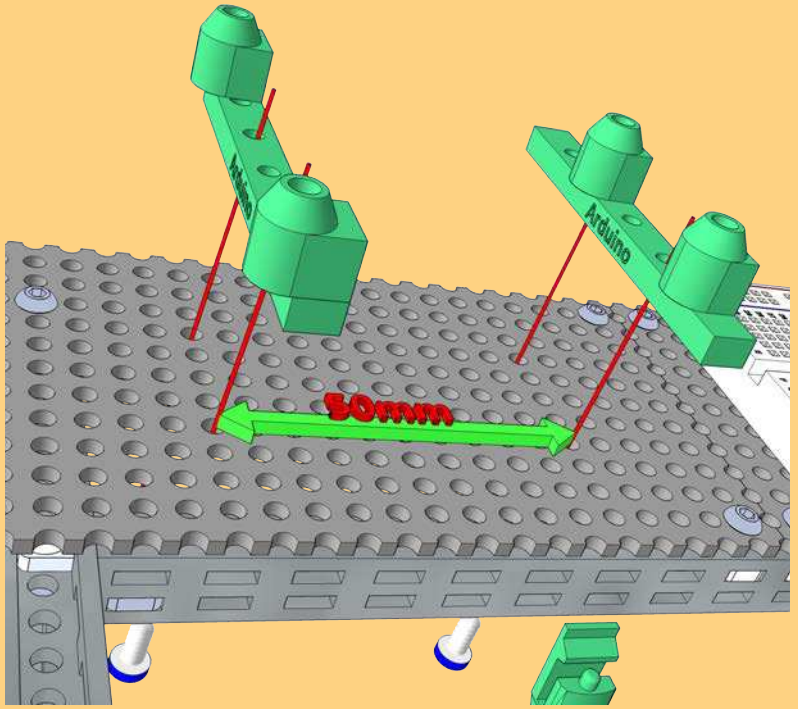
The modules are snapped into place.

totem

Arduino Uno brackets:

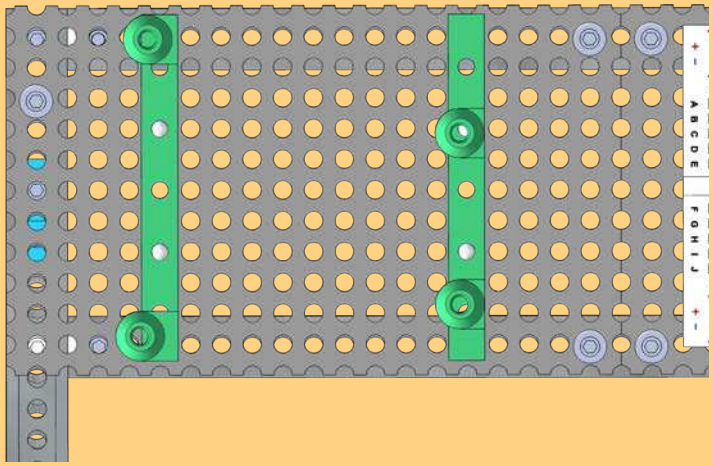
3

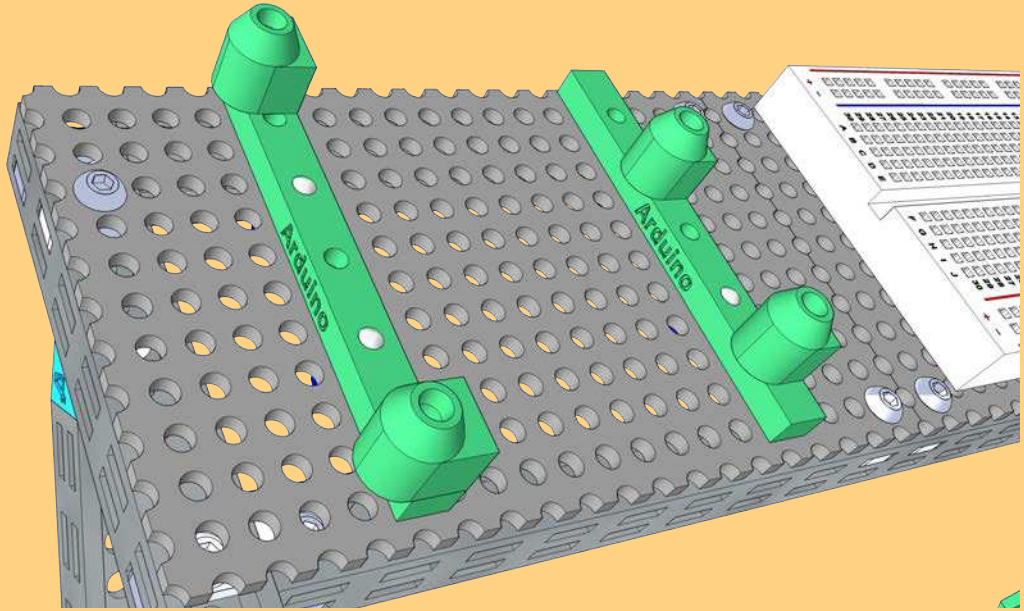




4x

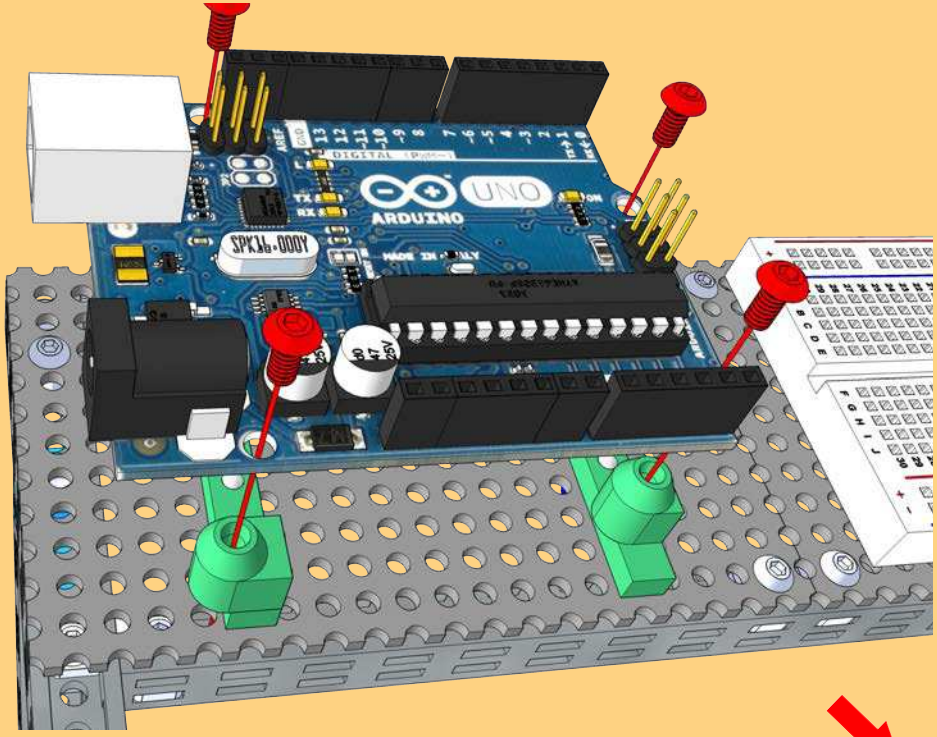
Screw for Plastic
7.5mm

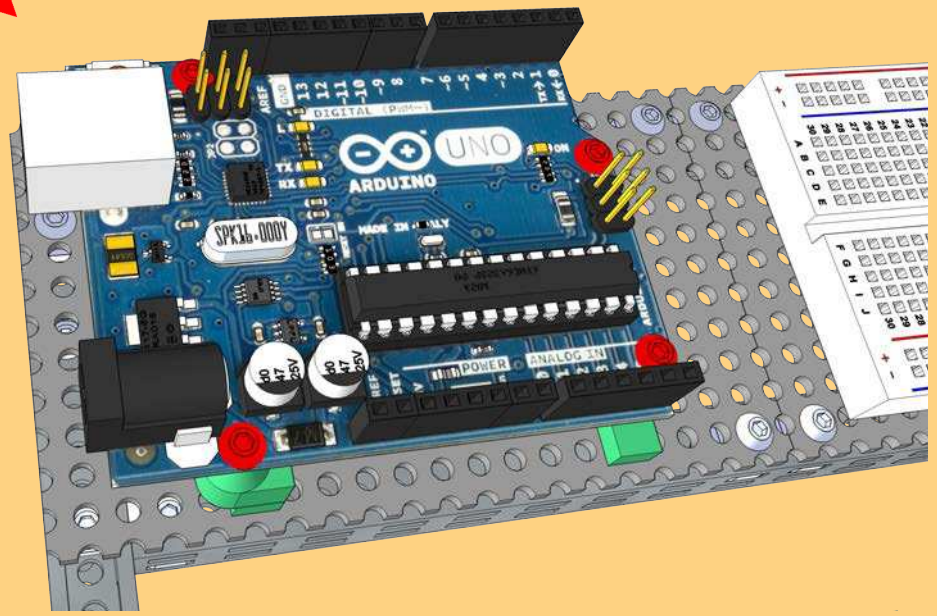




totem

v1.0





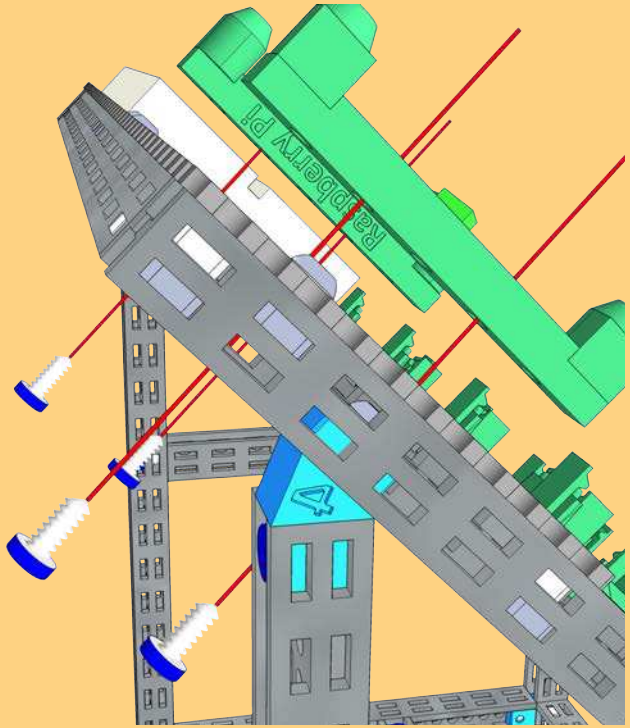
4x

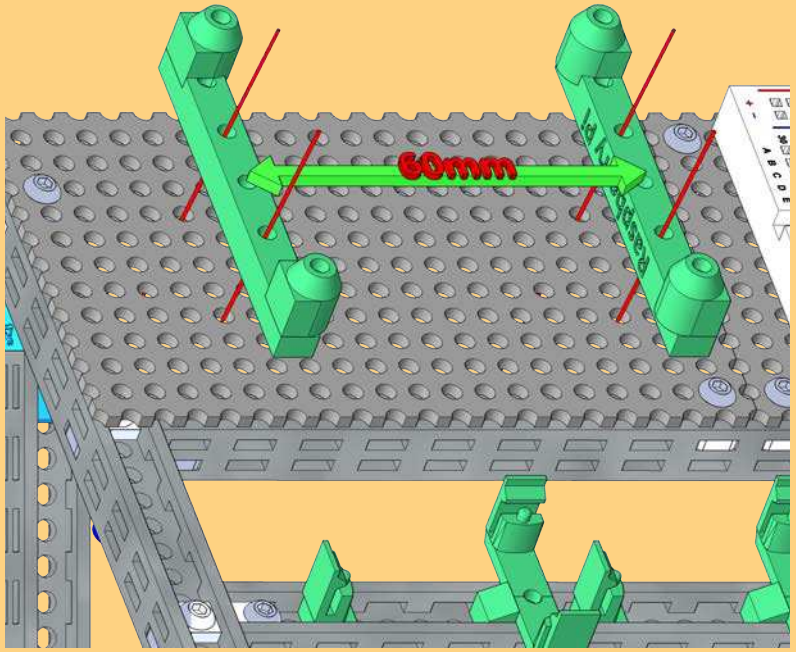
Bolt M3x6

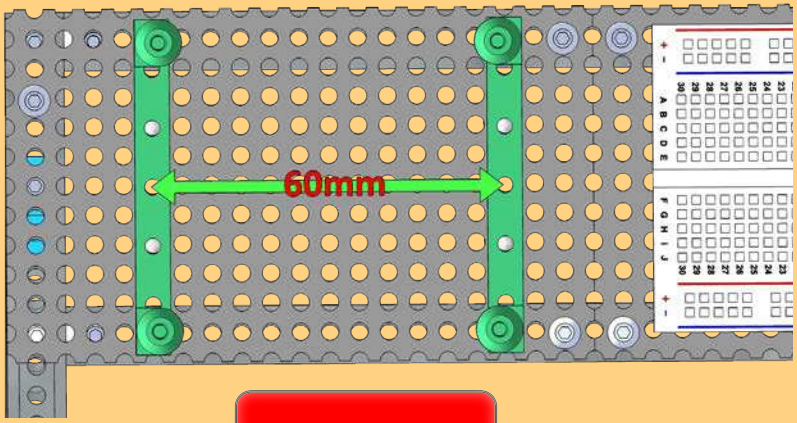
totem

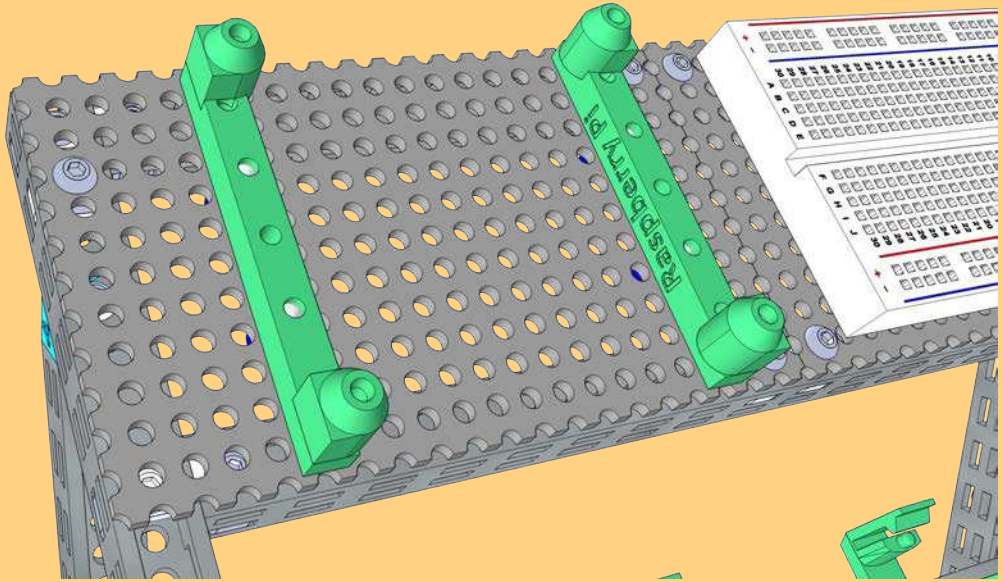
v1.0

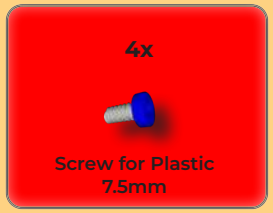
Raspberry Pi brackets:



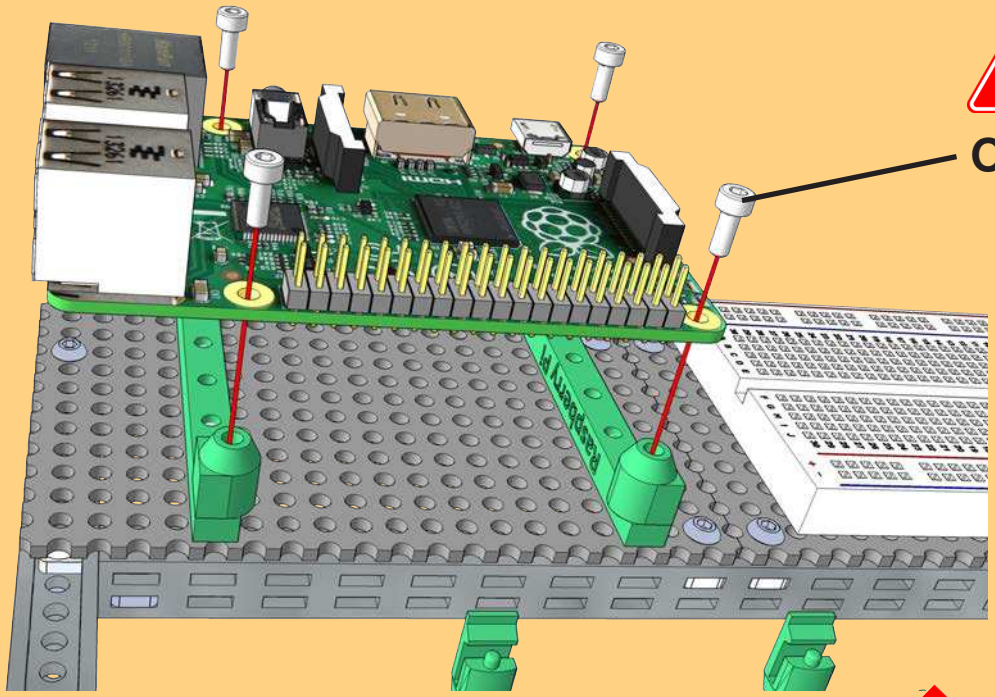




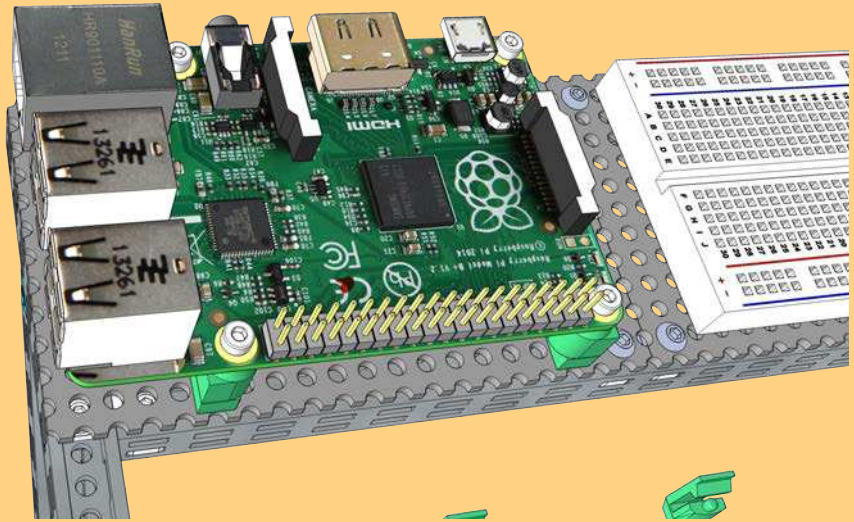




totem



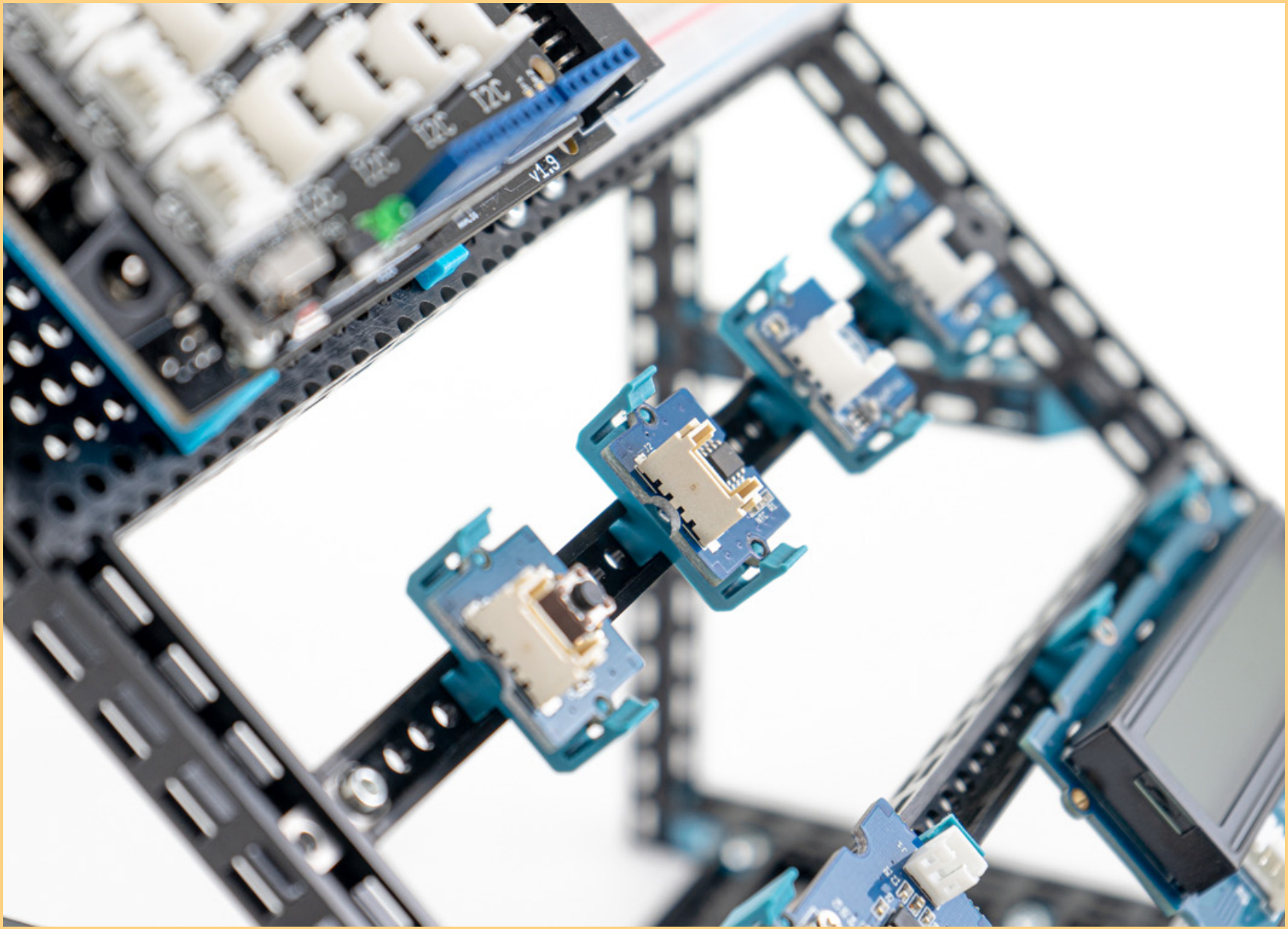
OBS. 2.5mm x 8mm



4x

Bolt M2.5x8mm

totem



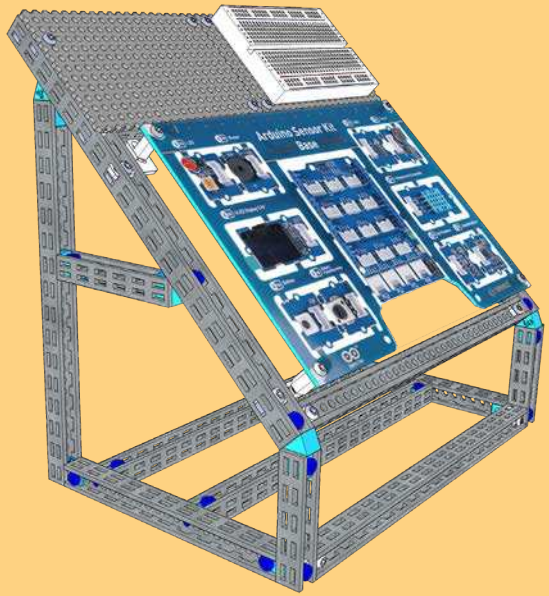
7

PART 6

totem

v1.0

PART 7



OPTION 2 :
Rack for SEED studios Grove sensor shield and Beginner Kit.

4x	12x	2x	2x
Nut M3 6x10	Bolt M3x6	L-bracket	2-hole Bracket

Included with the Grove Sensor shield and beginner kit from Seeed

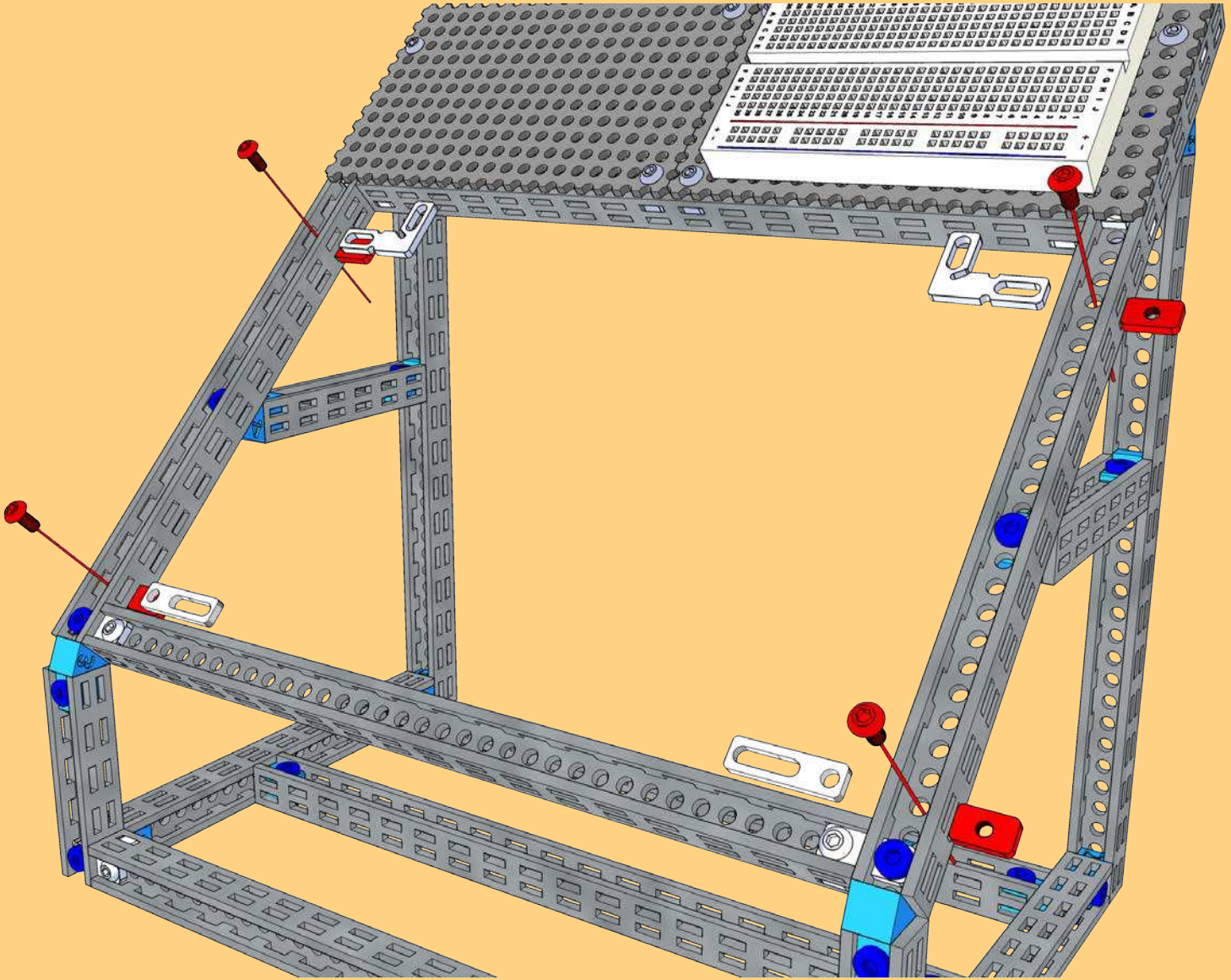
4x

Tower for Sensor/beginners shield

totem

v1.0

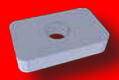
1



4x

Bolt M3x6

4x



Nut M3 6x10

2x

2-hole Bracket

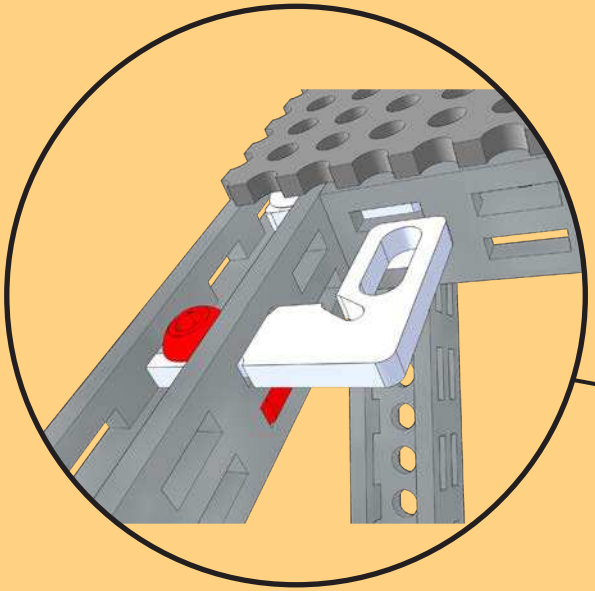
2x

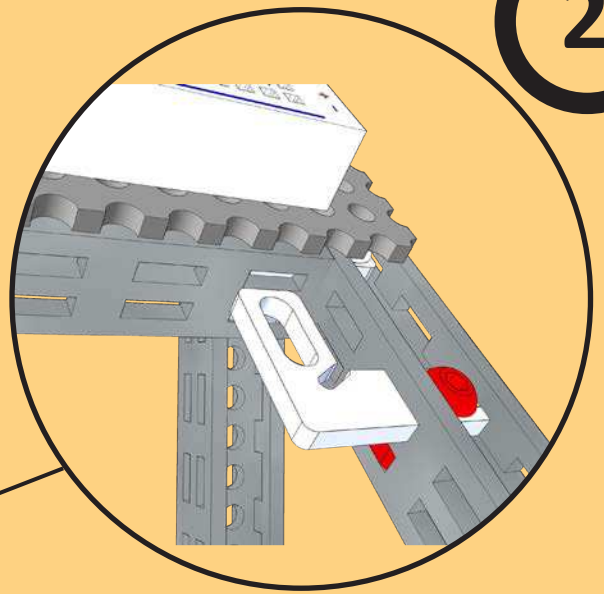
L-bracket

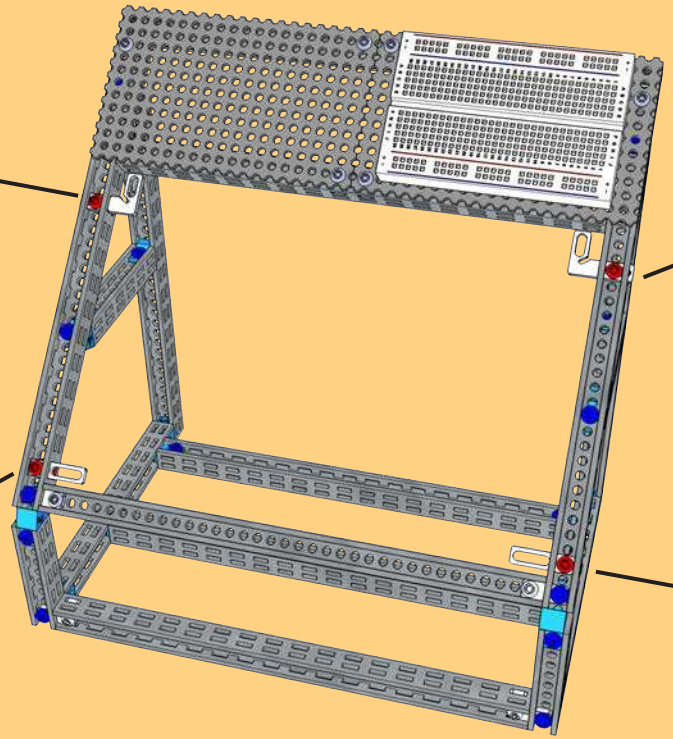
totem

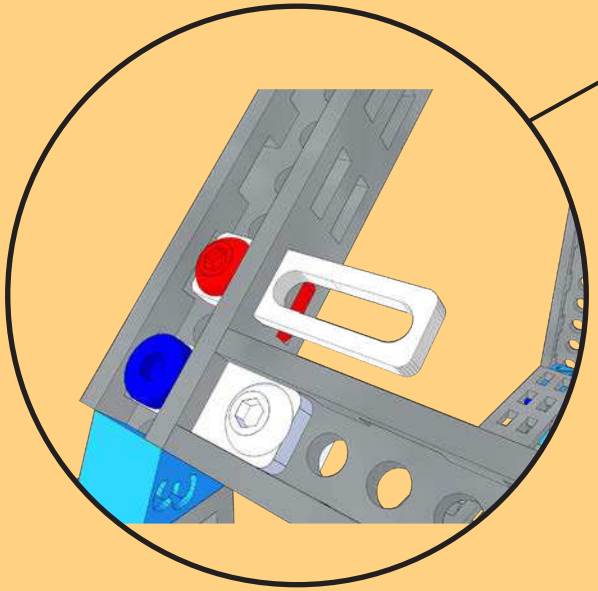
v1.0

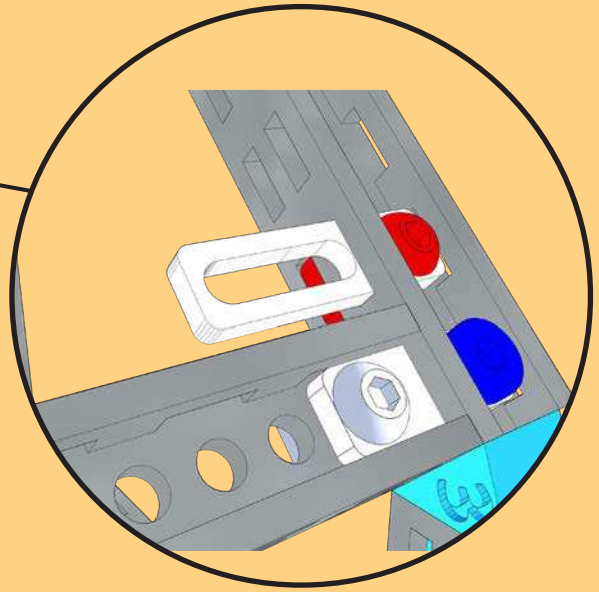
2





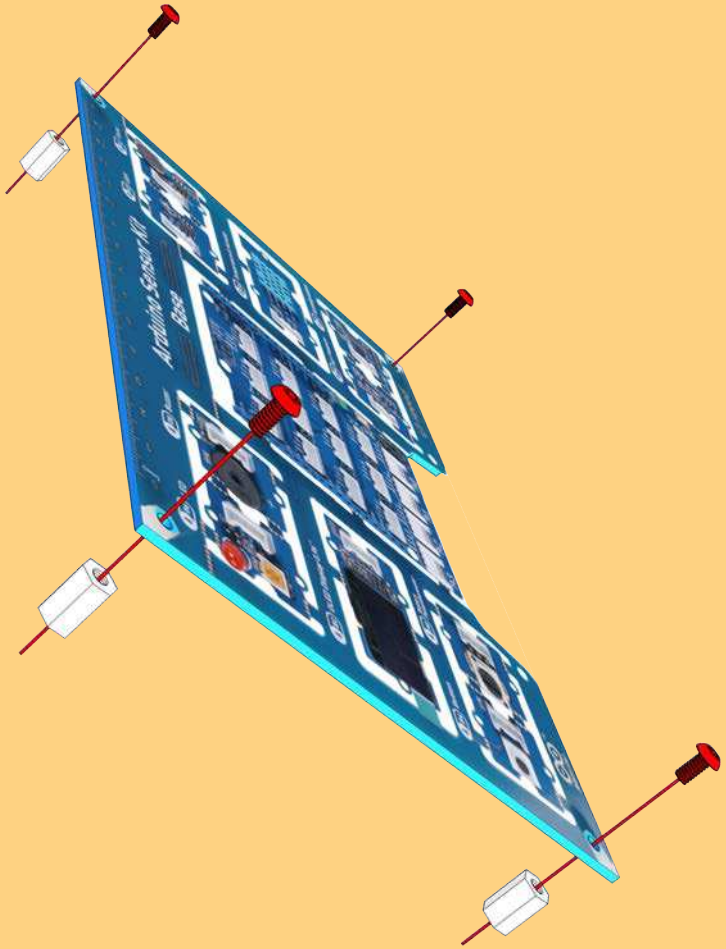


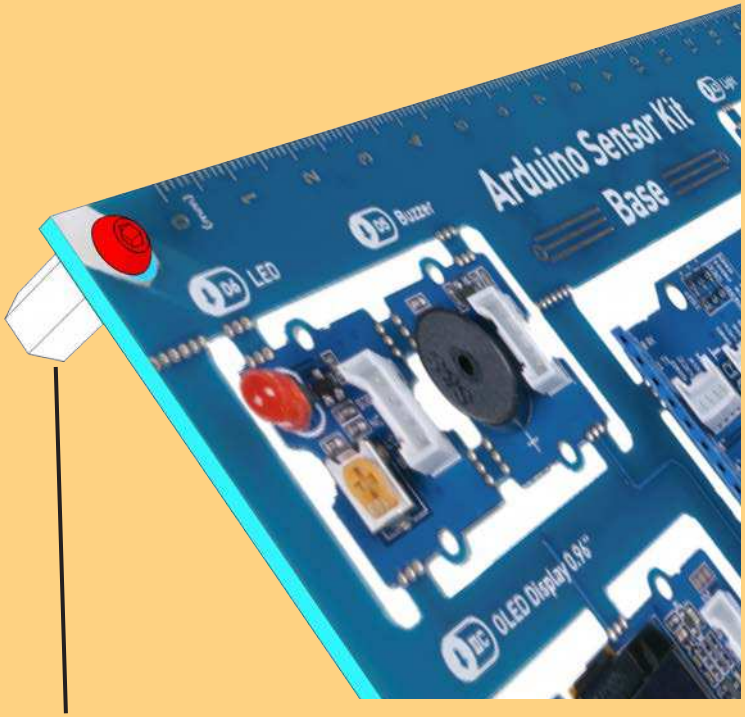


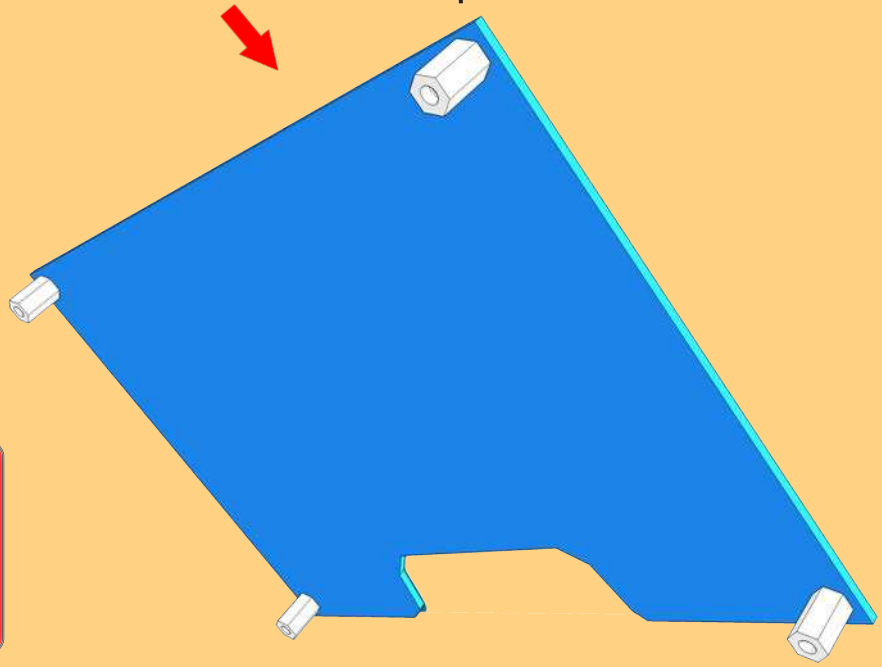


totem

v1.0





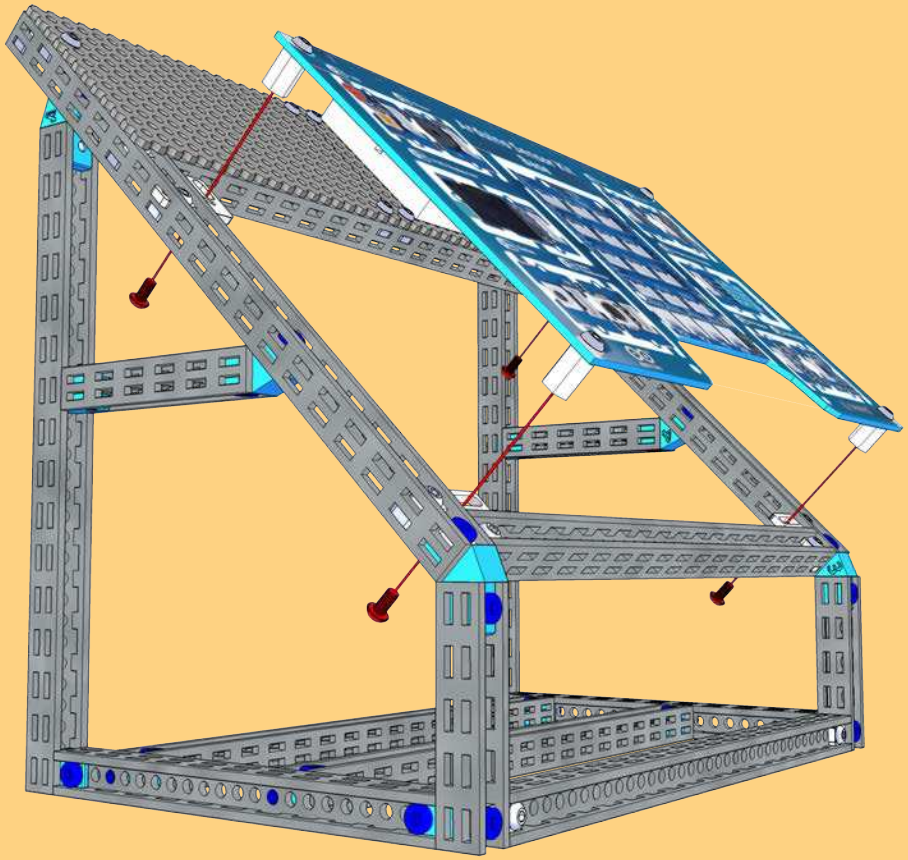


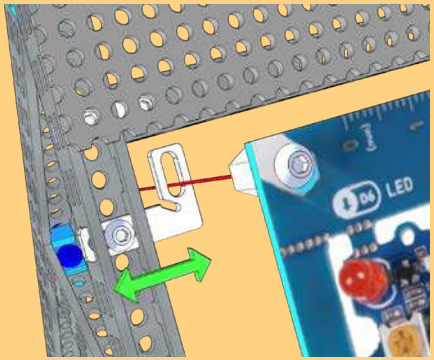
4x	4x
	
Bolt M3x6	Tower for Sensor shield

totem

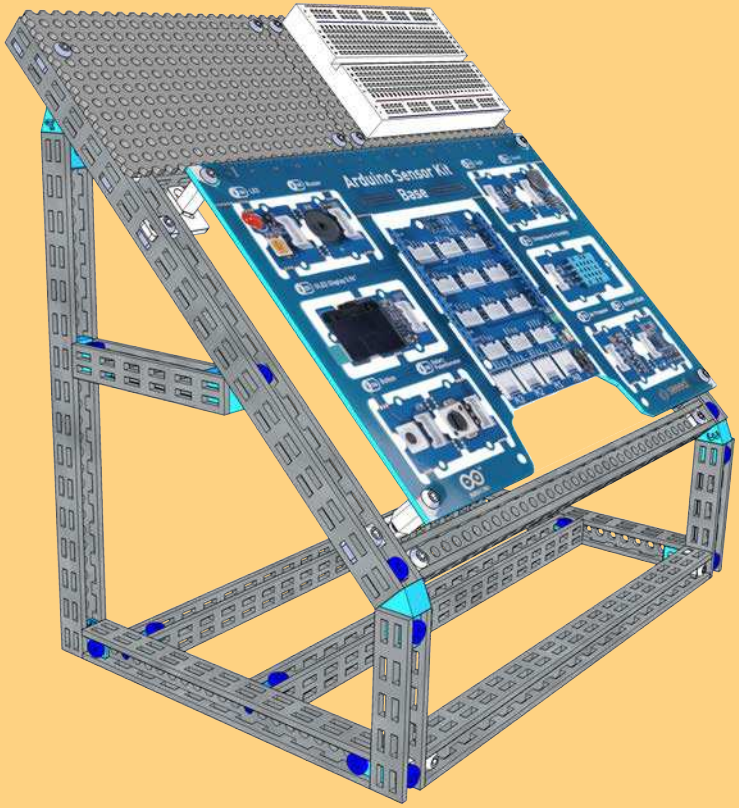
v1.0

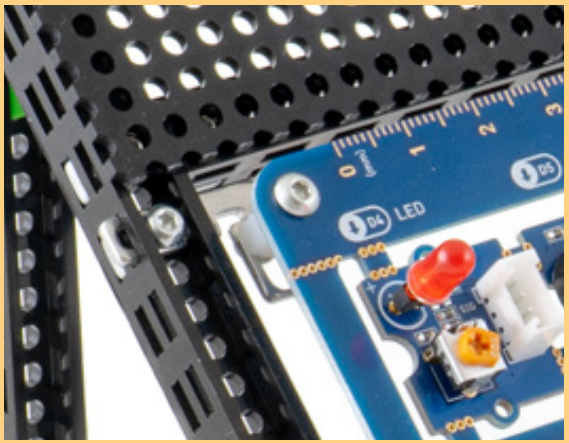
4

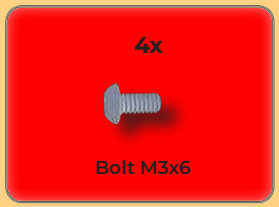




PART 7







totem

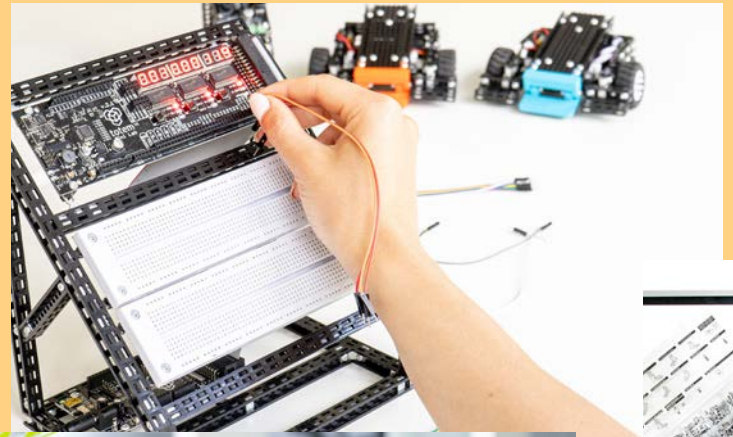
v1.0

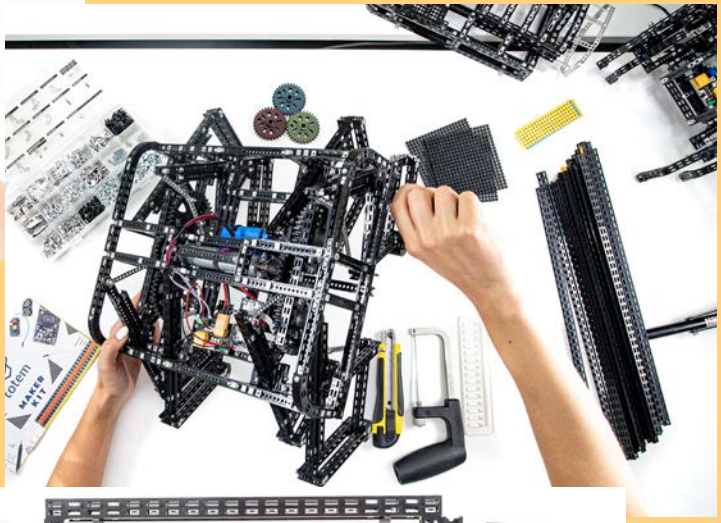
totem

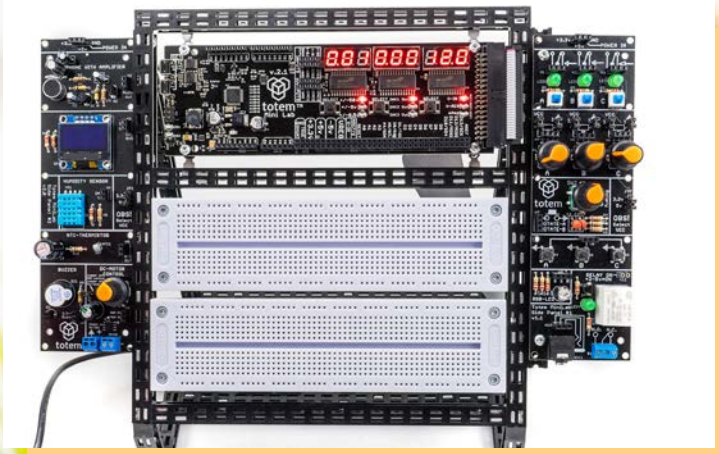
See us here:
www.totemmaker.net

At Totem we create a unique construction system with parts for robotics and electronics prototyping.

It’s designed as a user-friendly system for makers of all levels. Since 2015 we seek to make the engineering world fun, understandable and simple for everyone.







totem

v1.0