

Fighter Jet





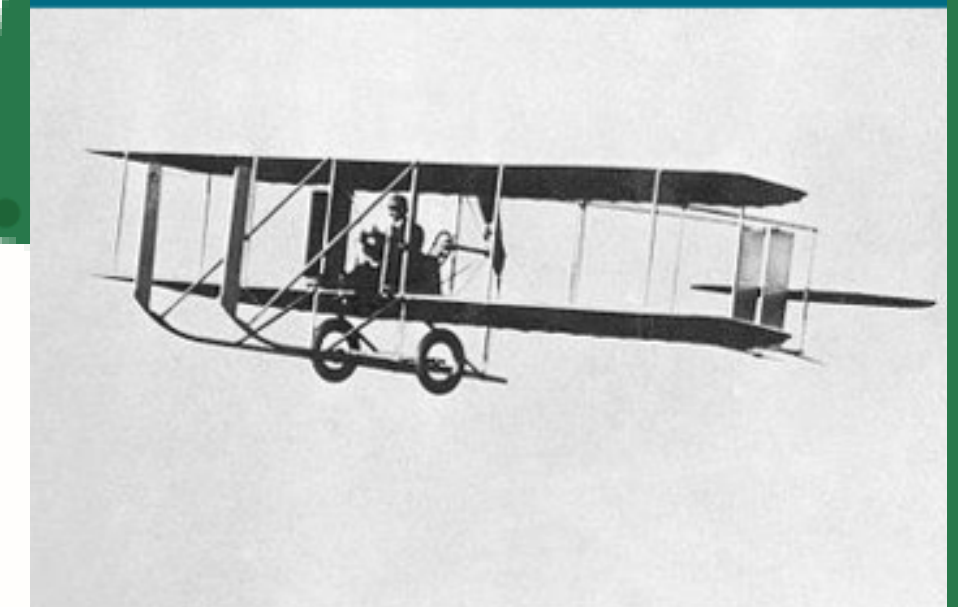
Do you know the names of the
airplanes in the pictures?



Do you know who invented
the world's first airplane?

On December 17, 1903, the Wright brothers successfully tested the world's first airplane, the Flyer I, in Kitty Hawk, North Carolina, USA.

Since the invention of the airplane, it has become an important means of modern transportation, deeply changing and influencing people's lives and opening a new chapter in humanity's exploration of the blue sky.



Next, let's learn about the
history of fighter jets!

The History of Fighter Jets



During World War I, the French were the first to mount machine guns on airplanes for air combat, leading to the emergence of specialized fighter aircraft.

These early fighters were mostly made of wood and fabric, powered by piston engines, and armed mainly with machine guns.



By the end of World War I, the basic design of fighters had been established — mainly small, single-engine aircraft with strong maneuverability and fixed forward-firing weapons.



Before World War II, fighter aircraft evolved into all-metal monoplane designs.

They were equipped with machine guns or cannons and had onboard radio communication systems.



During World War II (1930s-1940s), research on high-performance jet engines began.

Jet propulsion technology was developed in several countries, including Germany and the United Kingdom.

By the end of the war, the world's first jet fighters had appeared, marking a new era in aviation.

In the mid-1970s, air forces began forming specialized fighter units, focusing on maneuverability and versatility.

Representative models included the American F-14, F-15, F-16, and F/A-18, as well as the Soviet MiG-29 and Su-27, and France's Mirage 2000.

These aircraft became the main equipment of many nations' air forces.



——苏-27，国内仿制型号歼-11



——F-16 “隼”

From the 1980s onward, research focused on stealth, supermaneuverability, and advanced avionics systems. Representative models include the American F-22 and F-35, and the Chinese J-20. The Russian Su-57 also belongs to this generation of advanced fighters.



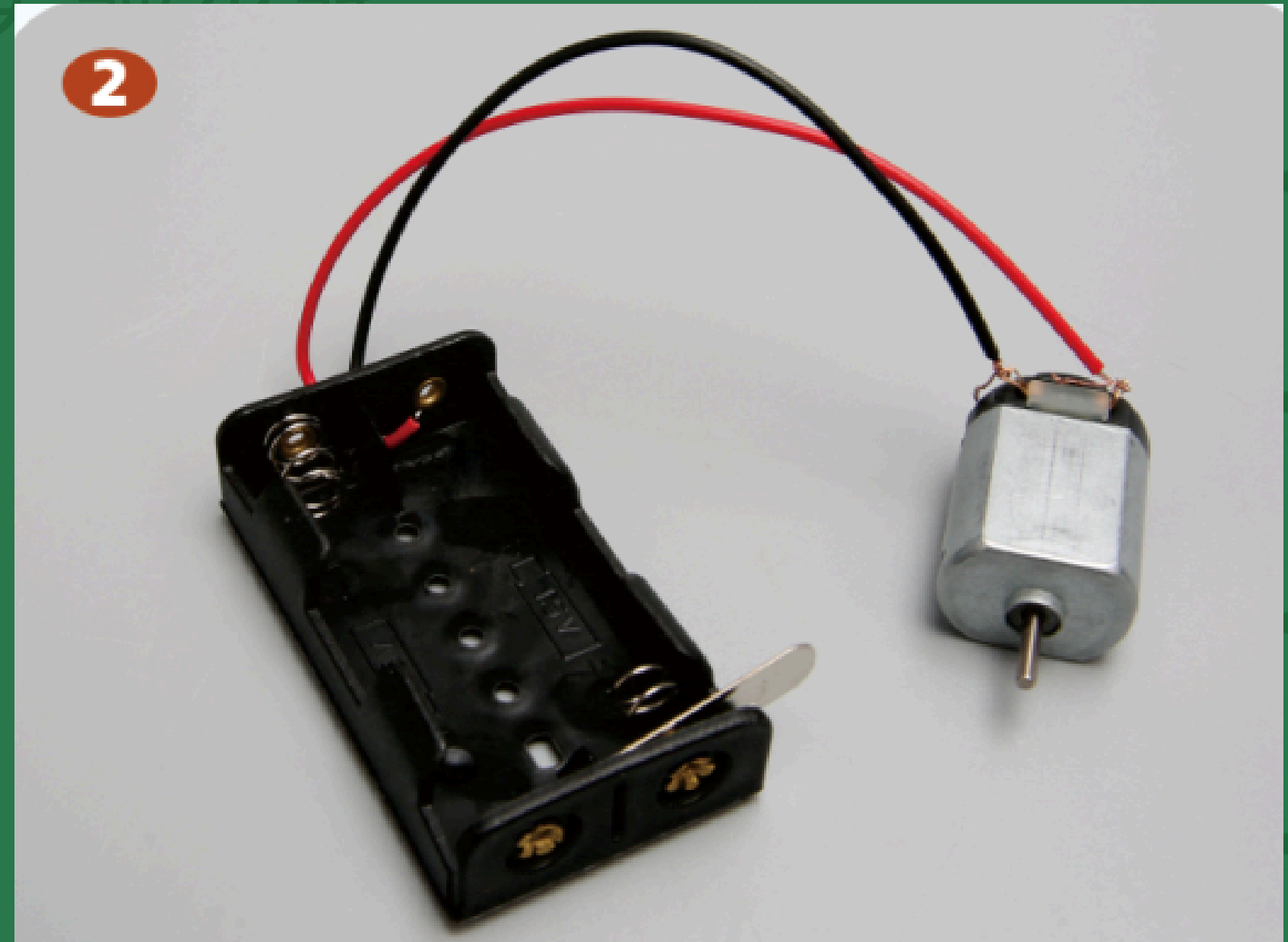


Let's make our own
fighter jet!

Recognize the Materials

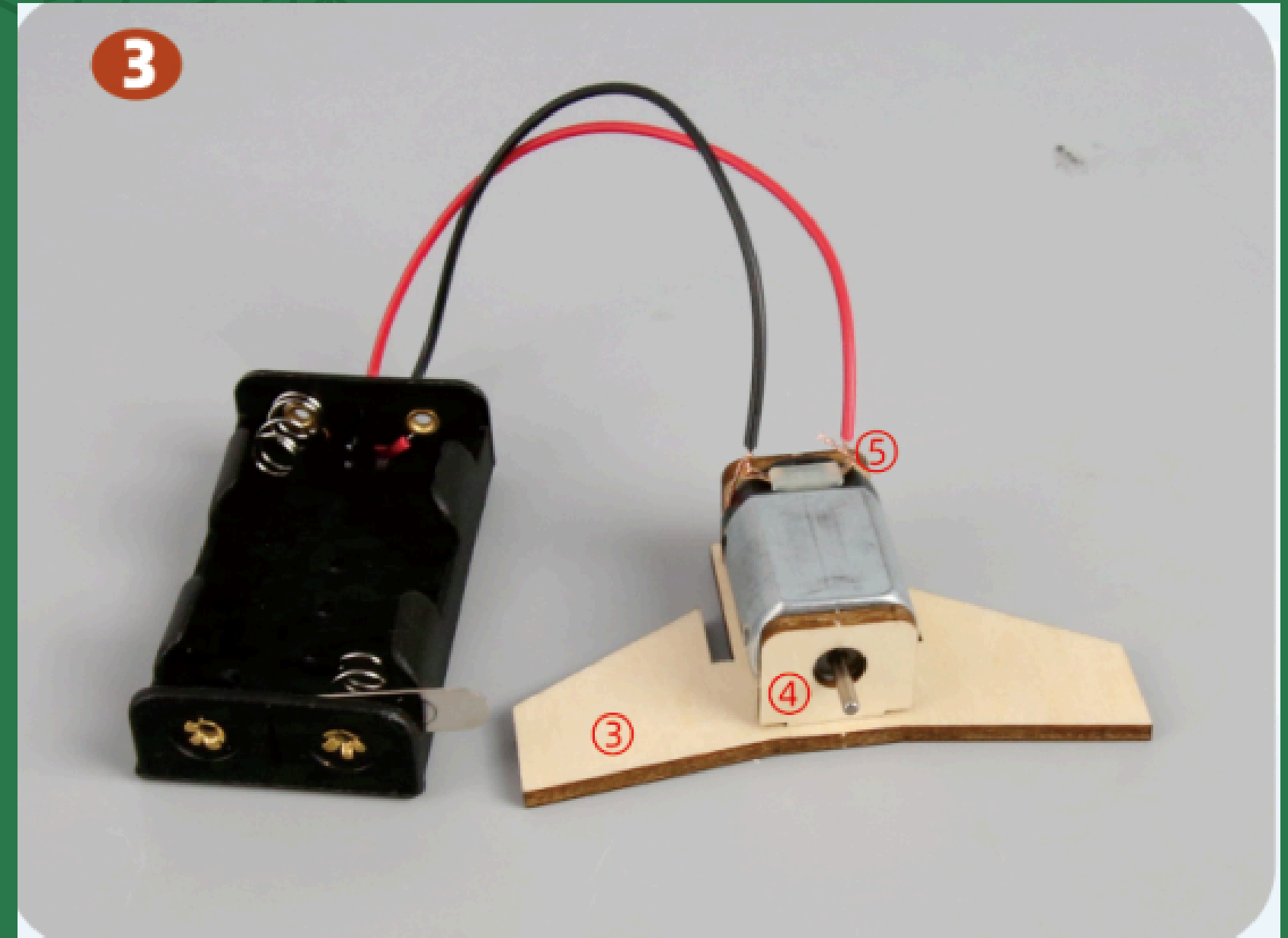


Connect the
motor to the
battery holder
wires.



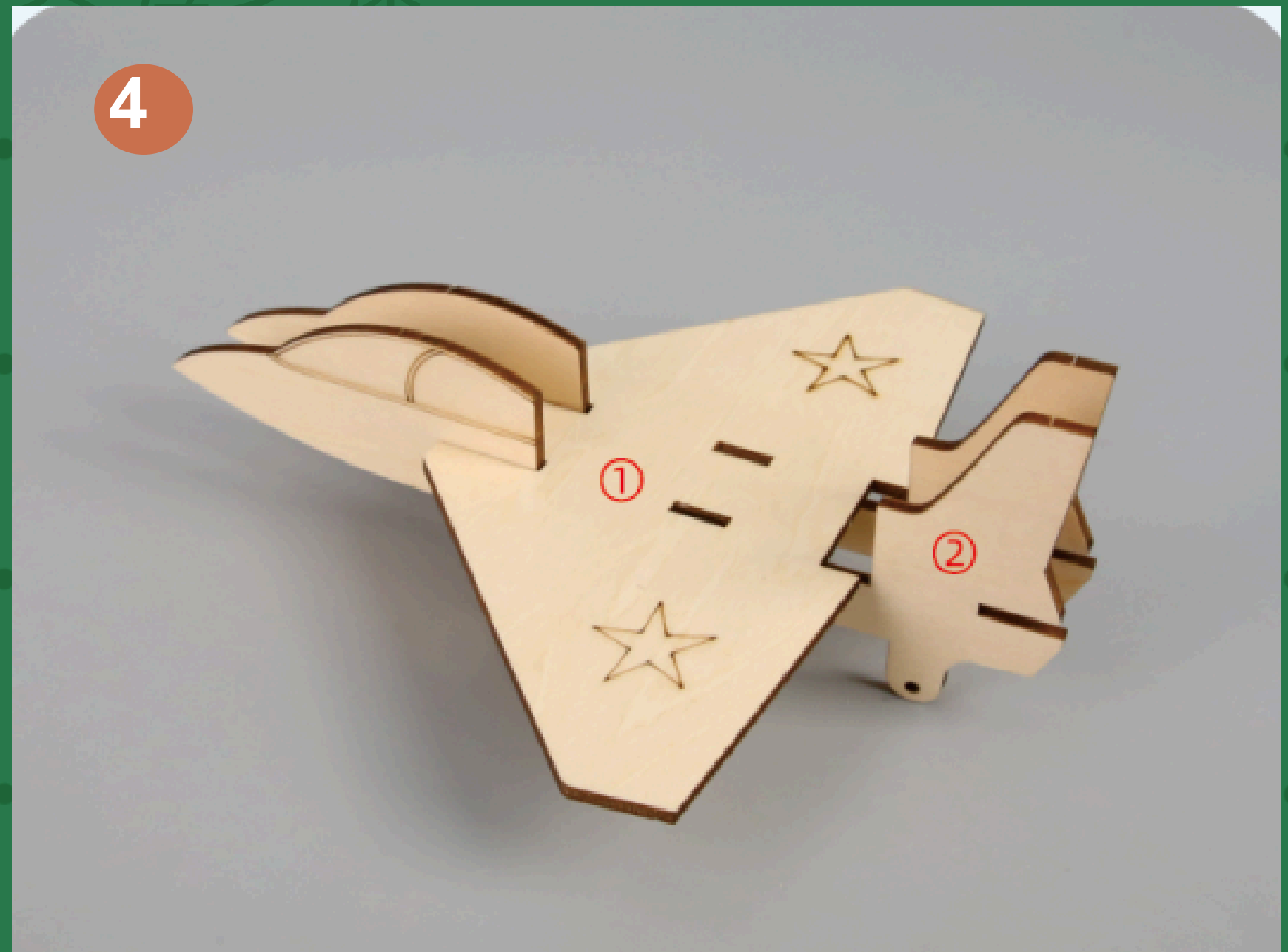
实验步骤

Assemble boards
No. 3, 4, and 5 with
the motor and
battery holder.



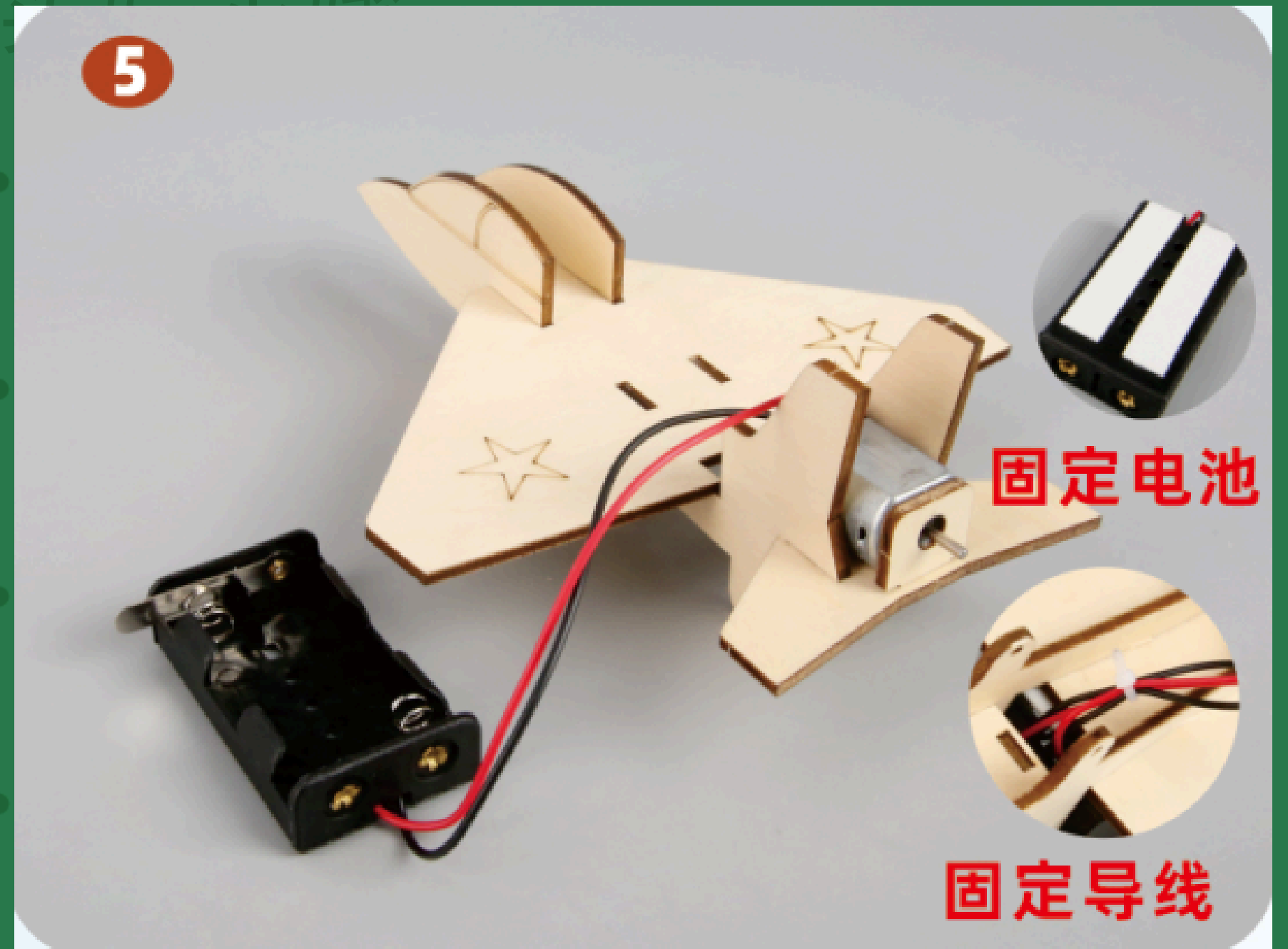
实验步骤

Assemble boards
No. 1 and No. 2
together.



Combine the
assemblies from Steps
3 and 4.

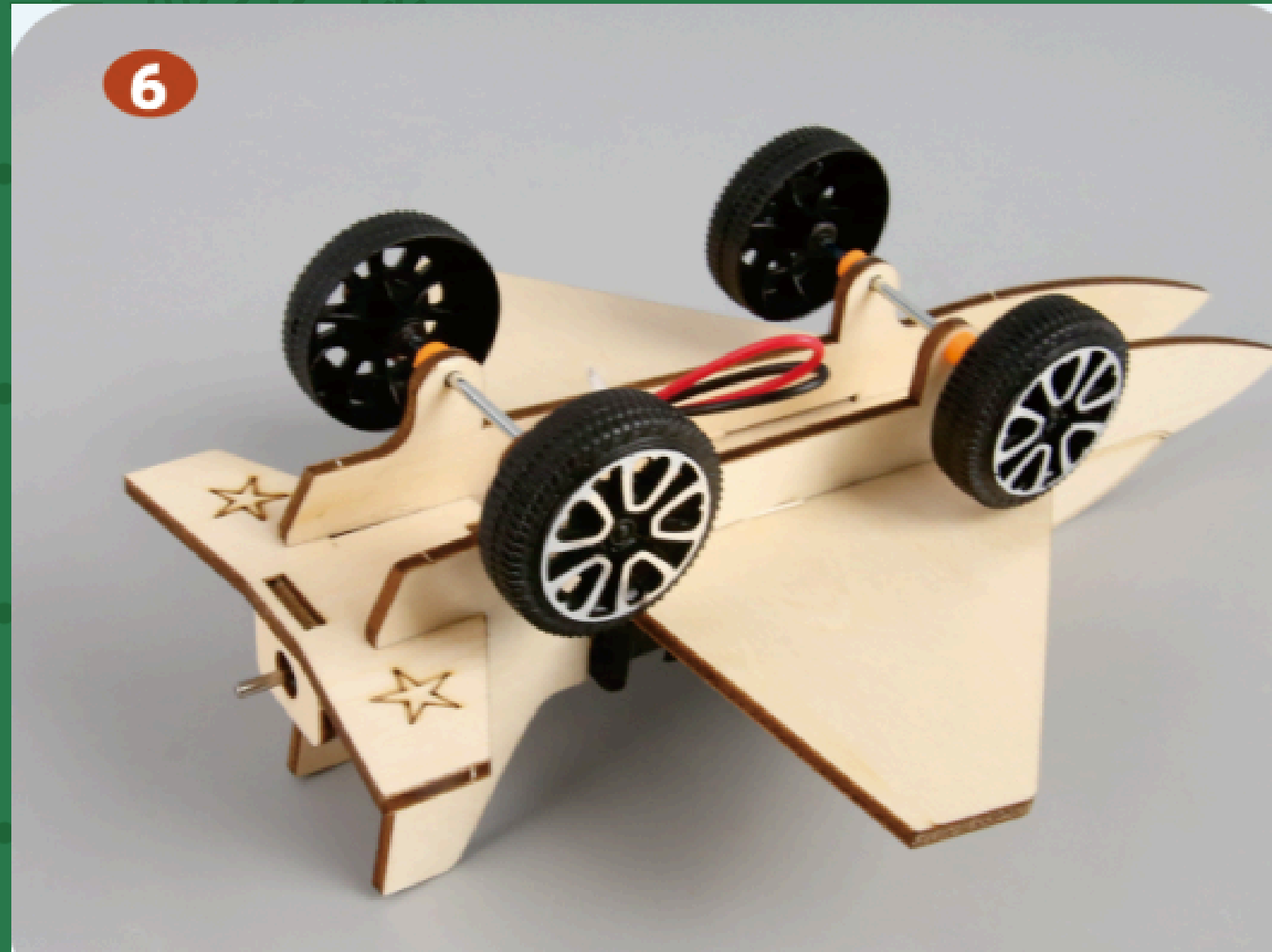
Stick the battery holder
with Foam Adhesive



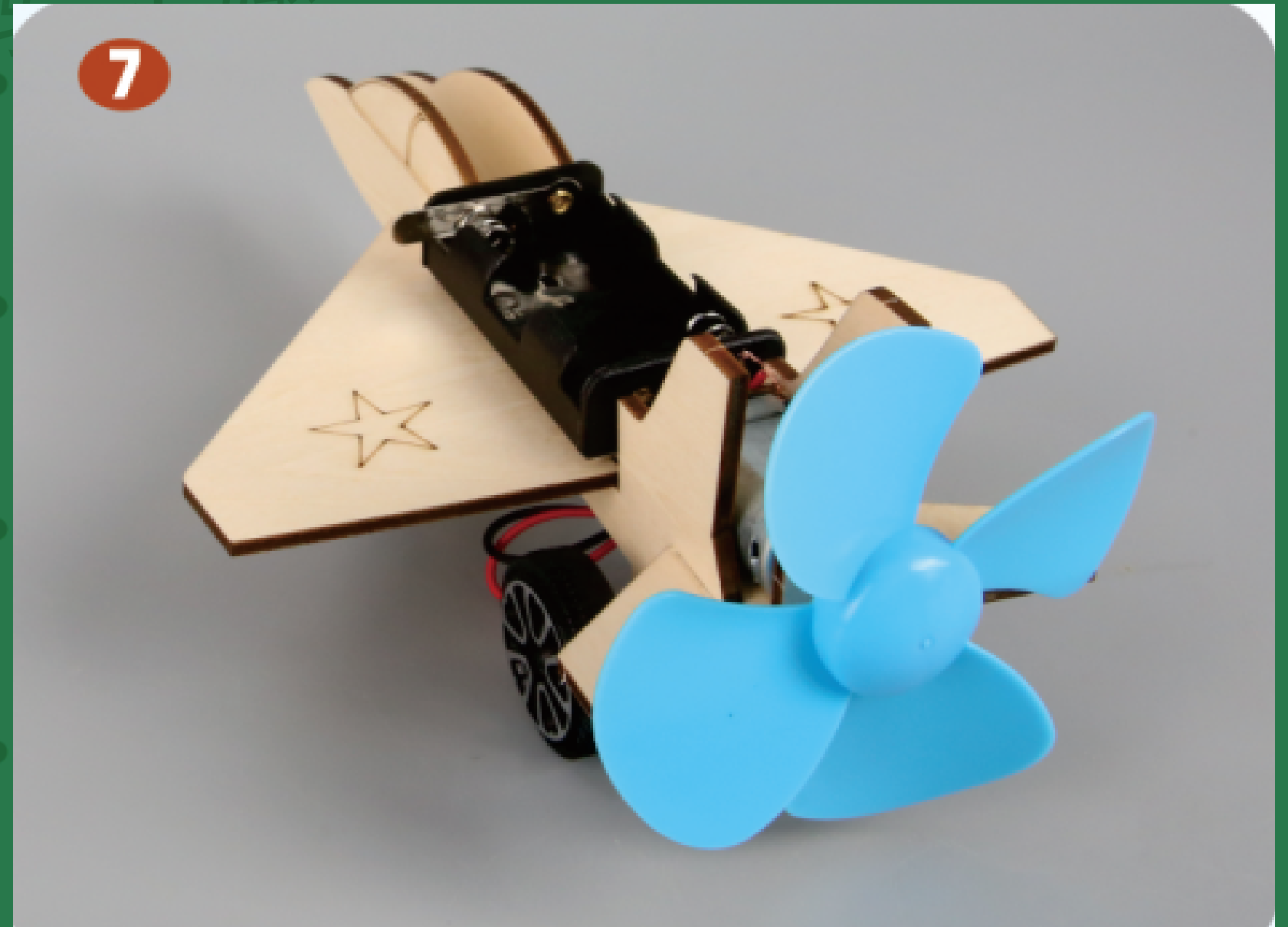
实验步骤

Install the four wheels
using the 50mm shafts.

(Put in orange rubber
ring in as shown)

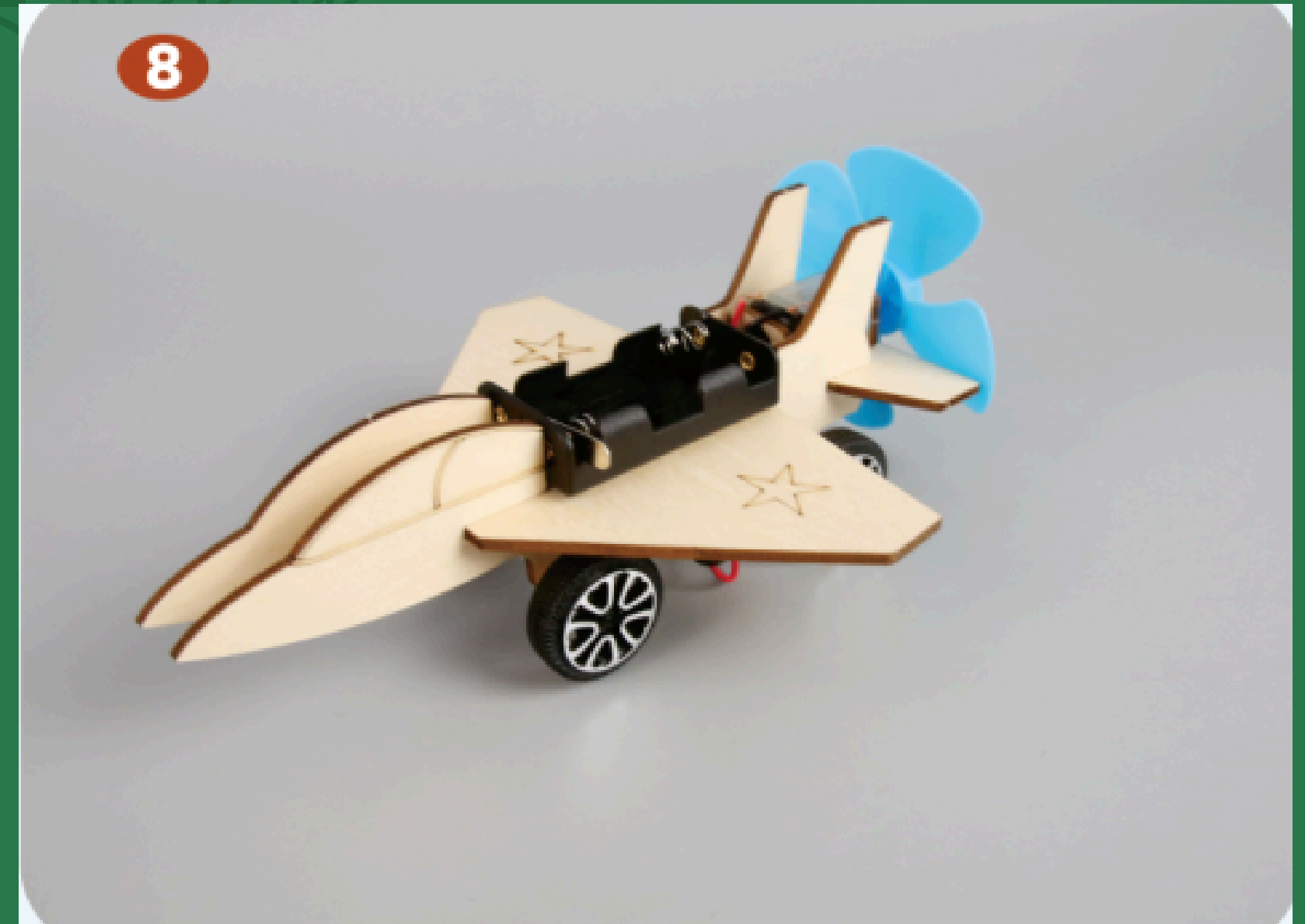


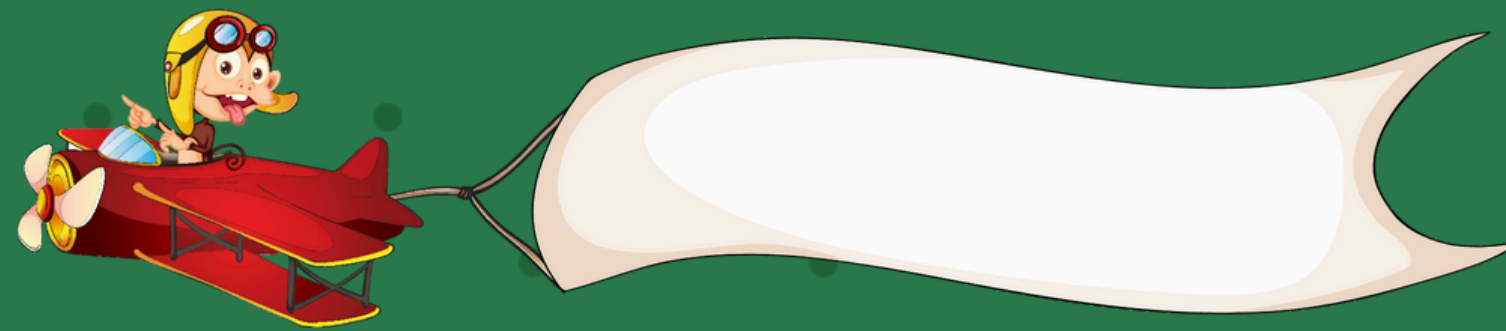
Attach the
propeller to the
motor at the tail of
the aircraft.



实验步骤

Your fighter jet model is complete!





Science Knowledge

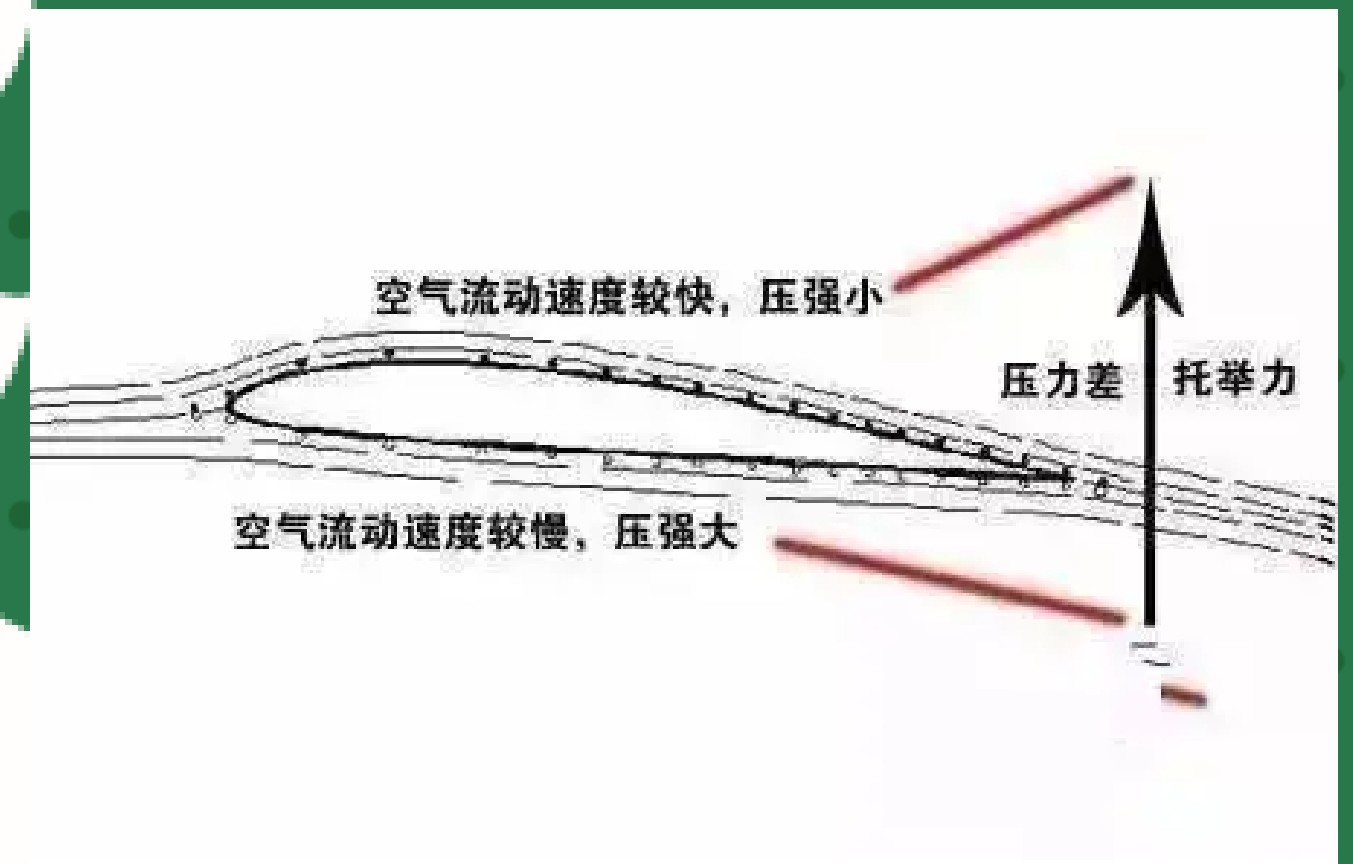


Why can airplanes fly?

Principle of Flight:

Airplanes rely on the difference in air pressure above and below the wings to generate lift.

As the airplane moves forward, air flows faster over the top of the wing and slower underneath, creating upward lift that allows the airplane to rise



Do you know how airplanes
take off?

For large passenger aircraft, takeoff begins with acceleration along the runway.

When the aircraft reaches a certain speed, the lift generated by the wings exceeds its weight, allowing it to leave the ground.

Typically, takeoff speeds are around:

- 240 km/h (150 mph) for Chinese aircraft
- 275 km/h (170 mph) for British and American aircraft



During takeoff and landing, aircraft fly at low altitudes and speeds, and the surrounding air conditions can change rapidly.

Therefore, takeoff and landing are the most accident-prone phases of flight.

For pilots, mastering these skills is a crucial part of flight training.

