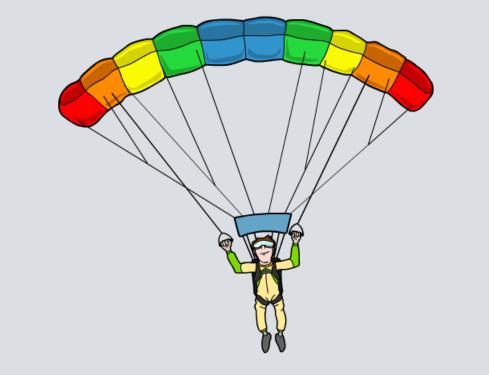
#### **Boardworks High School Science**





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## **Introducing balanced forces**





2 of 5



## What is Newton's first law?



If the net force acting on an object is zero, all the forces are said to be **balanced**.

This forms the basis of **Newton's first law of motion**, which states:

If the forces on an object are balanced, the object will continue to do what it is already doing:

- if the object is **stationary**, it will **remain stationary**
- if the object is moving, it will continue to move at the same speed and in the same direction.



3 of 5



# **Terminal velocity of a skydiver**



### What is terminal velocity?

When a skydiver jumps out of a plane, why does he eventually stop accelerating?

Click "**play**" to find out more about terminal velocity.

4 of 5

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## Velocity-time graph of skydiver



### What does the velocity-time graph of a skydiver show?

