

Nova's Forces Flashcards

Learning objective: To understand and explain the effects of forces including gravity, air resistance, water resistance, and friction.

Read the front of the card, think of the answer, and then flip to check if you are correct. Use these cards to test your knowledge of how objects move and interact.

What is the force that pulls objects towards the centre of the Earth?

Gravity

Which force acts in the opposite direction to an object's motion when it moves through air?

Air Resistance

True or False: Friction is a force that acts in the same direction as an object's movement.

False (Friction acts in the opposite direction to slow an object down)

Nova the owl wants to drop a feather and a pebble. Which will reach the ground first and why?

The pebble, because air resistance has a greater effect on the larger surface area of the feather.

What unit of measurement do we use to measure force?

Newtons (N)

What happens to the movement of an object if the forces acting upon it are balanced?

The object remains stationary or continues to move at a constant speed in a straight line.

What is the term for the 'drag' force experienced by an object moving through water?

Water Resistance

If you push a toy car across a carpet, why does it stop?

Friction between the wheels and the carpet slows the car down.

What is the difference between mass and weight?

Mass is the amount of matter in an object (measured in kg), while weight is the force exerted on an object by gravity (measured in Newtons).

How can you reduce air resistance on a vehicle?

By making the object more streamlined or aerodynamic.

What happens when forces are unbalanced?

The object will change speed, change direction, or change shape.

Which scientist is famously associated with the study of gravity and forces?

Sir Isaac Newton