Wonder Project

Rocket Challenge

Mission Brief 5: Forces of flight

Apply Newton's first law to rocketry!

Newton's first law

An object will remain at rest (not moving) or keep moving forever at the same speed and in a straight line, unless there is another force acting on it.

This means that your rocket will not lift off the ground without any force acting on it.

Step 1

Write the correct force next to the definitions below:

Thrust | **Drag** | **Weight** | **Lift**

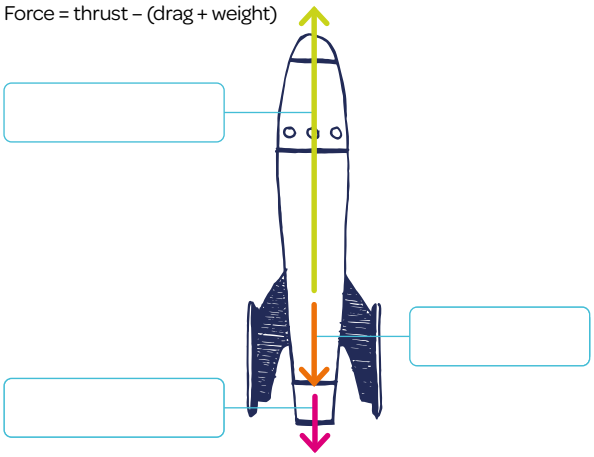
The force that makes your rocket move through the air	
The force on your rocket opposite to its movement through the air	
The force of gravity on your rocket	
The force that helps to keep your rocket stable	

Step 2

There are three main forces acting on this rocket diagram. Fill in the boxes with the correct force.

During launch

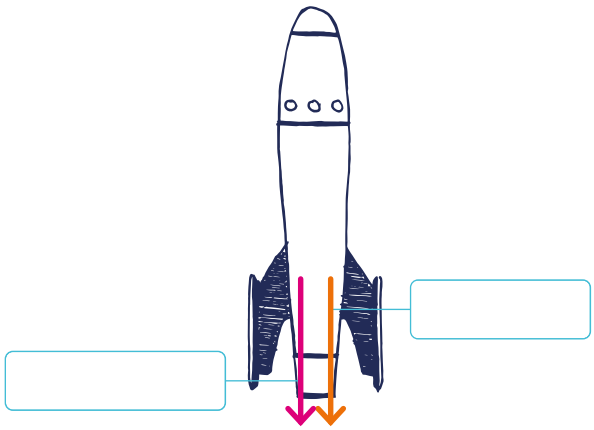
Force = thrust – (drag + weight)



- Rocket travels upwards.
- Speed becomes faster and faster.

After thrust has finished

Force = drag + weight



- Momentum keeps rocket moving upwards.
- Speed decreases.