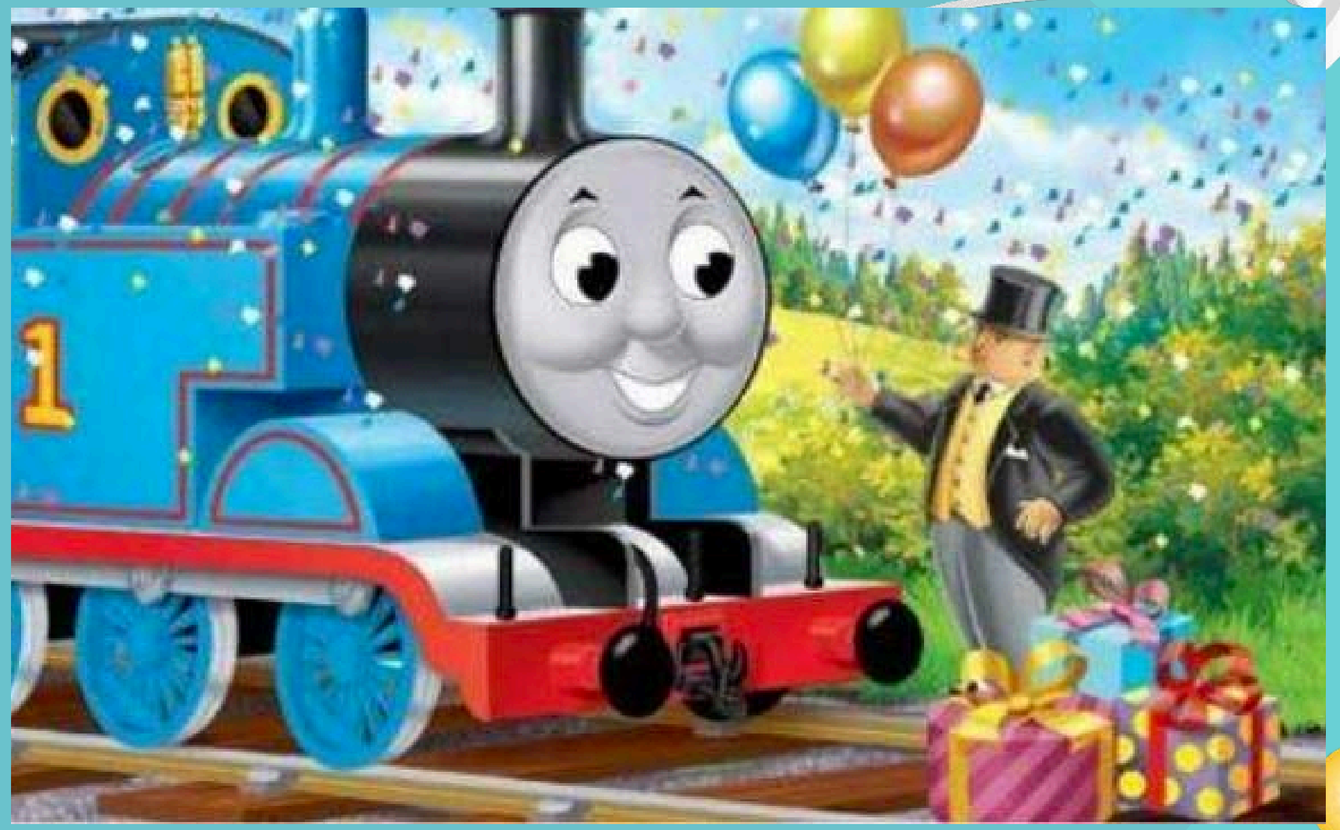
Railway Train

Introduction

Do you recognize the picture on the right?



Thomas the train

The Development History of Trains

Steam Locomotive

Green Train

磁悬浮列车

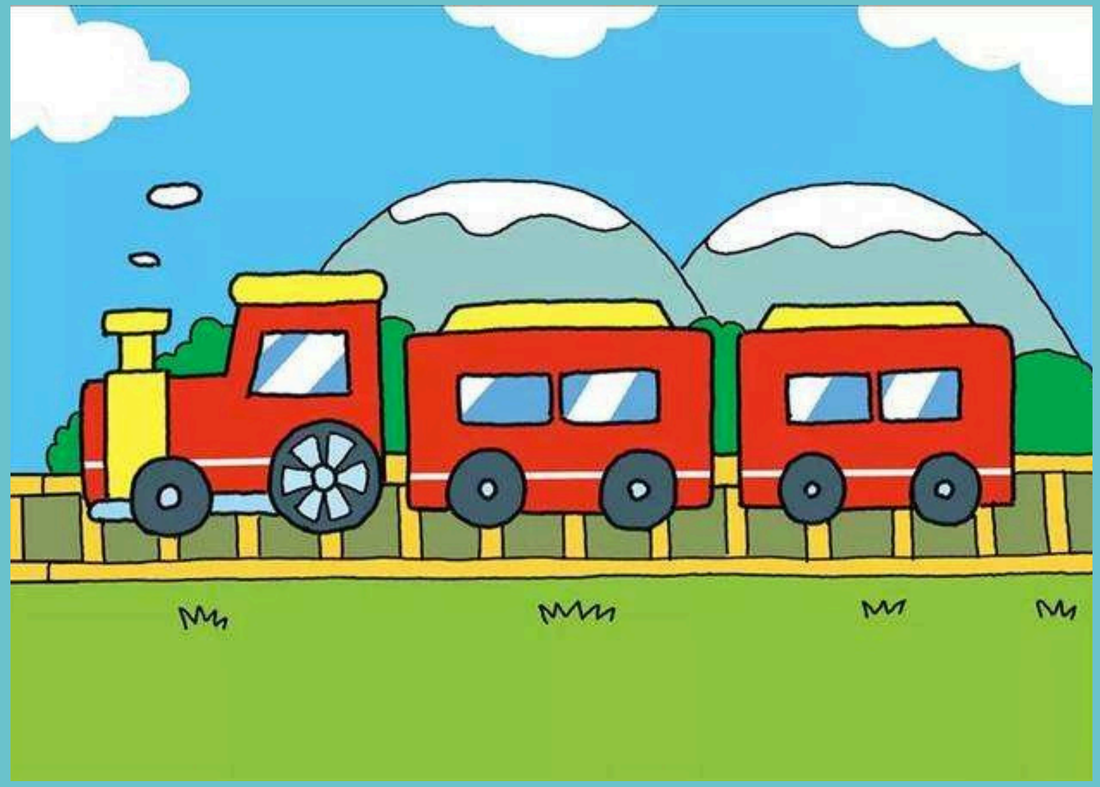
Maglev Train

High-Speed Train

Subway

Today, trains and railways are an inseparable pair of “brothers.” The locomotive, that is, the steam engine, was invented by British inventor George Stephenson in 1825. With the locomotive came the train.

Imagine what kind of small train you can make!



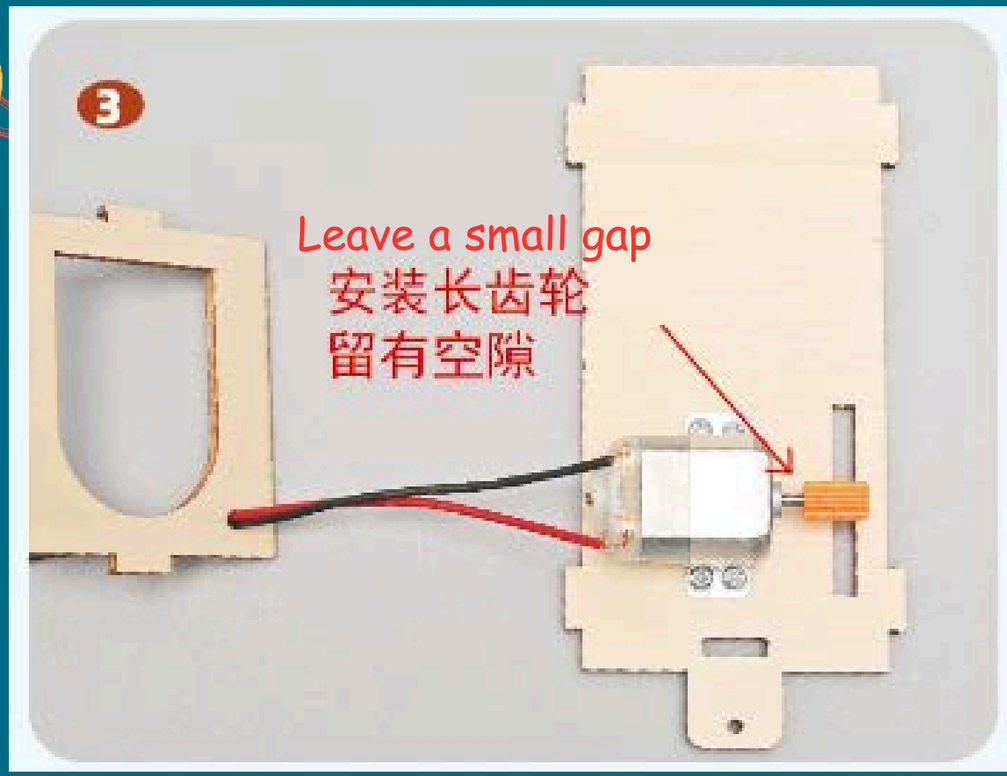
Let's make a passenger train experiment together!

Experiment Steps

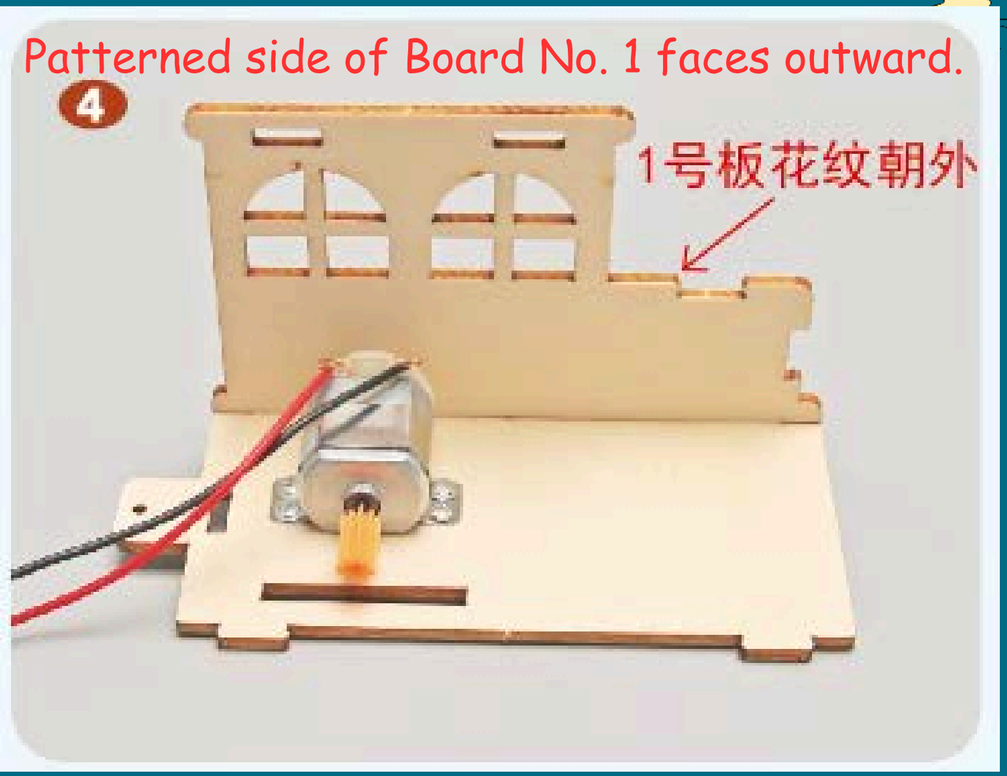
Let's begin!

Identify the materials.

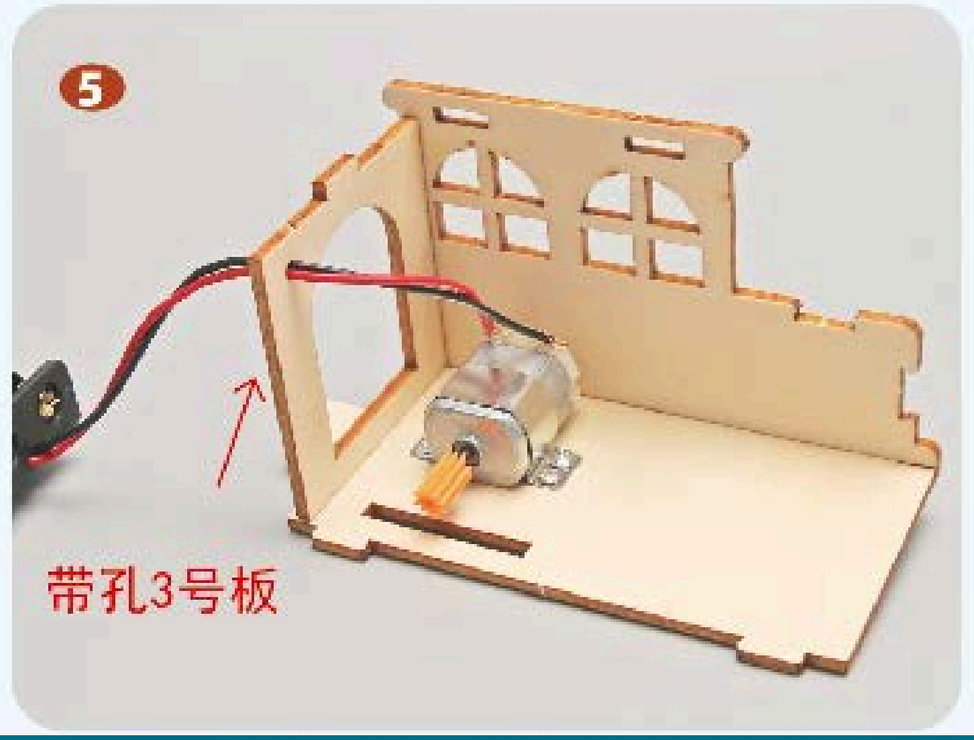
Connect the motor as shown, attach the red and black wires.
Connect the battery holder wires through board No. 3 hole and connect to the motor.



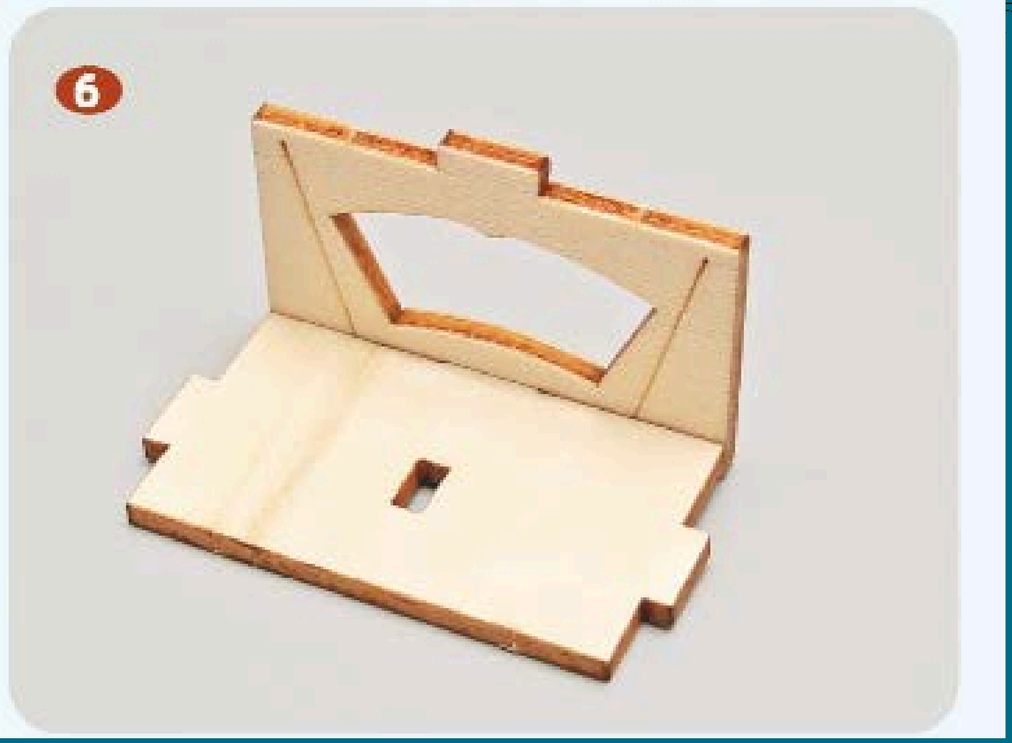
As shown, fix the motor onto Board No. 2 using screws.
Install the long gear on the motor shaft, leaving a small gap.



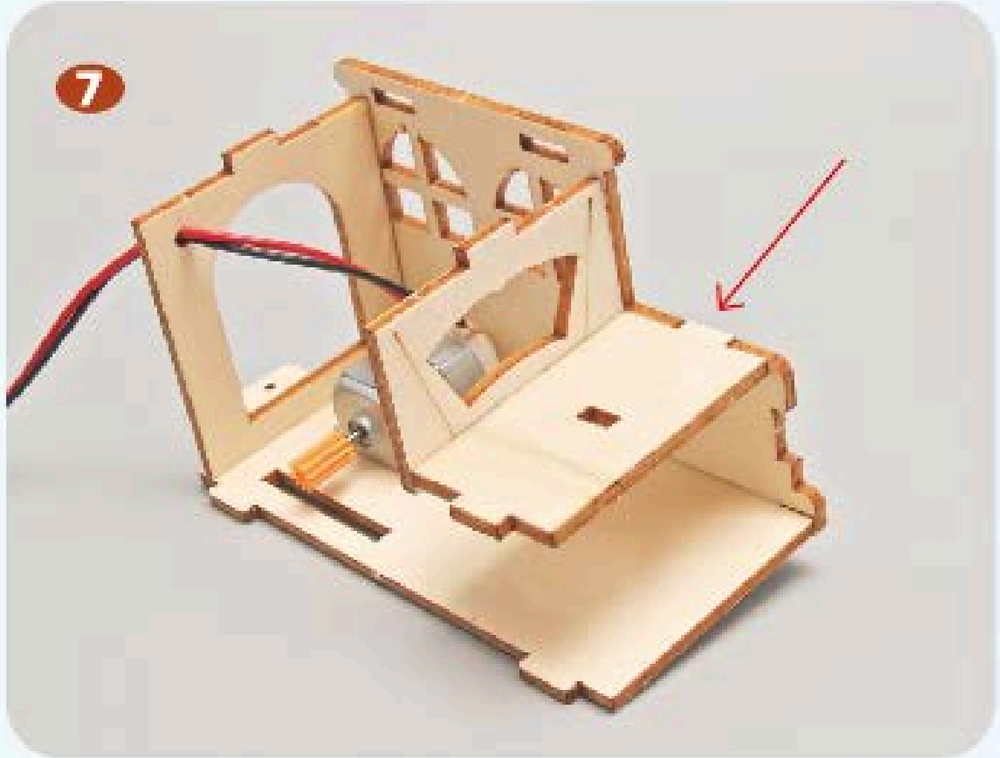
As shown, assemble Board No. 1 and Board No. 2 together.
Make sure the patterned side of Board No. 1 faces outward.



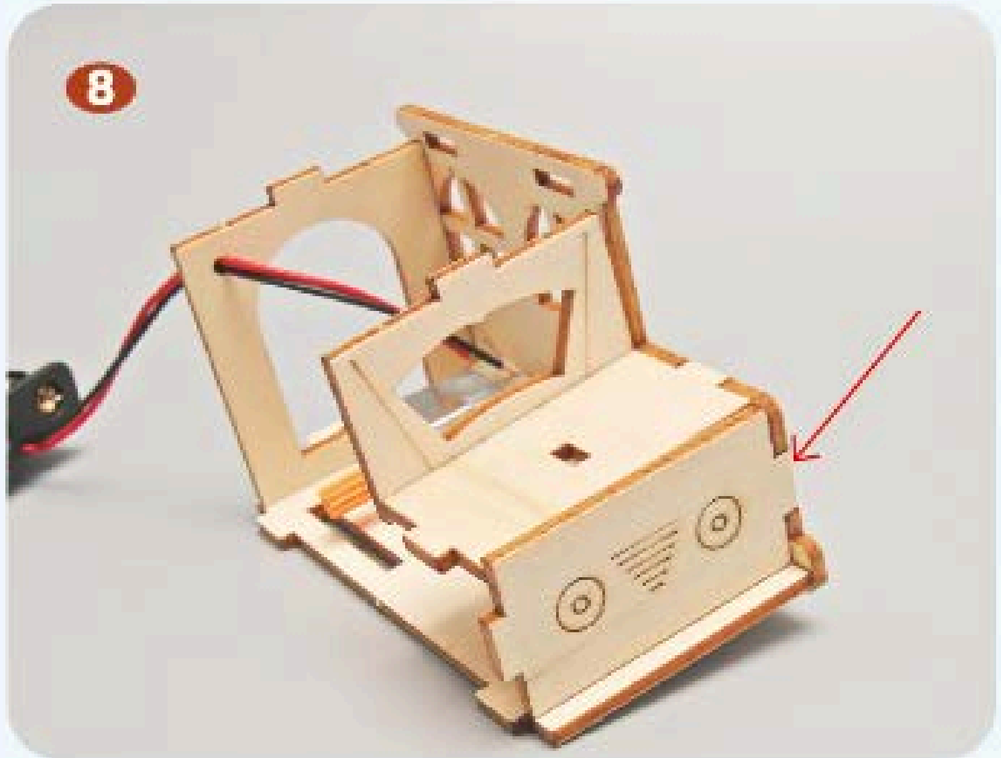
Install board No. 3 with holes as shown.



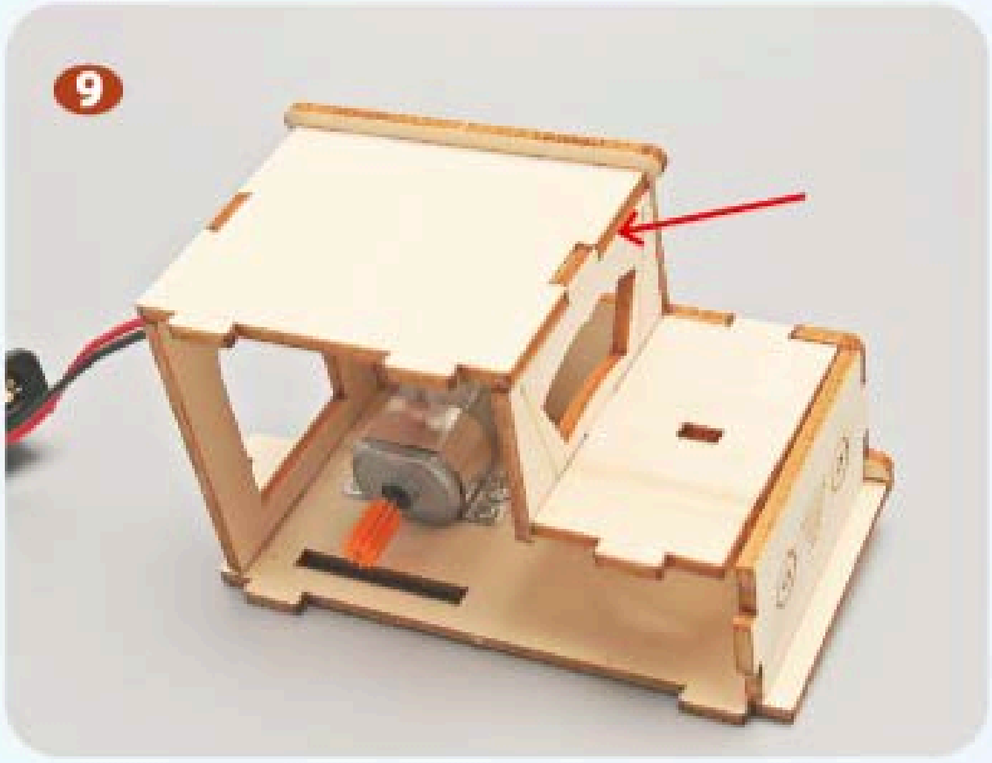
Assemble boards No. 4 and No. 5 as shown.



Install board step 6 on board no 1

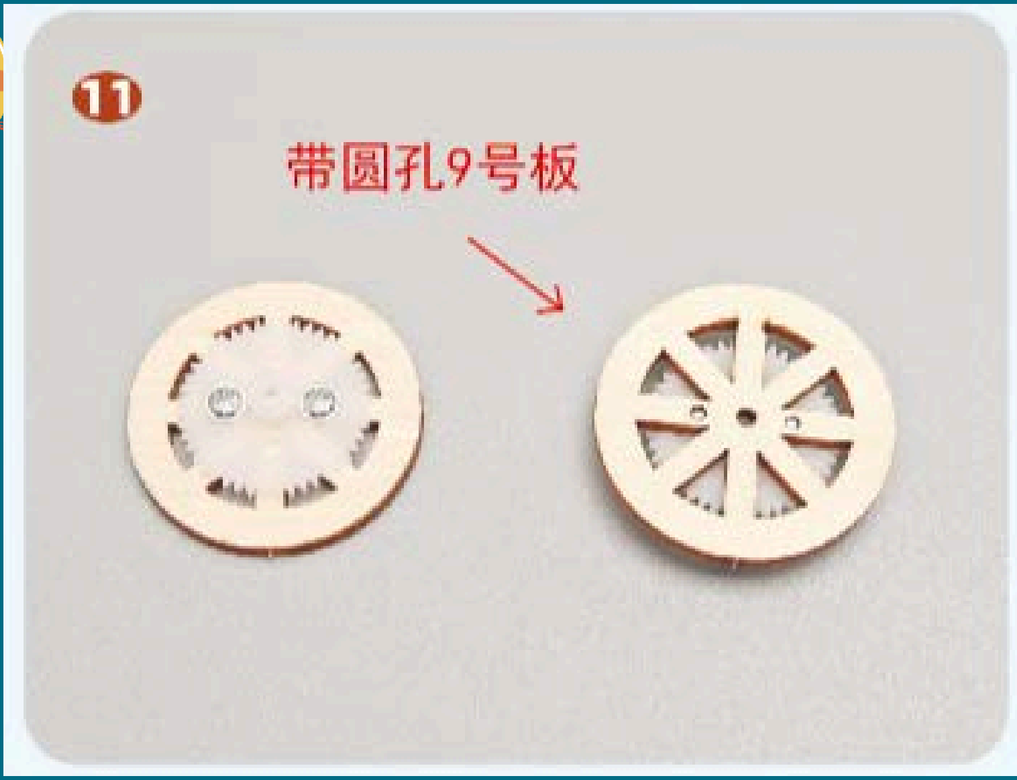


Install board No. 6 as shown.

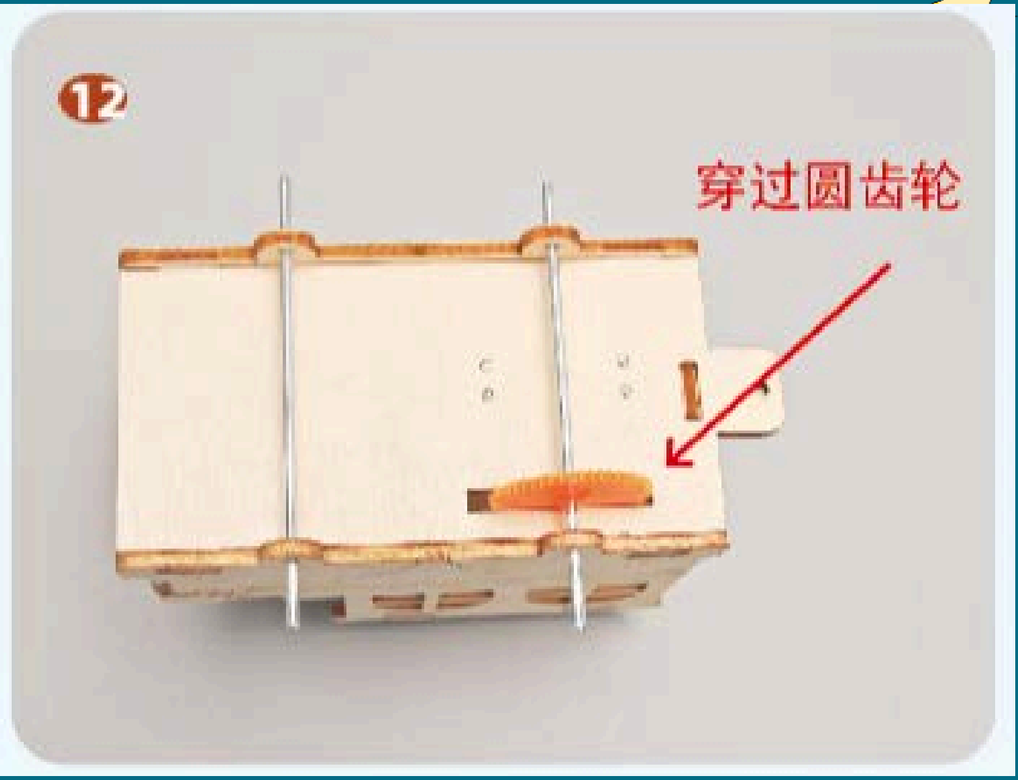


Install board No. 7 as shown.

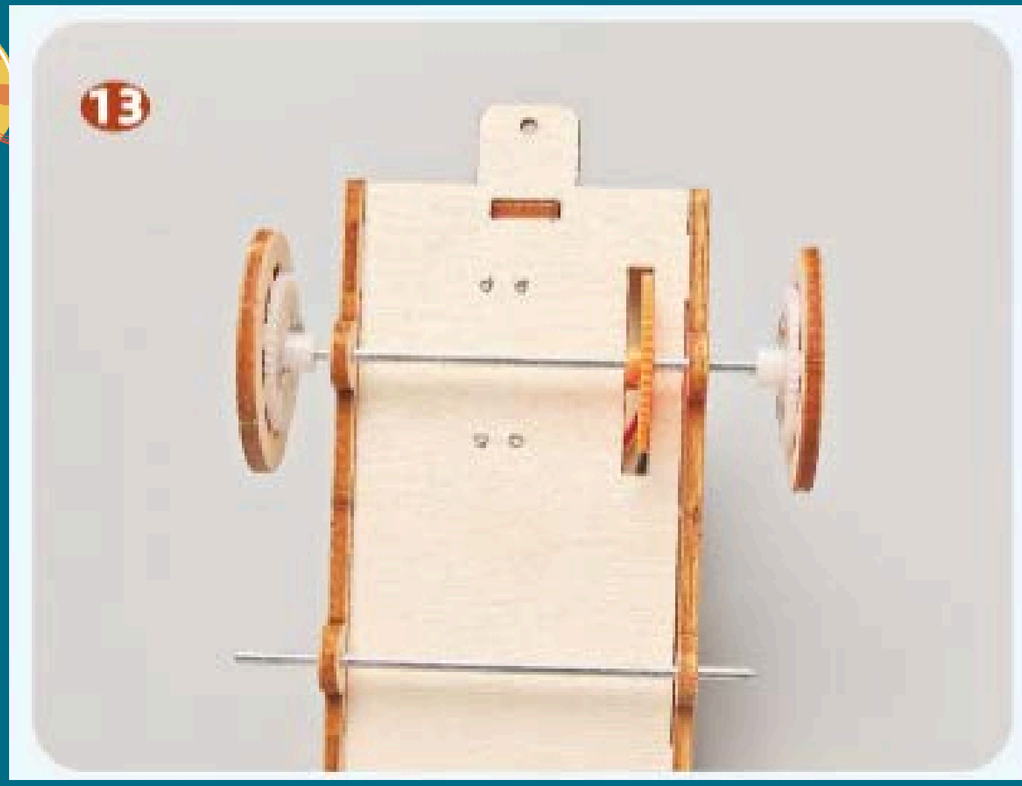
Install another board No. 1 as shown, and stick the battery box with double-sided tape.



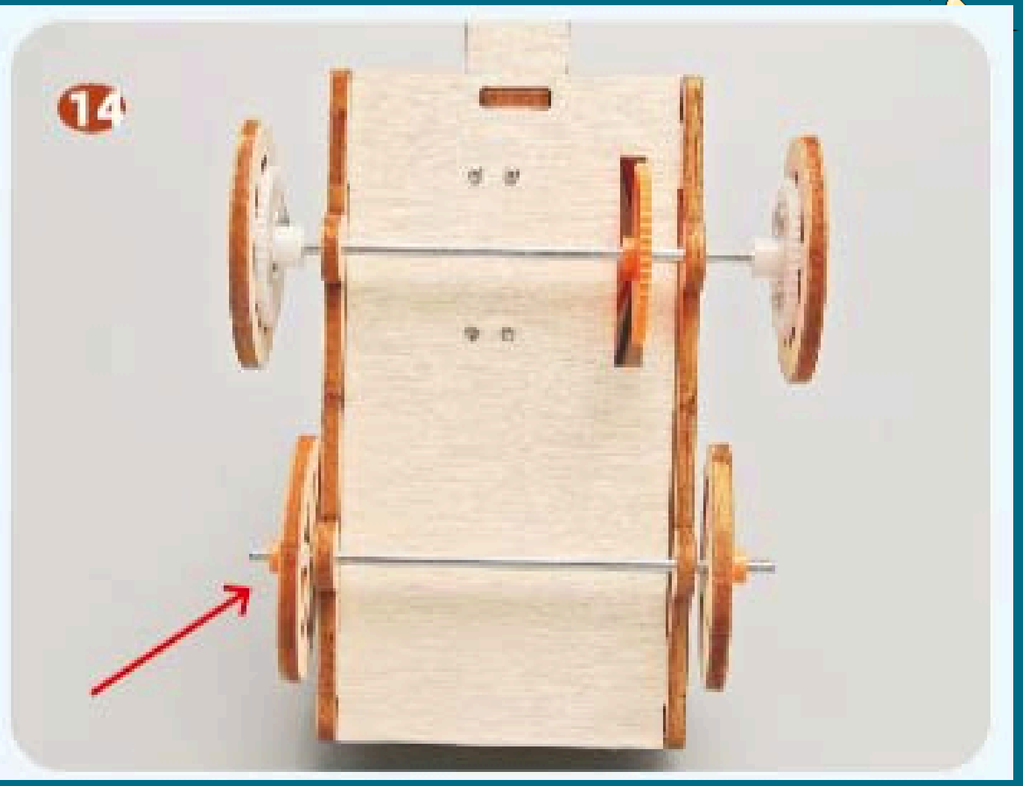
Combine two white gears with Board No. 9 (the one with round holes) as shown, and fix them together with screws to form the wheels.



Install two shafts as shown.
Pass through the round orange gear as shown
(Note: Make sure the long gear is properly engaged with the motor on step 3.)

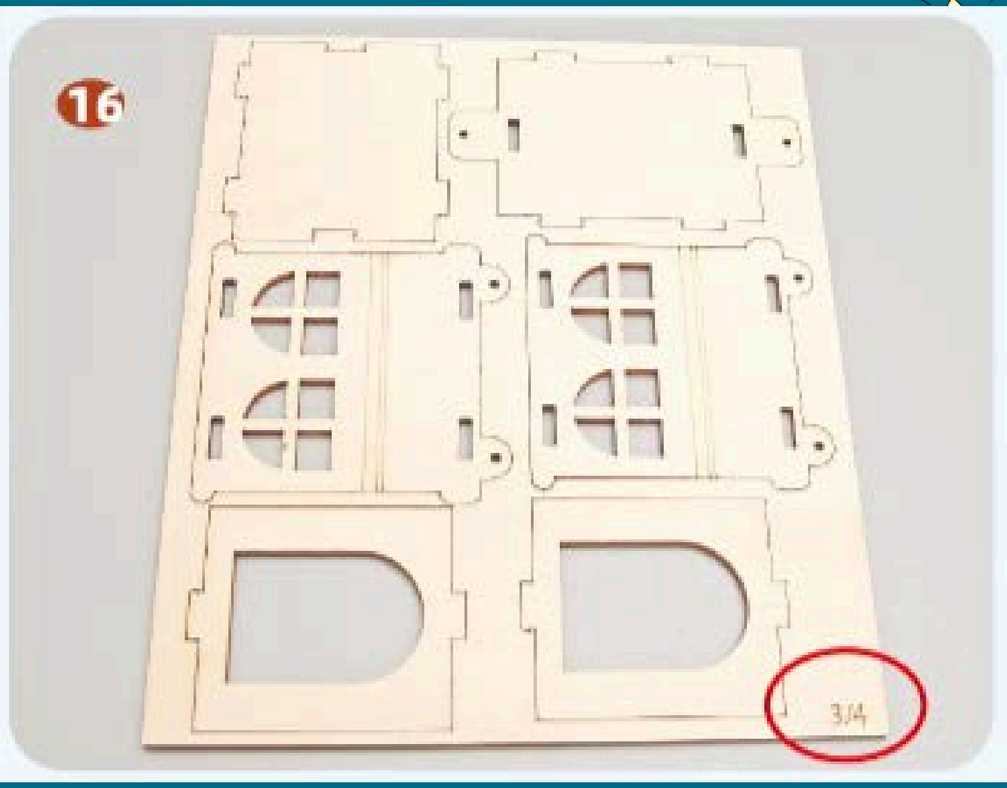


Install the white gears (wheels) as shown in the picture.



As shown, install the two No. 9 board wheels and secure them with shaft sleeves.

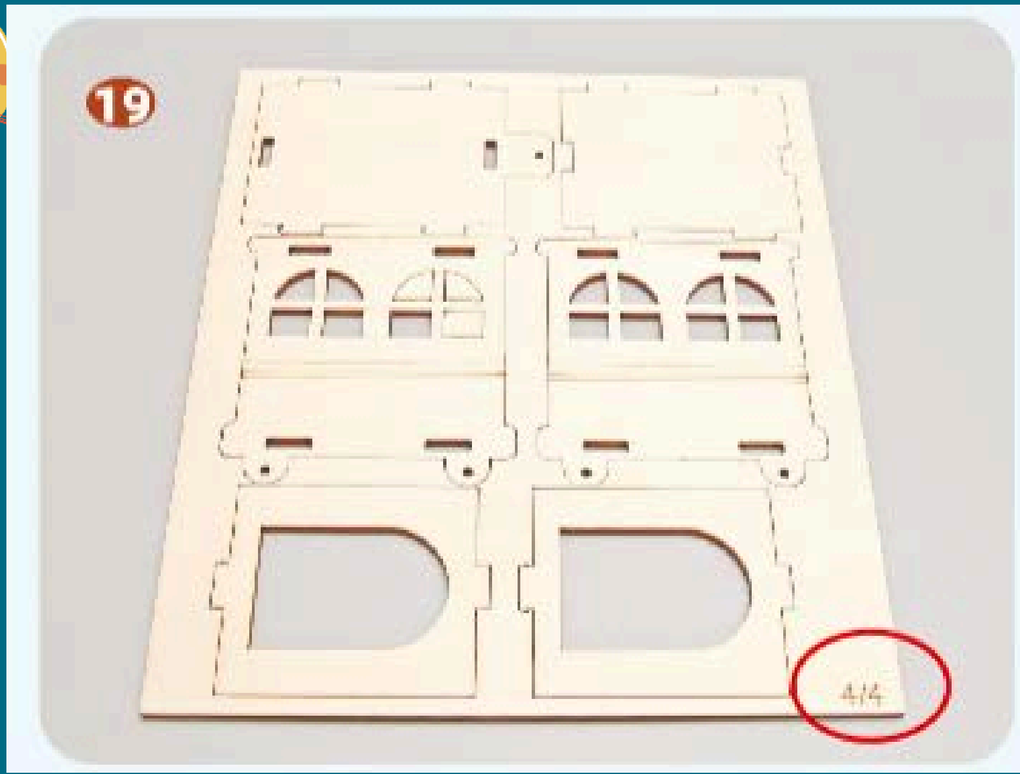
Install board No. 8 (locomotive head) as shown.



Find boards No. 3/4 parts as shown.

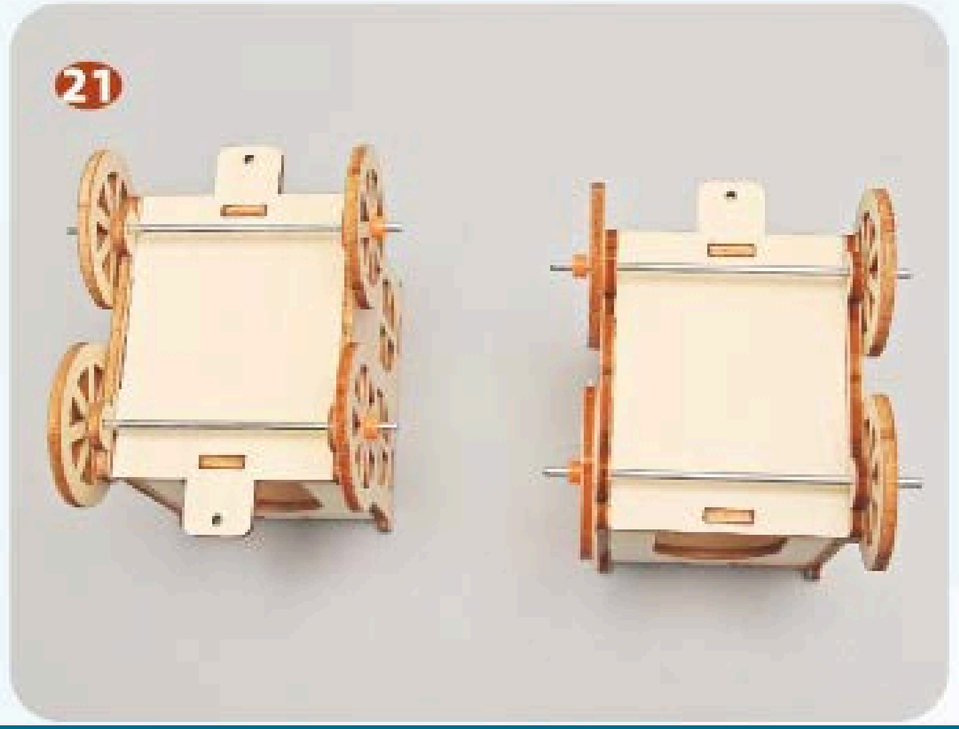
Install as shown, with the pattern facing outward.

Install (train body) as shown, with the pattern facing outward.

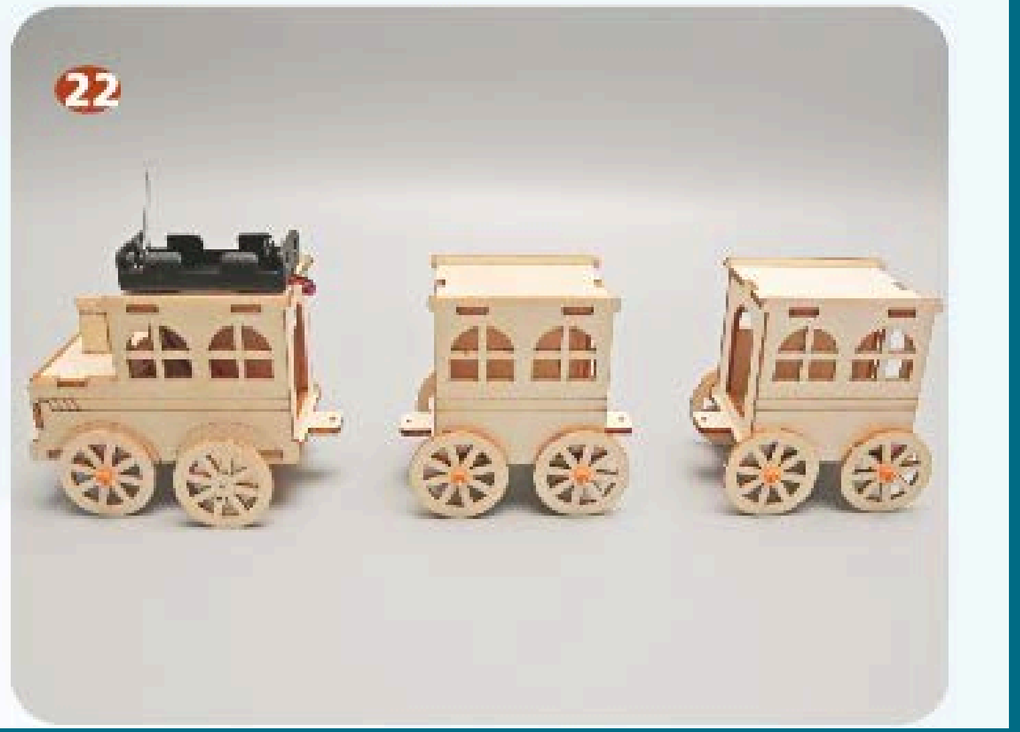


Find boards No. 4/4 as shown.

Install (train carriage) as shown, with the pattern facing outward.



Install the shaft and wheels onto the carriage as shown, and fix them with shaft sleeve.



Place the locomotive, carriage body, and rear carriage together as shown.

Use DT12 to connect the carriage as shown and hold it with shaft sleeve

Connect the carriages as shown.

Assembly Completed!

Scientific Knowledge

Knowledge Principle:

Passenger Train:
The operating principle of a train is to use traction force to move the train forward.

The traction force of a train is usually provided by the locomotive.

The locomotive, through its engine and control system, converts energy into mechanical energy, which drives the wheels to move the train forward.