



Wonder  
Project

## Rocket Challenge

### Mission Brief 5: Forces of flight

Now we've learned Newton's first law, it's time to learn how it applies 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 of rocketry next to the definitions below:

Weight

Lift

Thrust

Drag

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

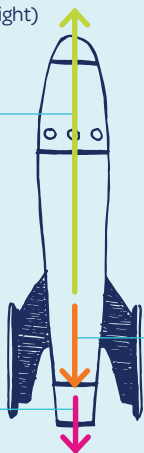
The force that helps to keep your rocket stable

#### Step 2

There are three main forces acting on this rocket diagram. Fill in the blank boxes with the correct force. You may even like to draw and label your own rocket on a piece of paper.

##### 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.