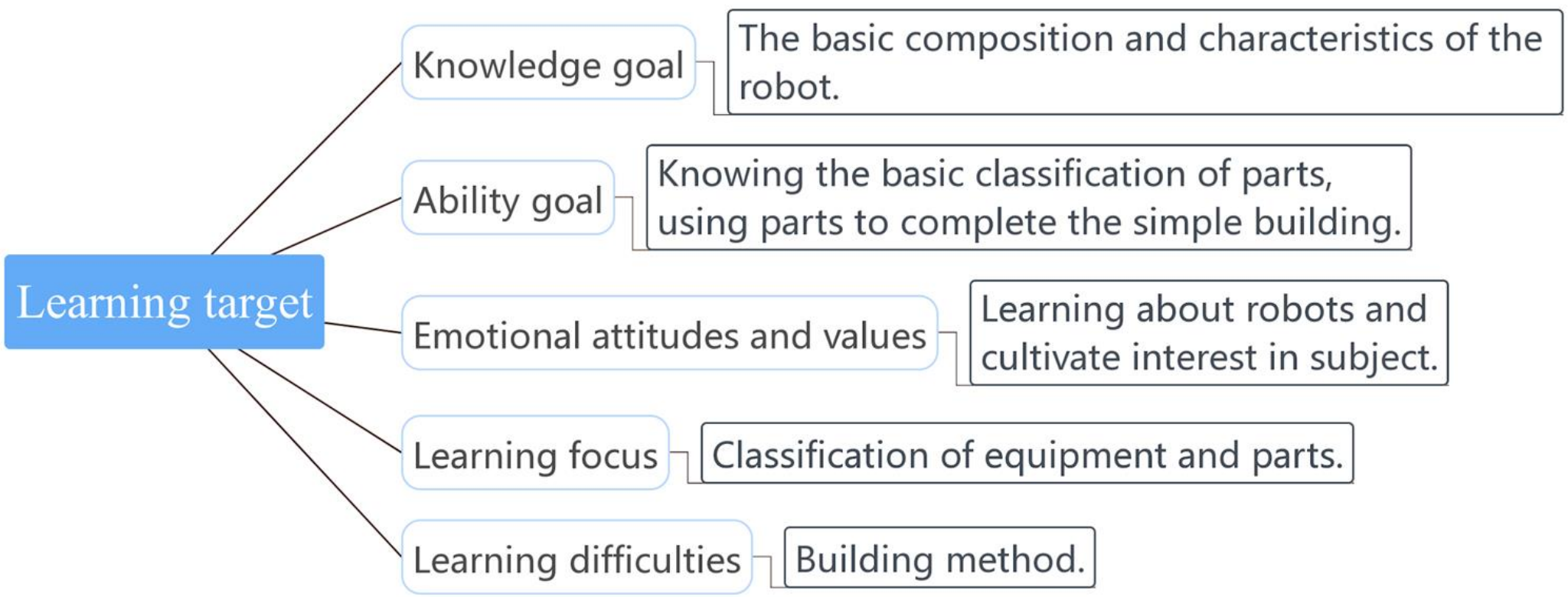
Learning Series
REX Robot



This building-block programming kit introduces robotics and sensors.

The kit is equipped with various sensors such as sound sensitivity, color sensor, touch sensor, photoelectric sensor, color light, ultrasonic, camera and many building blocks parts. Students can build various building block robots with their imagination, and use graphical programming software to program the robot and experience the joy of hands-on creation.

Learning Target



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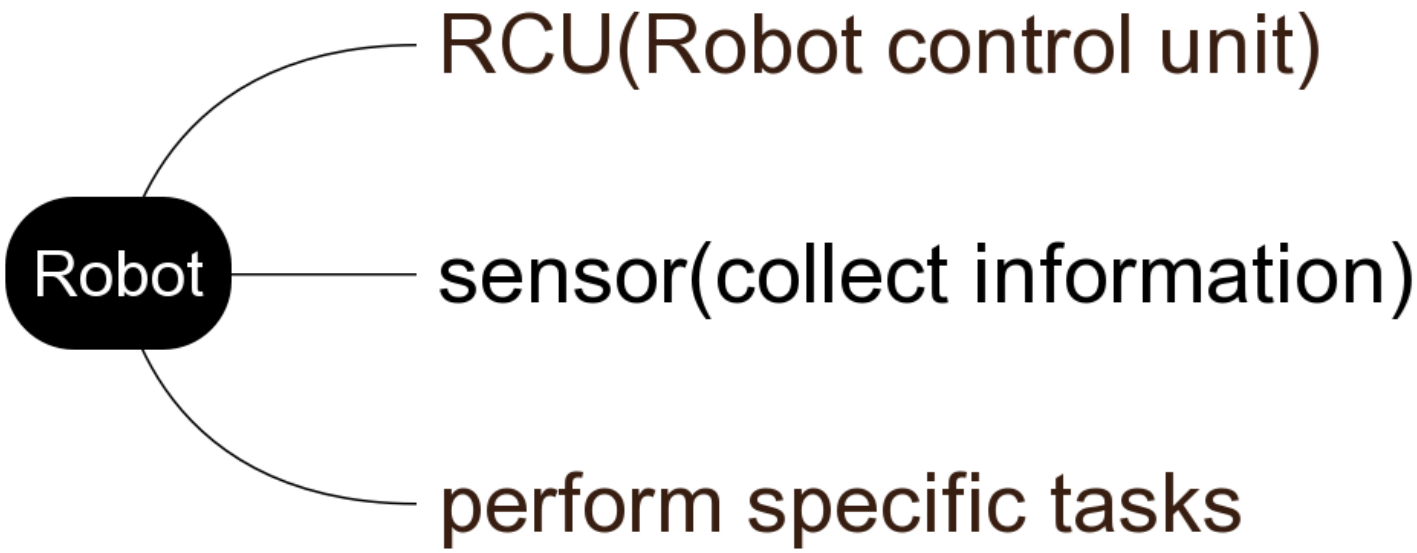
Course Introduction



Course Introduction



What is this robot made up of?



Course introduction



REX Robot

Know REX Robot

Part cognition is the foundation of the classroom communication. Practice makes perfect, we need to memorize and use it constantly.

Today we will know a new "partner" whose name is REX. REX is a star among robots, and his name has the meaning of a king. His profession is the police. He has a strong body and can easily subdue the bad guys.

Teaching New Knowledge

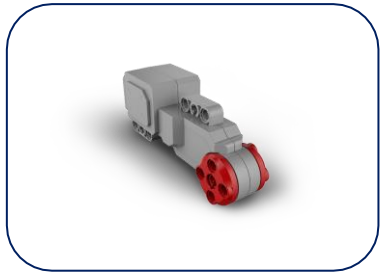


Teaching New Knowledge

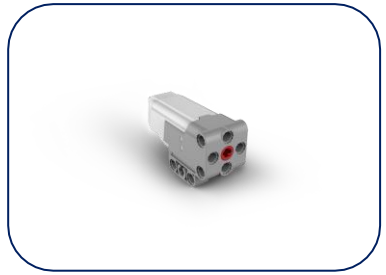
Electronic components: a device with a specific function after electrification



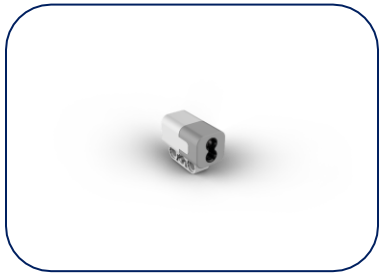
E6-RCU



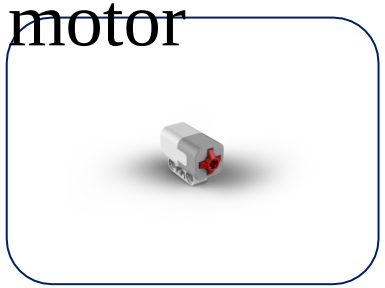
Large motor



Medium motor



Color sensor



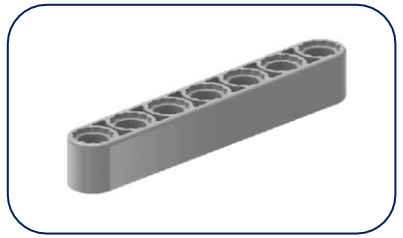
Touch sensor



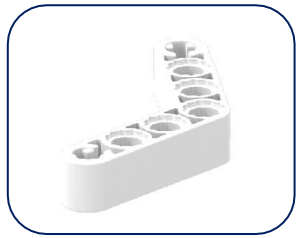
Ultrasonic sensor

Teaching New Knowledge

Beam parts: strip, parts mostly used for force-supported

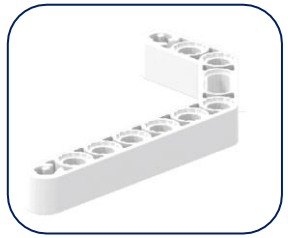


Straight beam:according to the number of holes, read as n-beam. Picture is read as Beam 7M.





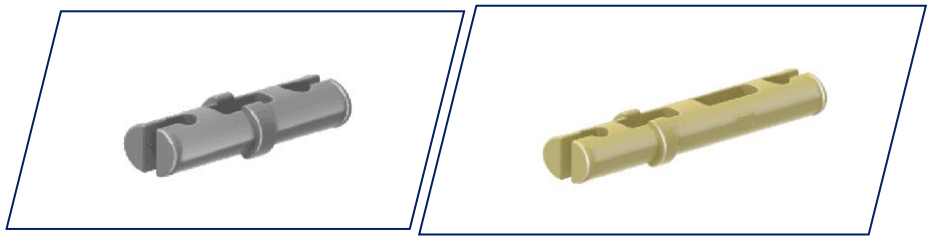
Angular beam:according to the number of two side holes of the angle, read as m*n angle beam. Picture is read as Angular Beam 3*5M.



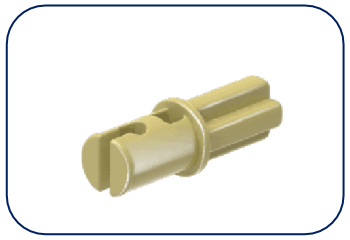
Double angular beam:according to the number of holes in the straight part of the two ends, read as m*n double angular beam. Picture is read as Double angular beam 3*7M.

Teaching New Knowledge

Peg parts: parts used for connecting different parts of equipment



Peg: according to the number of units with peg connects to the part, read as n-peg. Picture is read as connector peg 2M and connector peg 3M.



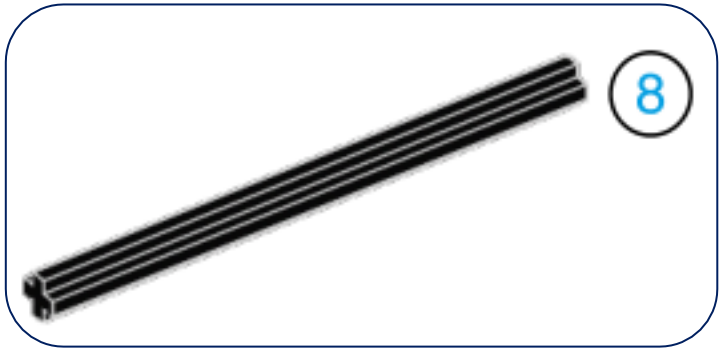
Cross peg: one side is normally connected to the hole, and the other side is used for connecting gear parts.



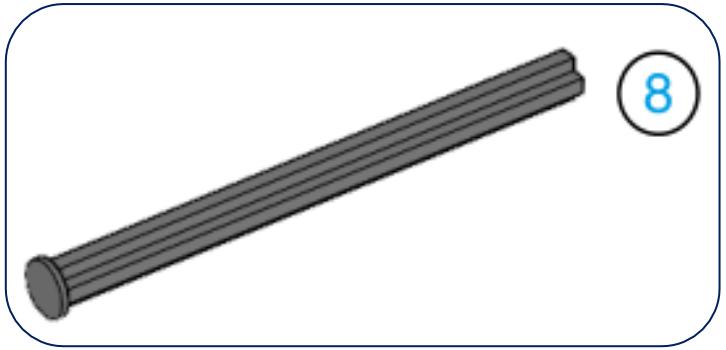
Peg with bushing: one side is normally connected to the hole, and the other side is used for connecting Axle parts.

Teaching New Knowledge

Axle parts: strip, parts mostly used for force-supported



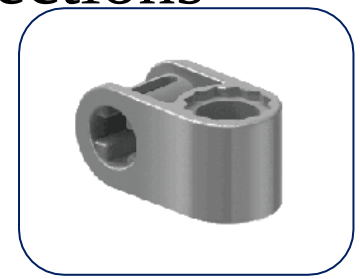
Cross Axle: according to the axle and the same length of the straight beam, read as n-axle. Picture is read as Axle 8M.



Axle with stop: according to the axle and the same length of straight beam, read as n-axle with stop. Picture is read as Axle 8M with stop.

Teaching New Knowledge

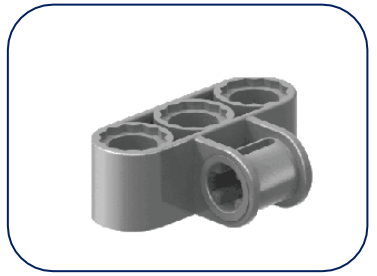
Block parts: Various connecting directions, connecting parts in different directions



Cross Block 2M



Cross Block 3M



Cross Block 3*2M



Double Cross Block 3M



Cross Block 2*2M

Teaching New Knowledge

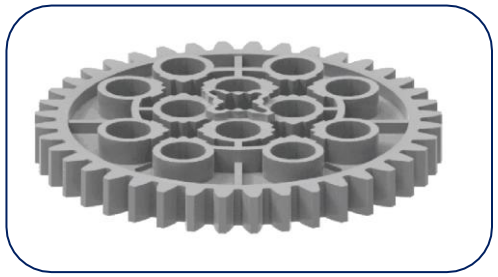
Gear parts: move, transmission, etc.



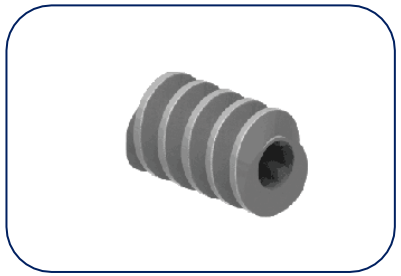
Hub



Hub



Gear



Worm gear



Belvel gear

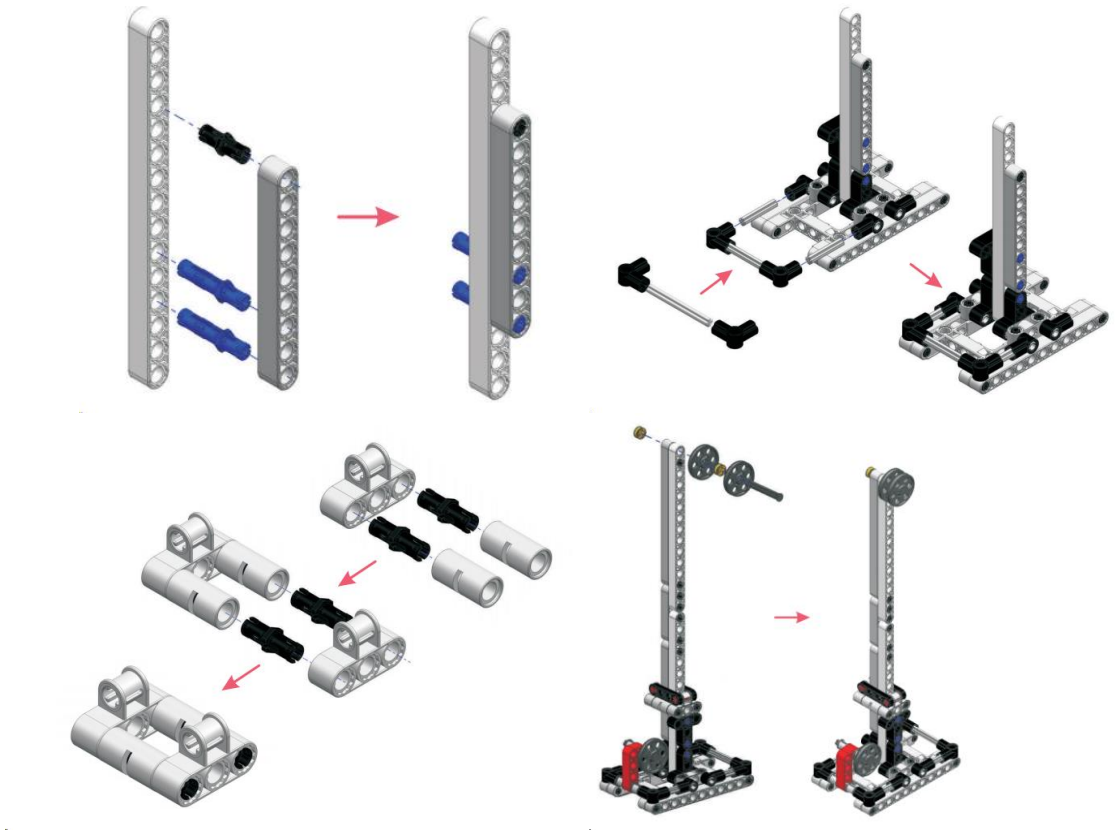


Double belvel gear

Task Practice



Task Practice



Assembly requirements

①stable structure

②focus gravity

③shape match

Checking Effect



Test Effect



Reviewing the learning content and deepen the impression.

Question 1	What is the name of the robot made today?
Question 2	What materials are used in today's robots?
Question 3	What is the purpose of the peg parts?

Test Effect



Homework

① Complete a role play with REX, know the class requirements.

② Act a classroom patrol and explain the classroom requirements to other partners. “Hello! I am REX, when hear the signal(ring), return to the seat and prepare for the class quickly”

③ When you introduce yourself, you must say hello to everyone. When someone introduces you, you should listen carefully. At the end, you applaud and reply, “It ’s so good!”.

Thank you for watching.

BE STEM READY

