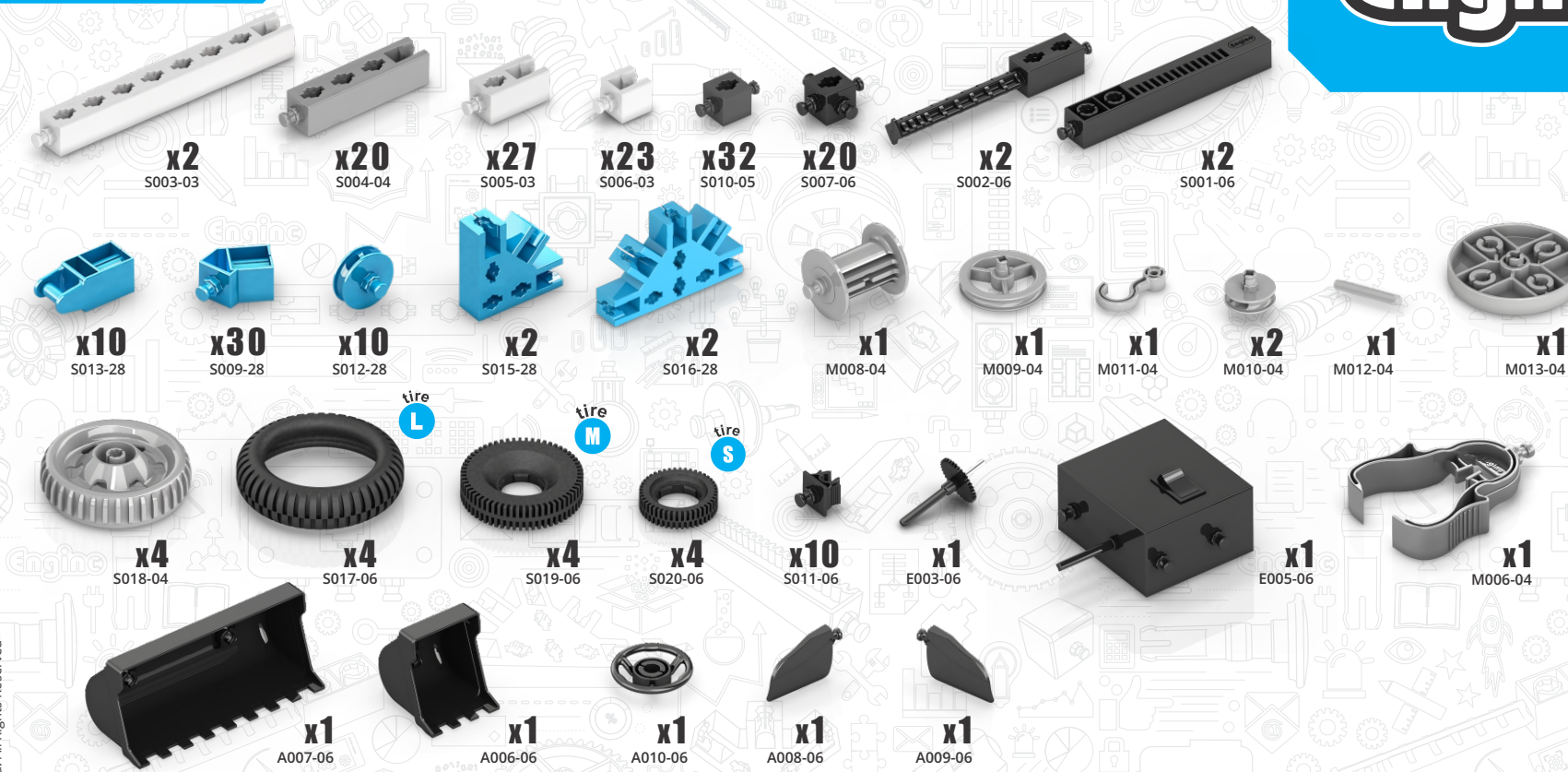


Bill of materials



EU OFFICE & FACTORY:
 ENGINO-NET LIMITED
 P.O.BOX 72100, 4200
 LIMASSOL, CYPRUS
 Tel.: +357 25821960
 Fax: +357 25821961
 E-mail: info@engino.com
 Web: www.engino.com

Copyrights for images:
 ©123RF.com / Joshua Rainey, Nuwat Chanthachanthuek, mynoemy1, Vadim Sadovski

WARNING:
 CHOKING HAZARD—Small parts.
 Not for children under 3 yrs.



Product code:
CE601MM-A
 Edition 3.0

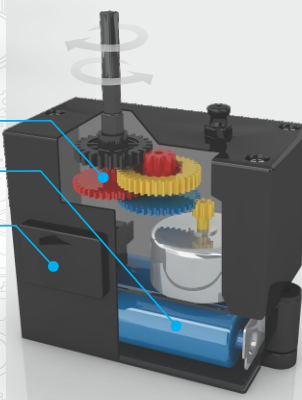
Engino®

CREATIVE™

engineering maker Master



HIGH TORQUE
 GEAR BOX
 3XAAA BATTERIES
 (NOT INCLUDED)
 FORWARD
 REVERSE
 SWITCH



⊕ MOTOR POWER

60 IN 1
 motorized
 MODELS

1 model
 printed
 instructions
 (included)

59 models
 online
 3D instructions

3D INTERACTIVE INSTRUCTIONS

PLAY BUILD
 INVENT LEARN

STEM
 ENABLED

8+
 Appropriate
 Ages

**Building
 Instructions**

3
 Years
 Warranty

Extraction Tool
 For easy disassembly
 of small parts

Theory

What we will learn

A racer is a four wheeled motor vehicle which is used in car racing competitions. When racing demands high levels of traction and extra power to cross the rough terrains, a dune buggy is the absolute winner! Lightweight design, along with mechanical modifications are their key features which provide supreme off-road performance and breathtaking excitement to spectators. Due to their performance, the army and police are also equipped with buggy vehicles. Are you interested in learning how these extreme cars are designed?



One of the most exciting types of racing competition is the drag race! Cars which participate in these races are called dragsters and are heavily modified in order to achieve the best possible acceleration along with the highest top speed.

When the lights go out, powerful engines launch the cars while roaring and shaking the ground. Winning demands the perfect combination of driving skills and excellent car performance! Have you ever wondered why dragster cars are so fast? What special skills do these drivers have?



History of the Buggy

As soon as automobiles were invented, car races began to be organized. These events attracted large masses of people and originally served as exhibitions of new machines and designs. The competition among machine makers pushed racing events into bizarre and rough territories. The birth of a dune buggy vehicle is estimated around 1950 when a race held on the sandy beach of California.

Buggy design

Buggy is a modified car optimized for off-road challenges. The prime modification is the significant reduce of the total weight by removing doors and bodywork. It is a lightweight automobile with one or two seats. A second key change is the increase of the machine's power which enables climbing steep paths. Also, large and wide wheels are attached to the vehicle for easier drive on dunes, beaches, or deserts. A buggy vehicle carries only the accessories it needs.



Did you know?

The first vehicle sent to space was a buggy car. The astronauts of the last 3 Apollo missions had the opportunity to drive a rover on the rocky surface of the Moon. Their dune buggy was named "*Lunar Rover Vehicle*" and allowed exploration to sites almost 8 kilometres away from landing place. It used electricity for power and could attain a maximum speed of around 13 kilometres per hour.



Buggy used for Moon exploration

History of the drag racing

Ever since the invention of the motor car, drivers have been obsessed with speed. The lust for the ultimate fast ride in a short distance, led young drivers to compete with their cars proving their braveness. Such battles date back to 1950's. With increasing popularity, the sport began to take its shape a decade later. Scheduled races on double lane tracks began, while dragster cars were modified to be more powerful.

Dragsters

Traditionally, dragsters are long and narrow cars with a single seat for the driver. The rear tires are wider and larger compared to the front. Super-modified engines are used for maximum acceleration and optimum high speed. The track length is usually around 300m and it is covered in less than 4 seconds!

A race is actually made from a series of knockouts, with the winning car qualified to the next round. When only two cars are left in the race, the fastest car of the final sprint is the overall winner!



Did you know?

Cars which participate in the class of "Top Fuel" achieve a speed near 500 kilometres per hour! In order to stop before reaching the track lane limits, they use a parachute for breaking. The parachute is attached folded to the rear of the cars and is deployed just after the driver crosses the finish line. This is one out of many mandatory equipments that these dragsters have to carry for safety reasons.



Parachutes are used for breaking

Quiz

Do you know the answer of these questions? Write a ✓ into the correct box.

1. Where is a buggy racer suitable for competition?

- ☐ Street ☐ Ice ☐ Off-road

2. Which famous beach is known for the birth of the first buggy vehicle?

- ☐ California ☐ Cote d'Azur ☐ Miami

3. Unnecessary bodywork, doors and windows are removed from a buggy car in order to reduce

- ☐ Power ☐ Weight ☐ Cost

4. Buggy cars can be used from the police when they have to go for

- ☐ Rescue ☐ Control Traffic ☐ Holidays

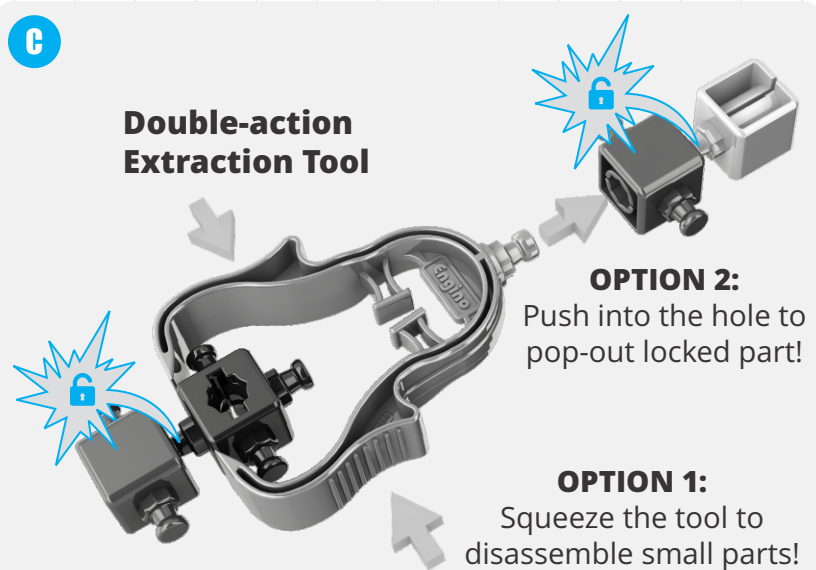
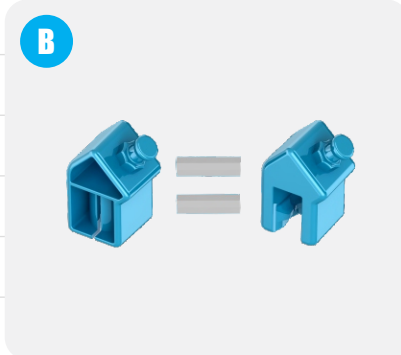
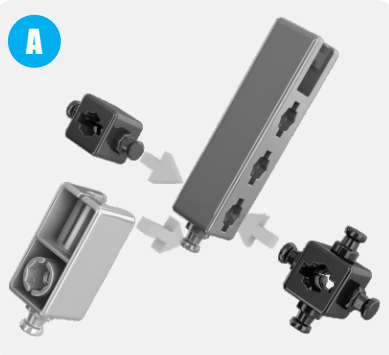


More theory & experiments online!

www.engino.com/theory/ce601mm-a



Building Tips



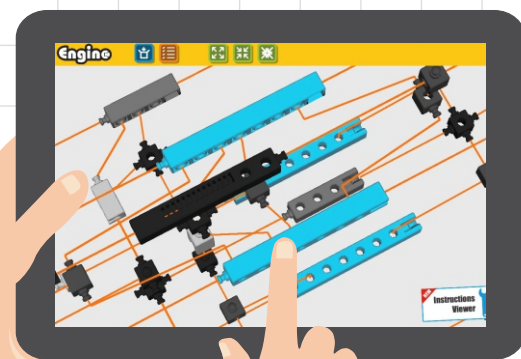
Free App

- A** Use your PC or tablet and go to the following link for more models:

www.engo.com/instructions/ce601mm-a

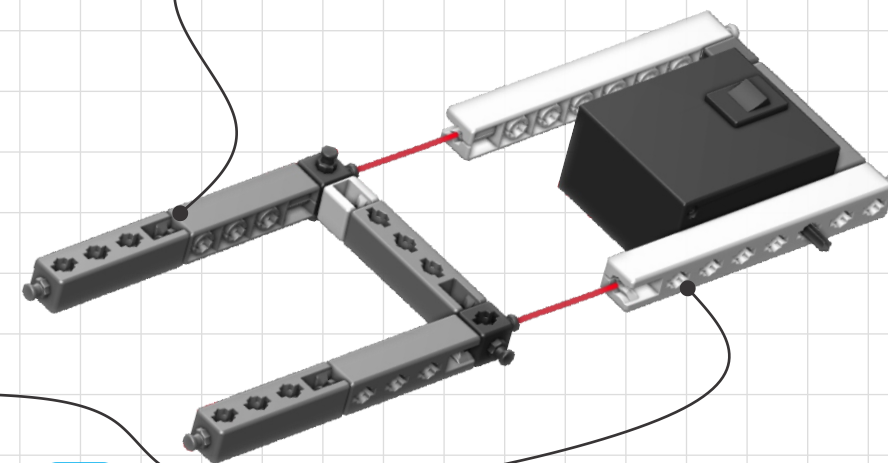
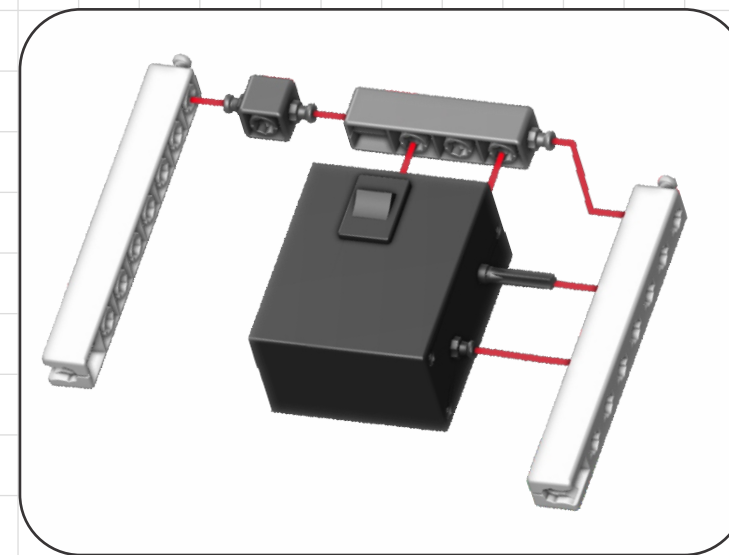
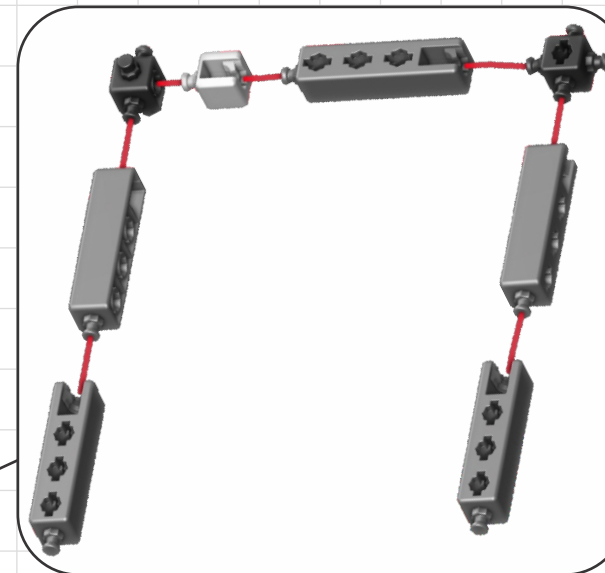
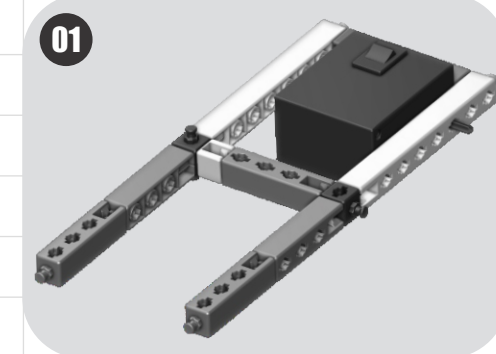
- B** Download the app to discover step-by-step instructions in 3D view!

Engino kidCAD (3D Viewer) app:

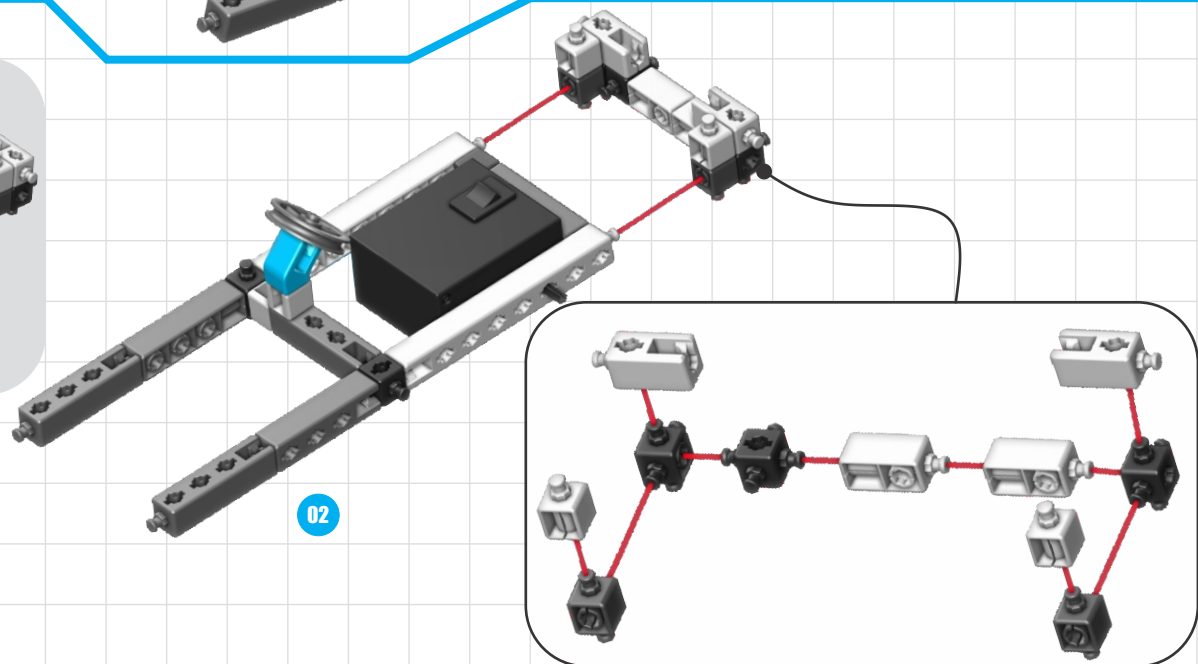
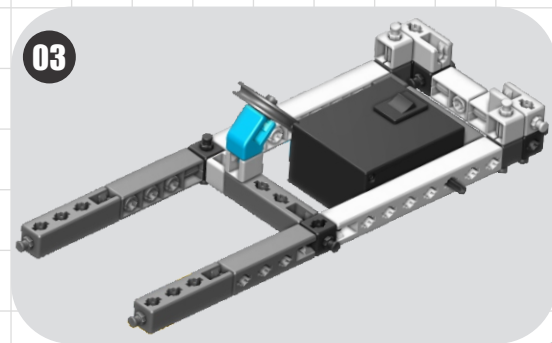
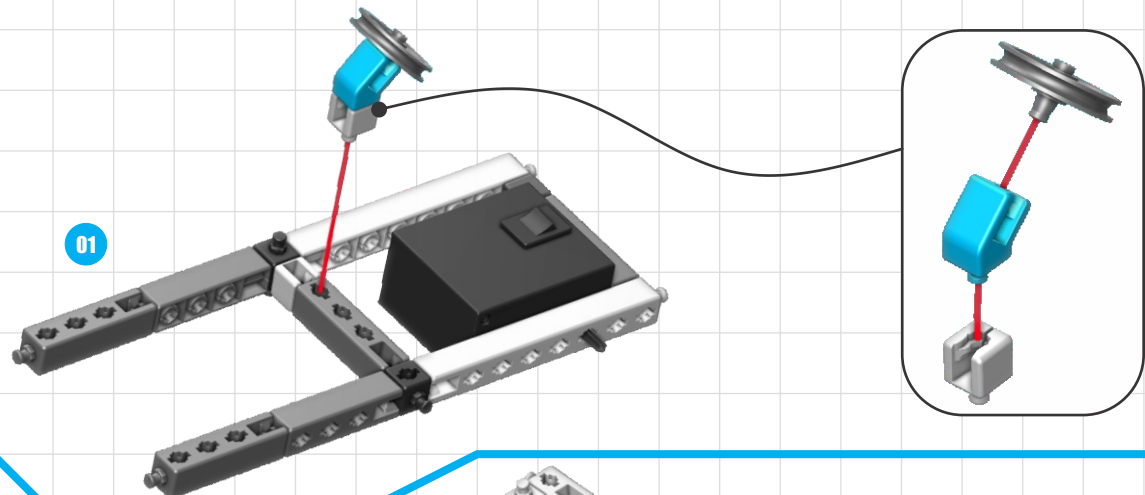
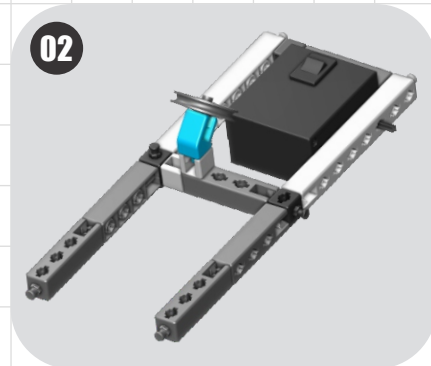


05

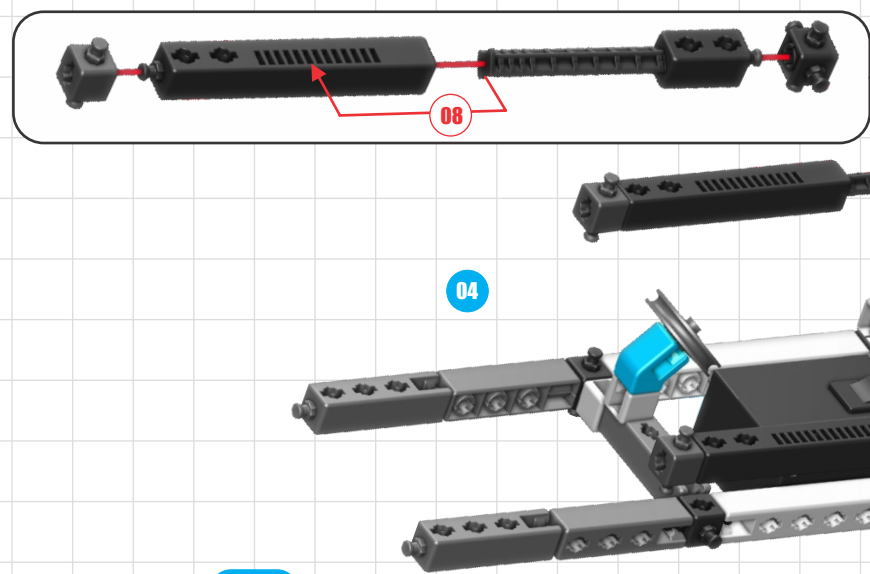
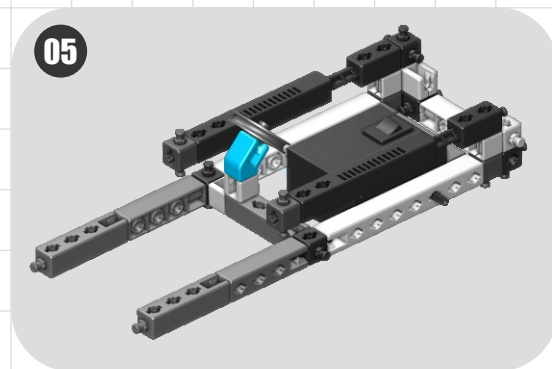
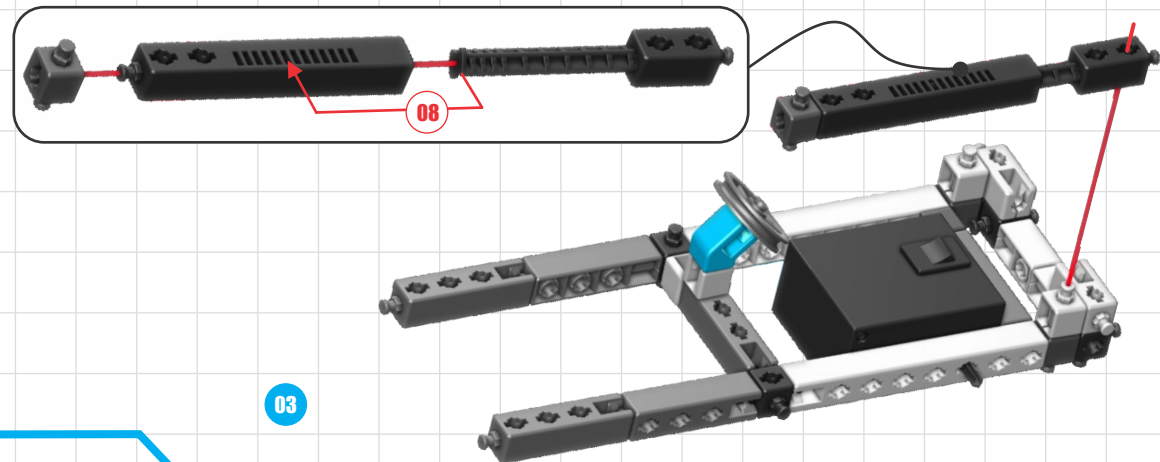
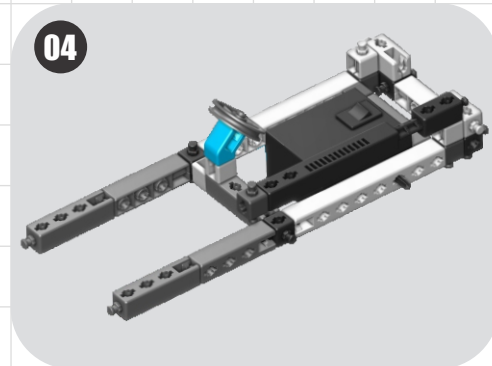
Building Instructions



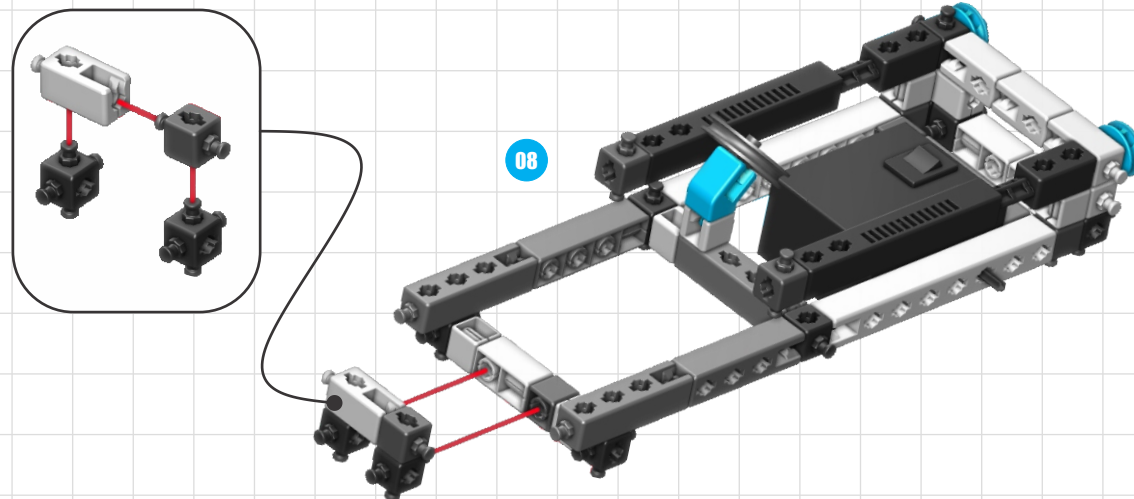
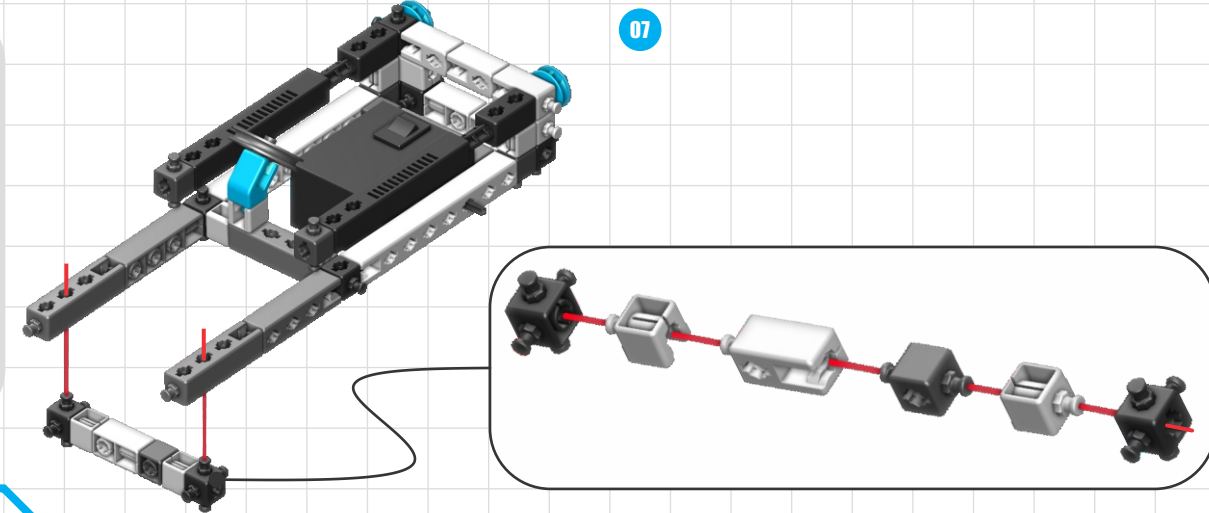
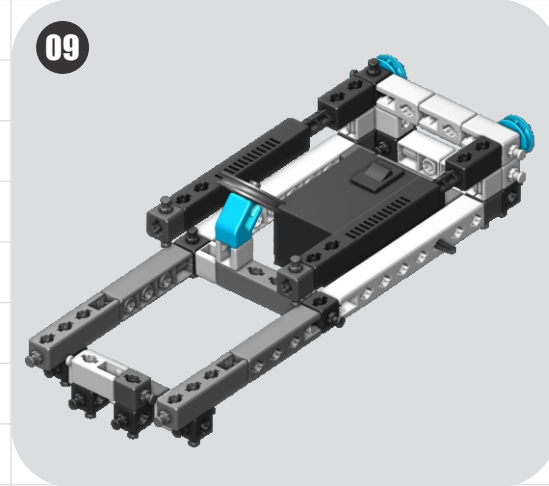
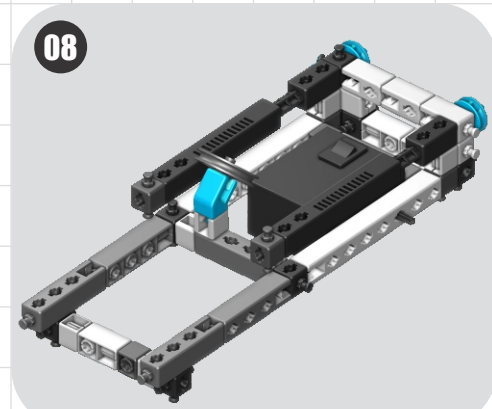
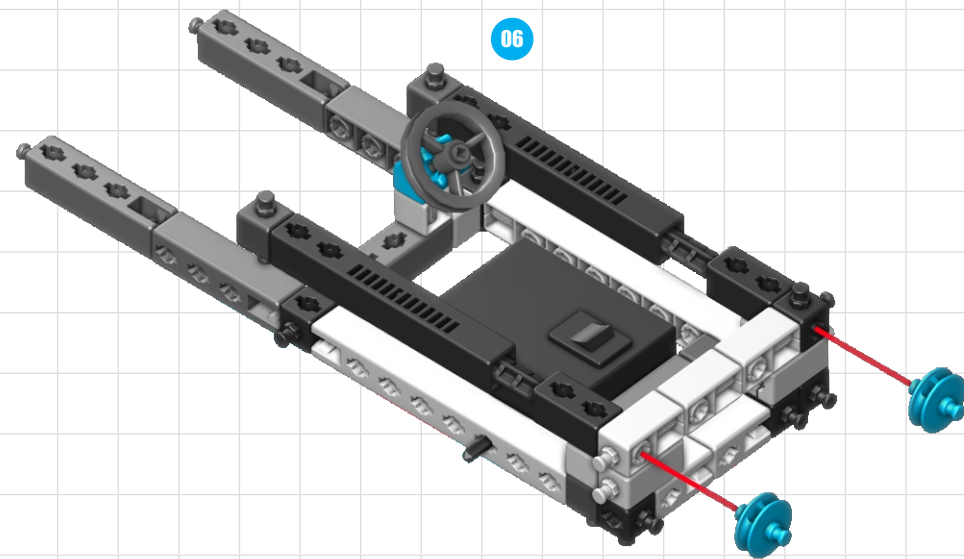
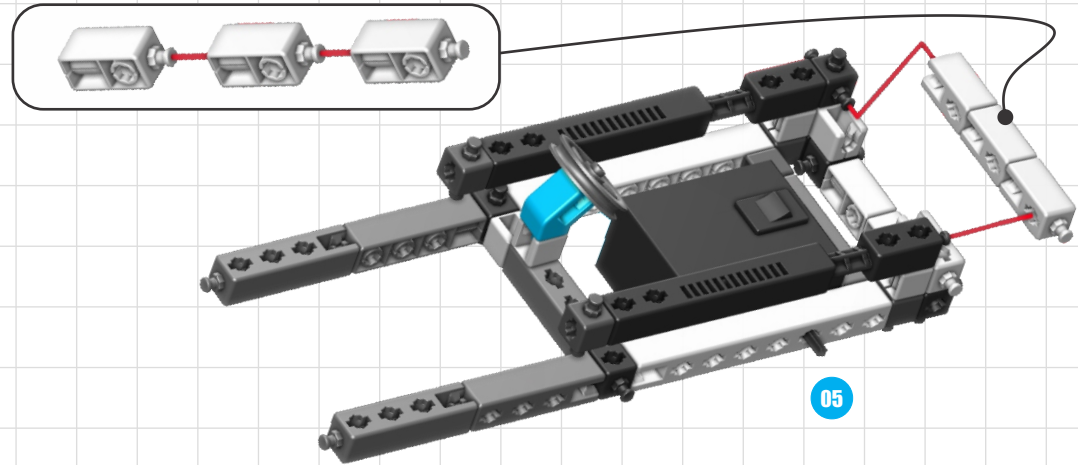
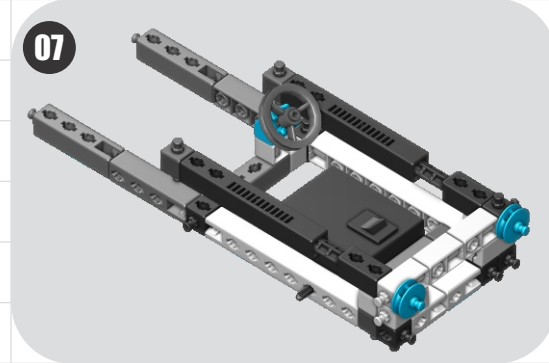
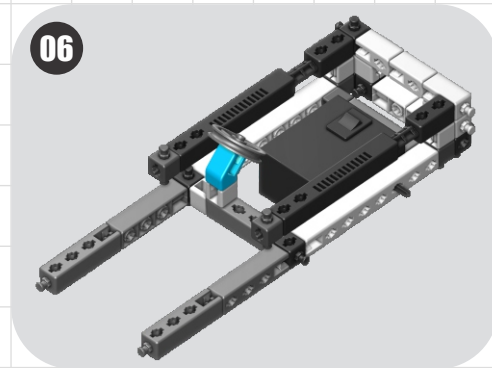
06

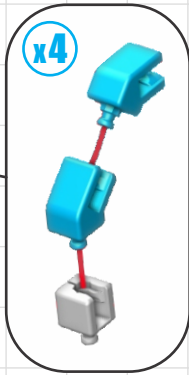
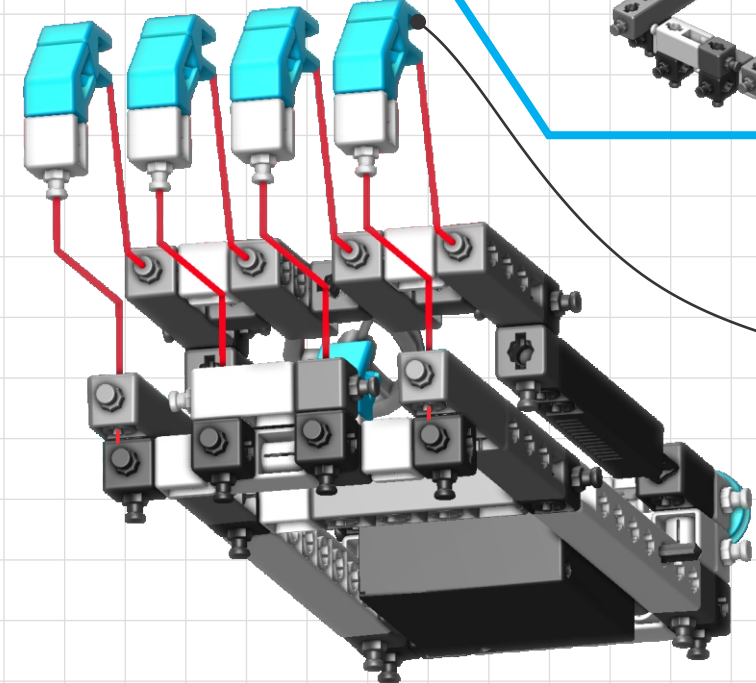
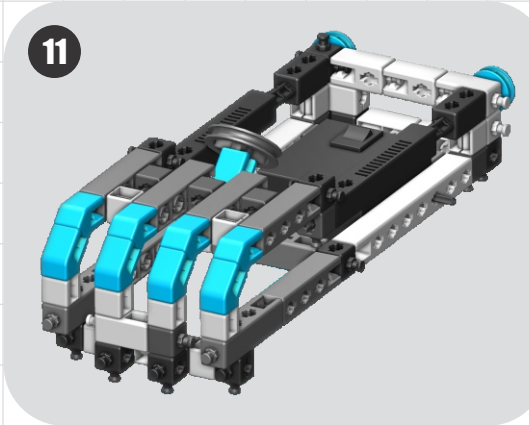
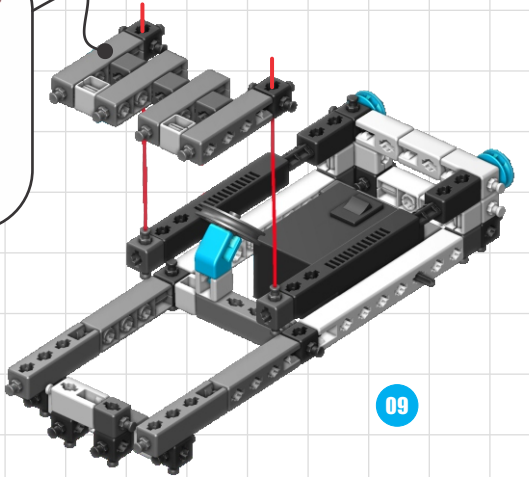
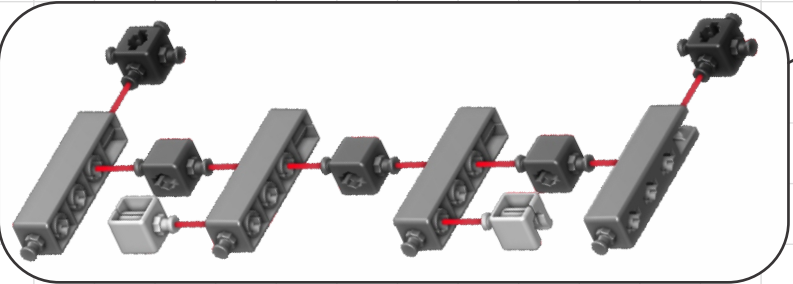
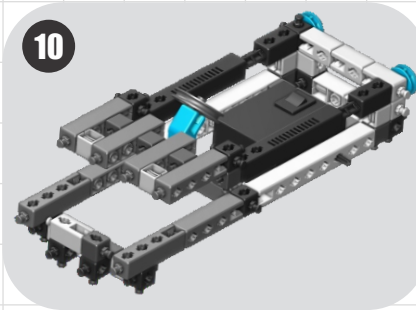


07

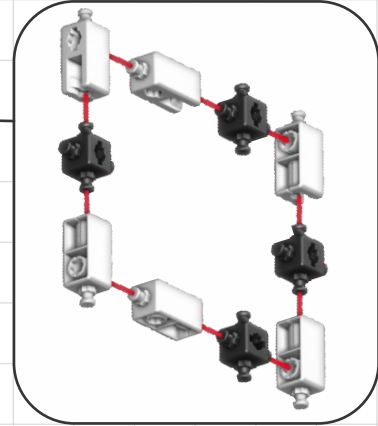
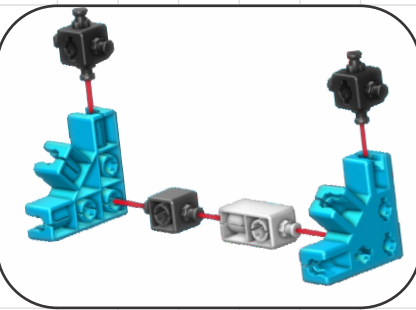
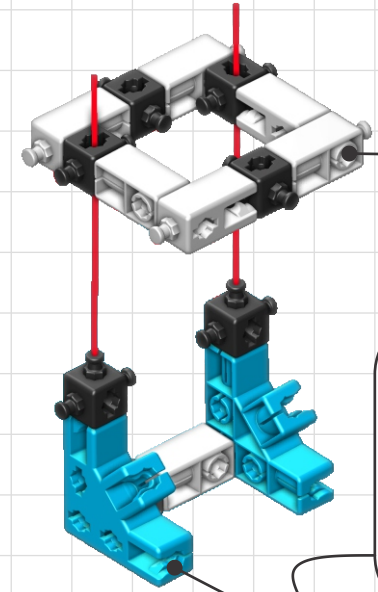
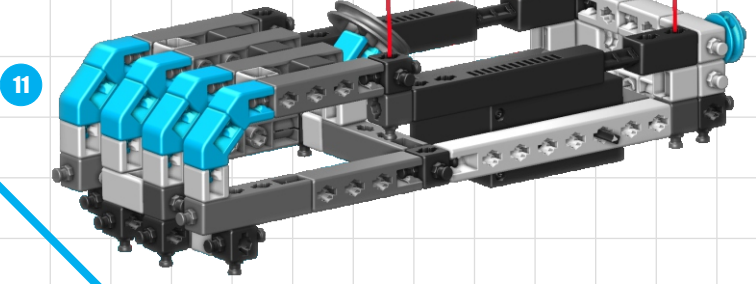
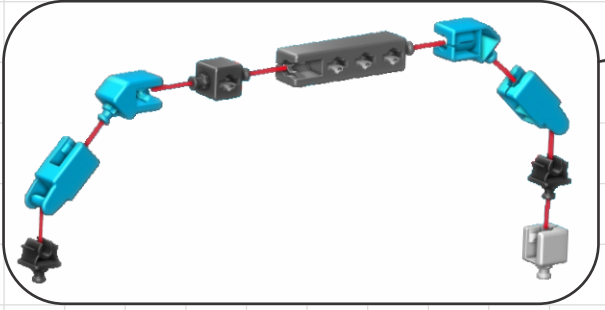
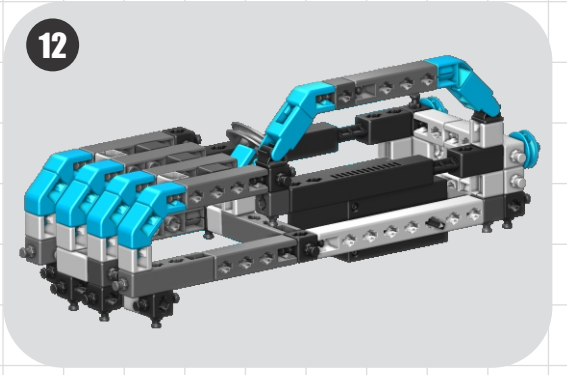


08

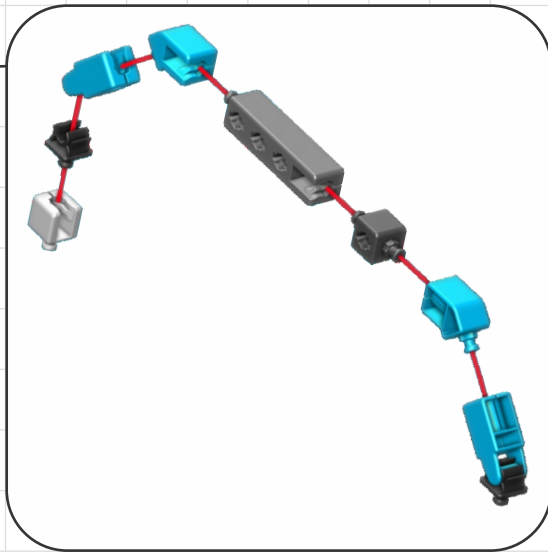
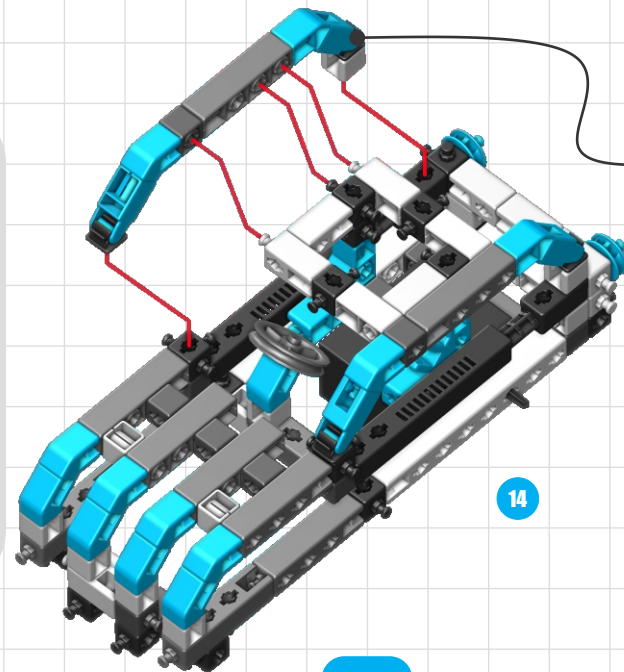
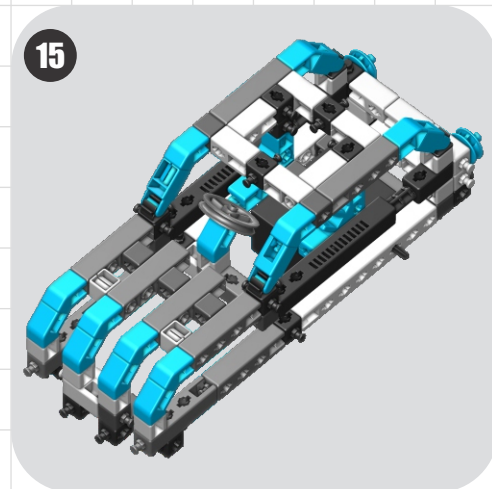
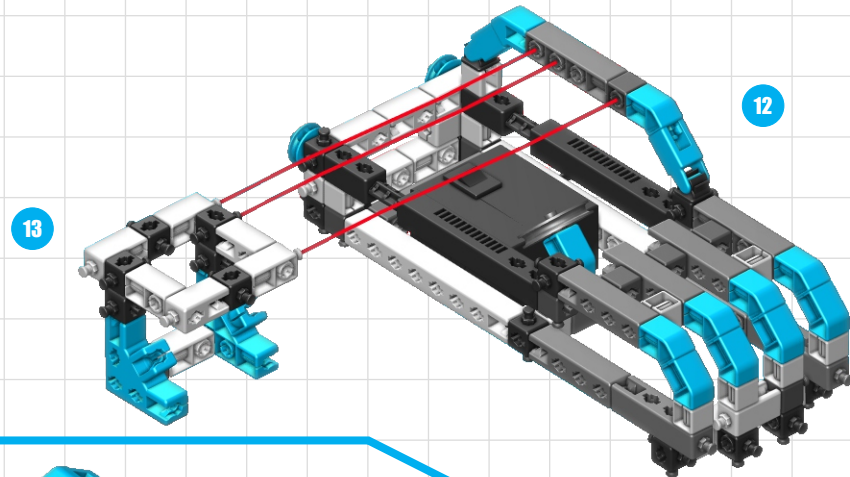
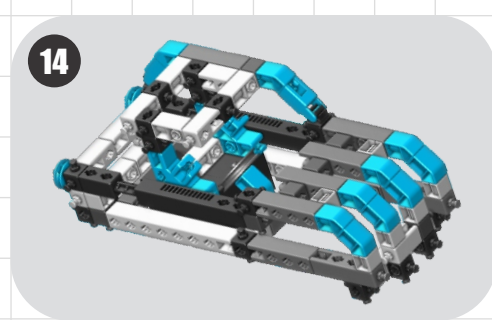




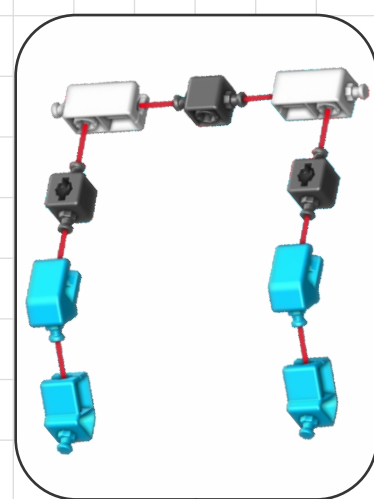
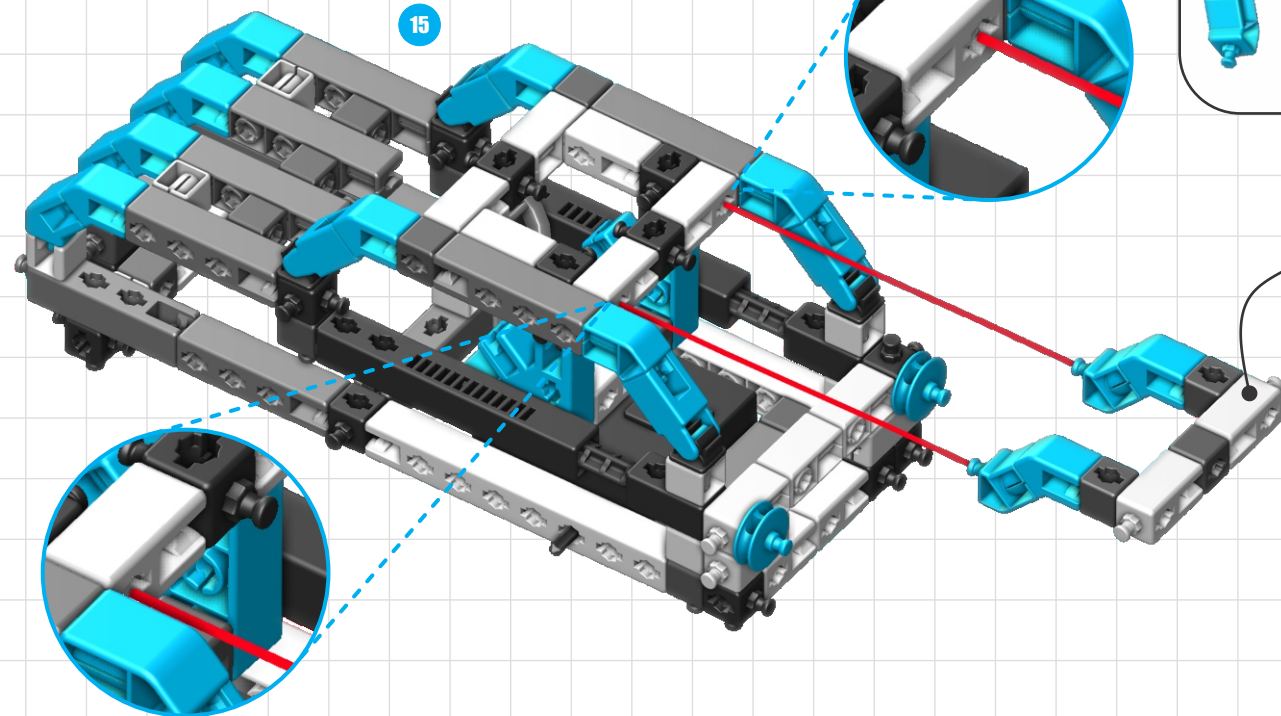
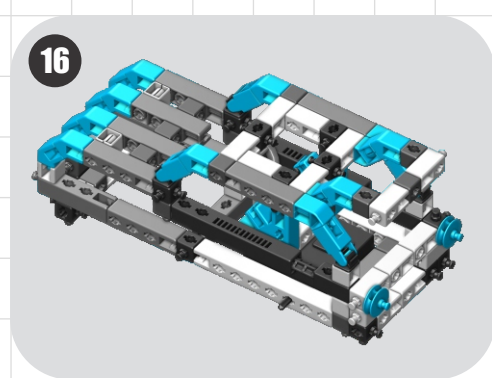
11



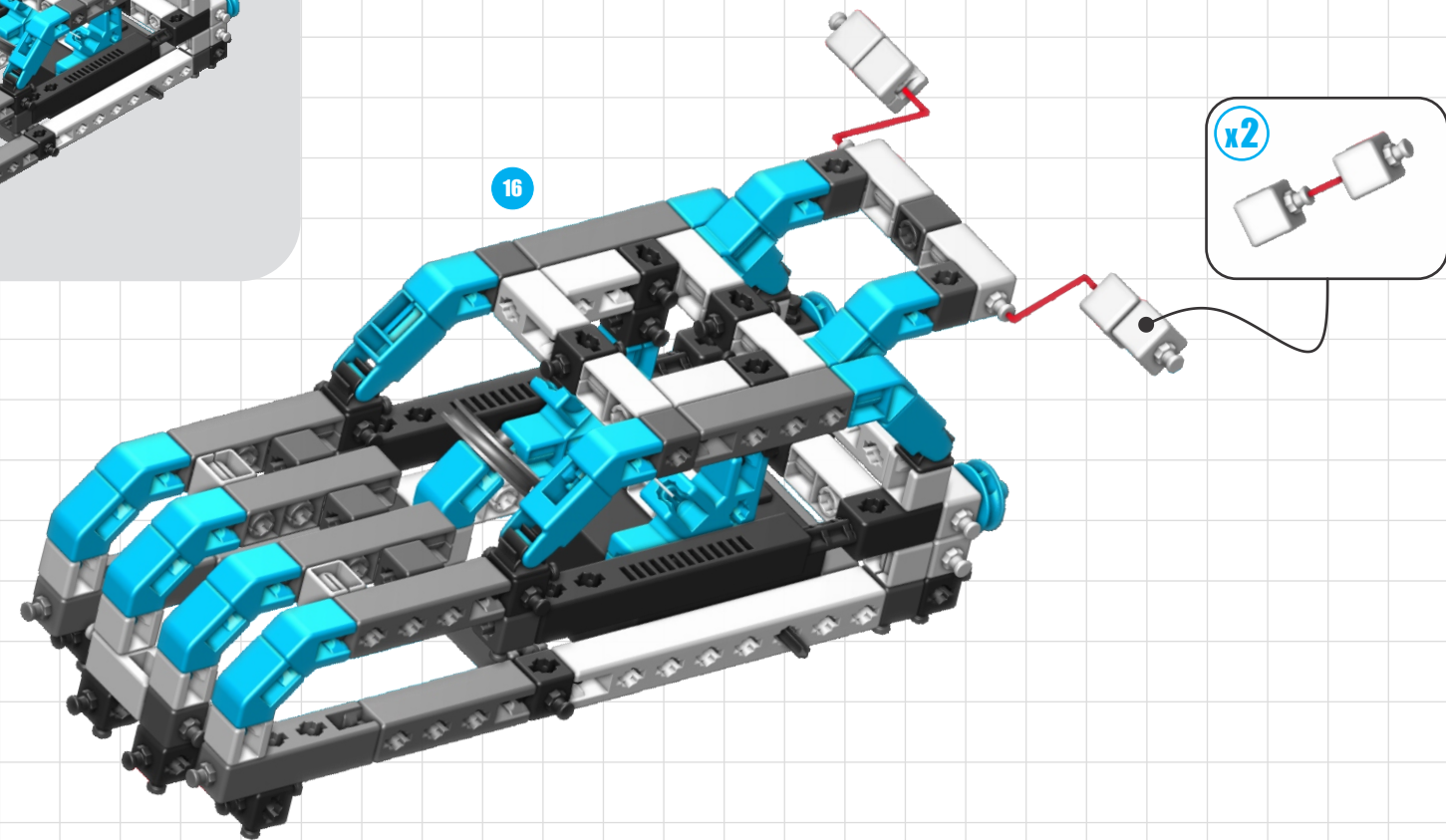
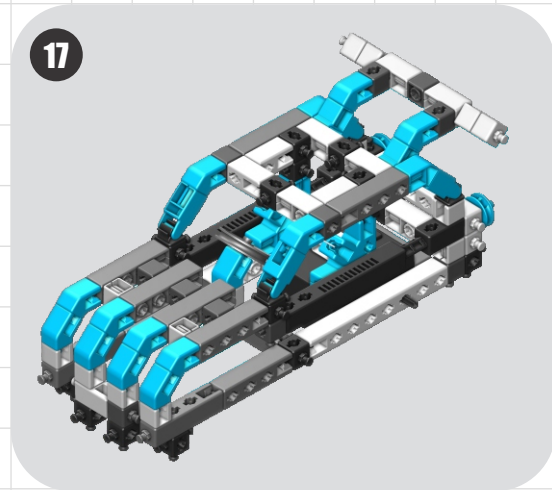
12



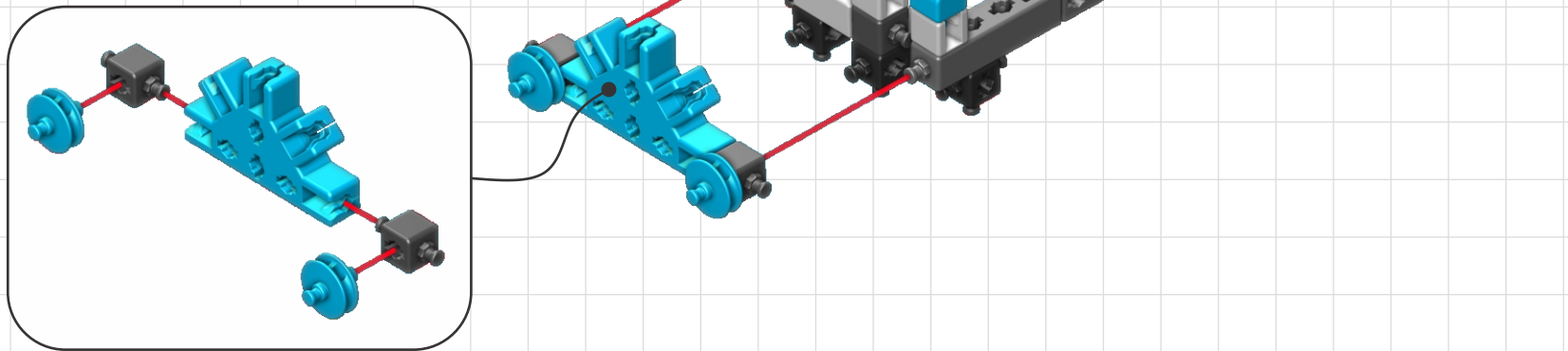
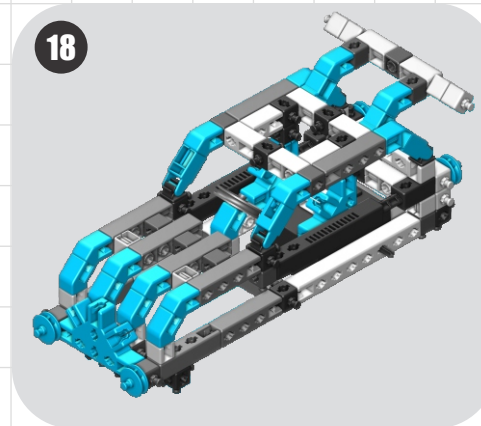
13



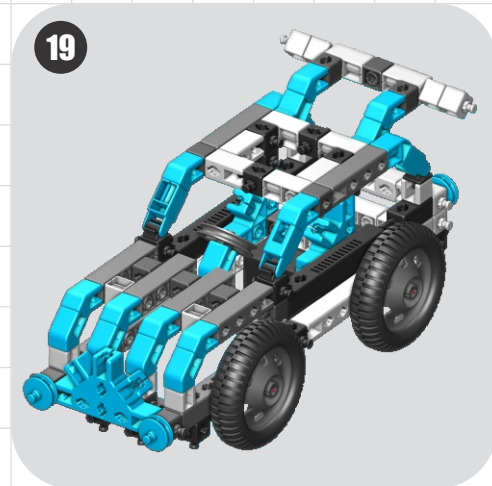
14



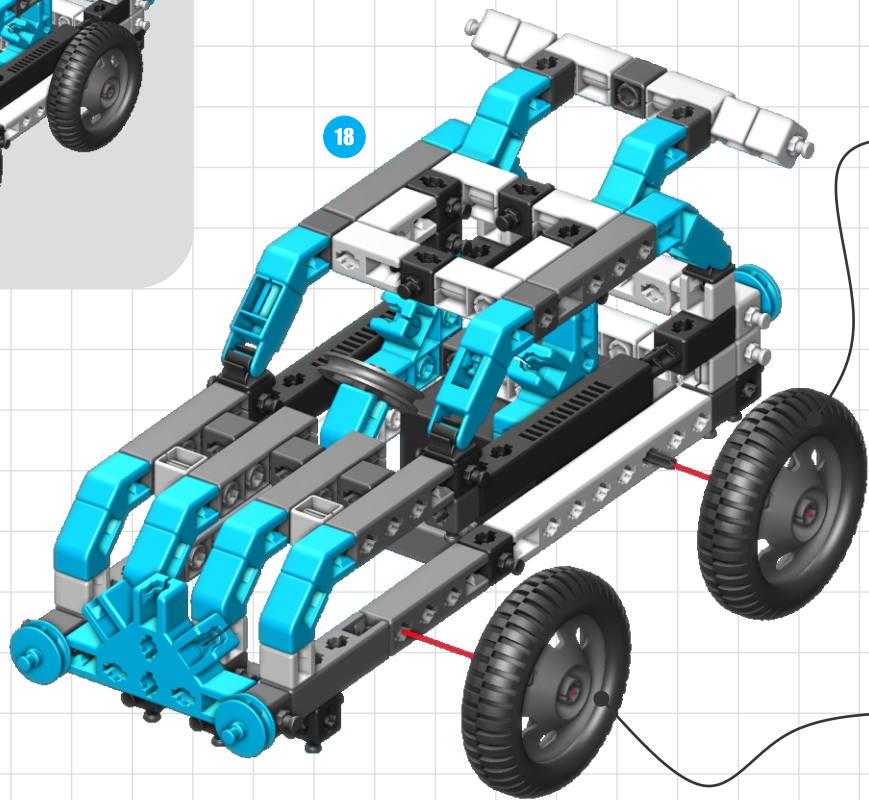
15



16

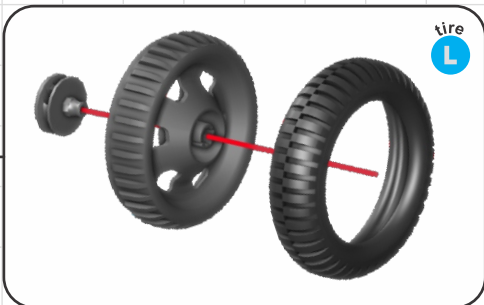


19



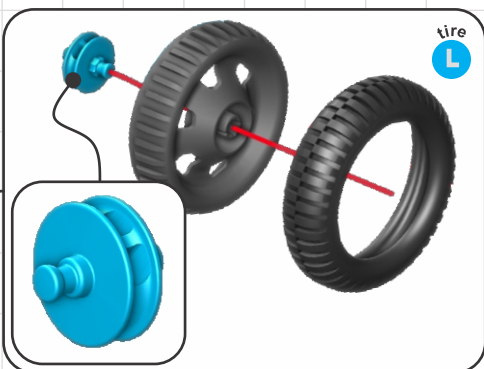
18

17



tire L

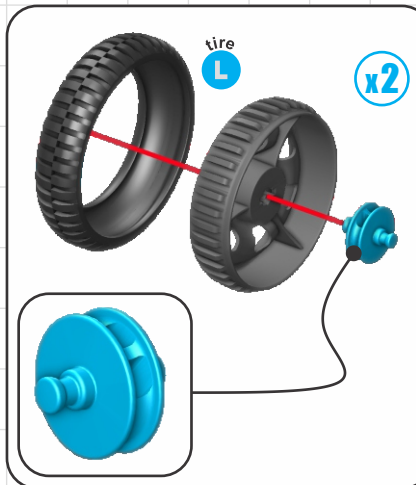
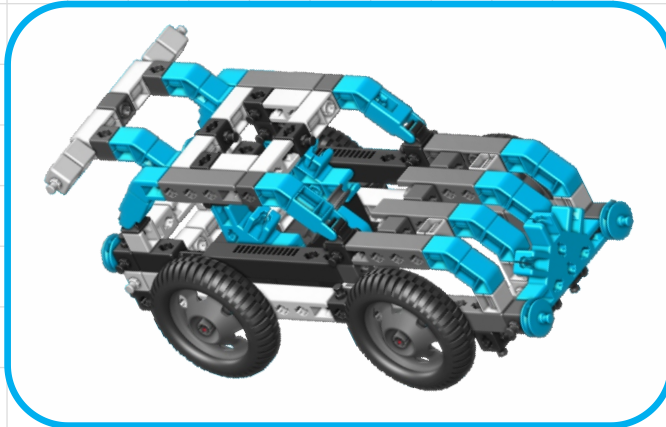
L



tire L

L

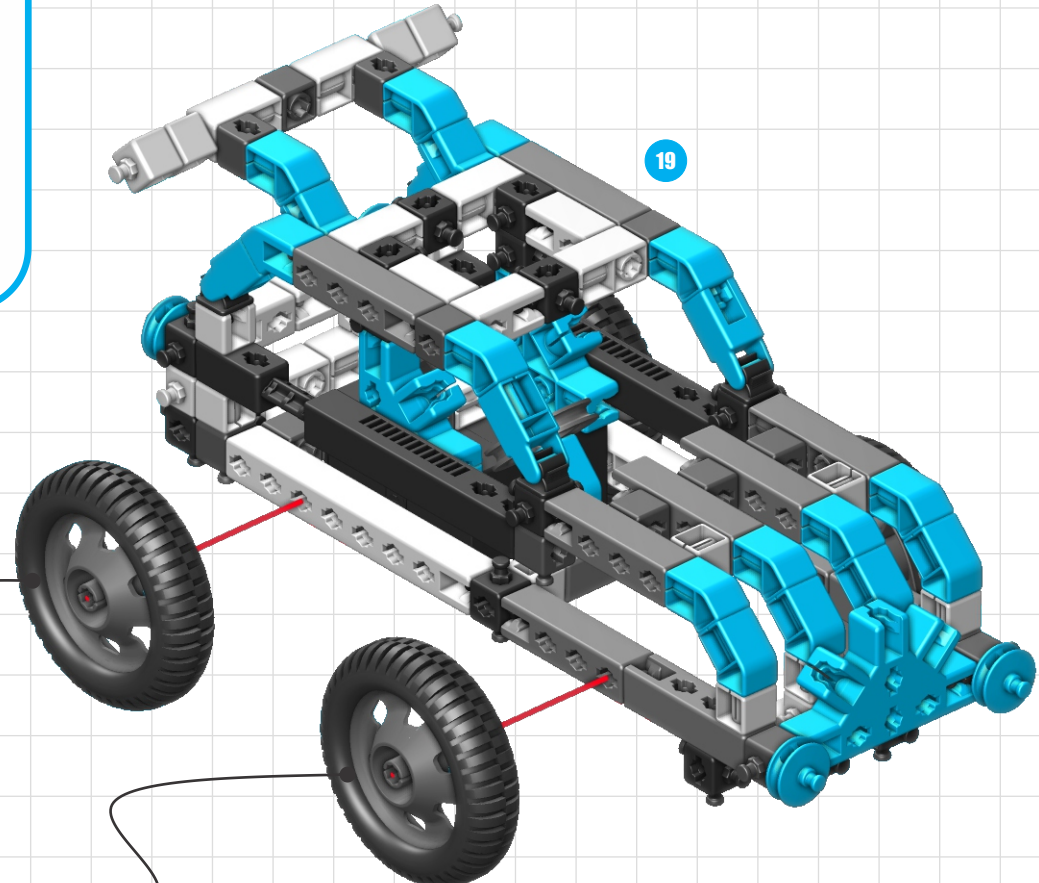
x2



tire L

L

x2



19

18