we the curious
Workshop

Fantastic Forces Upper KS2

Duration: 1 hour, max capacity: 30 students

How do forces affect our everyday lives? Demonstrations and experimentation reveal the effects of gravity and air resistance as students predict, observe and record results about these fundamental phenomena.

Key Words

Forces, Gravity, Air resistance, Balanced and unbalanced forces, Force diagrams.

Learning objectives

Understand that forces are pushes and pulls and can move things.
Understand that gravity is a force that pulls things to the centre of the Earth.
Gain an appreciation that gravity acts in the same way on heavier and lighter objects.
Gain an appreciation that objects with a larger surface area fall more slowly through the air due to air resistance.
Understand that balanced forces result in no change in movement.

Content

Explore some of the forces needed for movement by pushing a volunteer in our special We The Curious truck.
Make predictions about and investigate the forces of gravity and air resistance.
Carry out an investigation to find out how gravity acts on objects of different masses.
Carry out an investigation and make a spinner to find out how surface area and air resistance affect falling objects.
Watch a demonstration to show the effects of balanced and unbalanced forces on the movement of a small truck.
See how air resistance can affect the movement of a vehicle.

Curriculum Links

Forces, Year 5
Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
Identify the effects of air resistance and friction that act between moving surfaces

Potential Hazards and accessibility

Students will drop juggling balls, work with scissors, and model forces using a large fan.