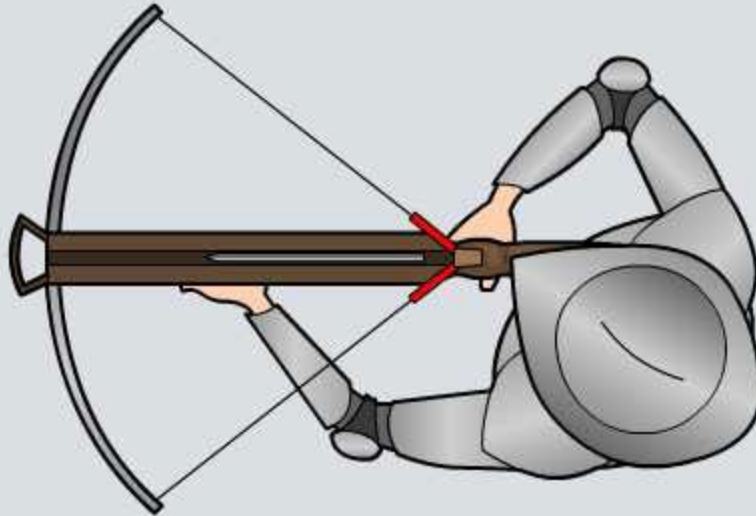
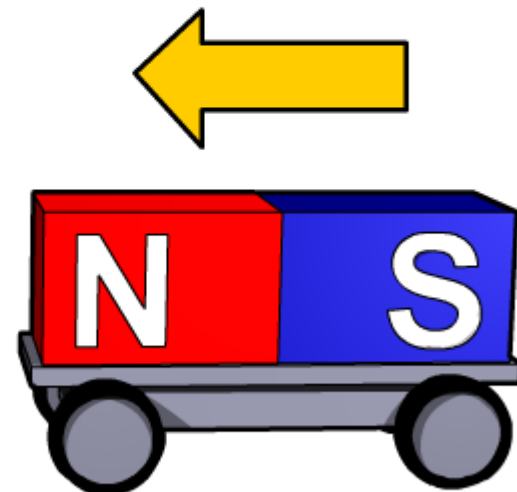
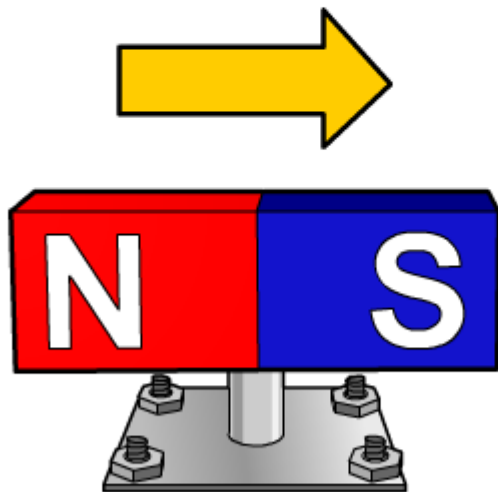


What Are Forces?



What are forces and what are their effects?

A force is a push or a pull that objects exert on each other.



What type of force is involved in each activity?

push

pull

writing on paper

?

C

solve

↶

Types of forces

All forces involve interactions between objects. There are several different types.

Gravity and **magnetism** are forces that can act over distances.

Friction and **upthrust** are forces that involve direct contact between objects.



All types of forces can occur whether objects are still or moving.

What forces are acting during this rocket launch?

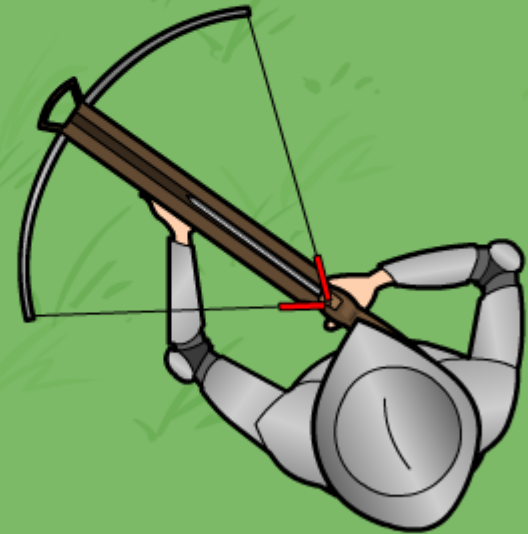


The effects of forces

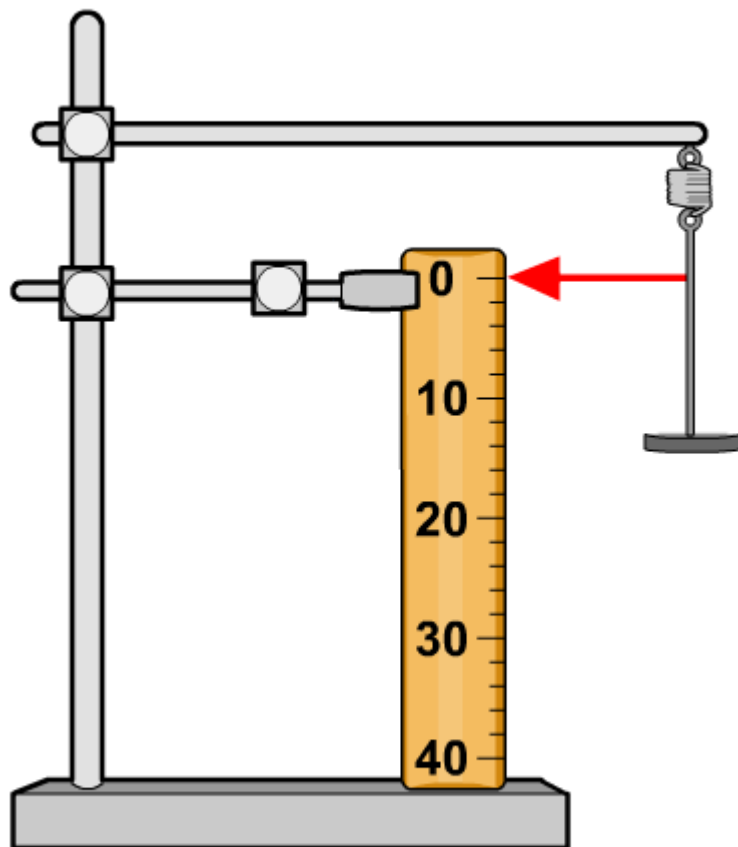
A force cannot be seen, but its effects on an object can.

Forces can cause objects to change speed, shape and direction.

Click "**play**" to find out more.



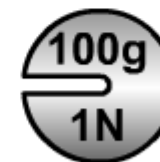
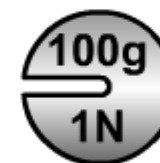
What is the elastic limit of this spring?



weight added: **0 N**

spring extension: **0 cm**

weight bank



graph

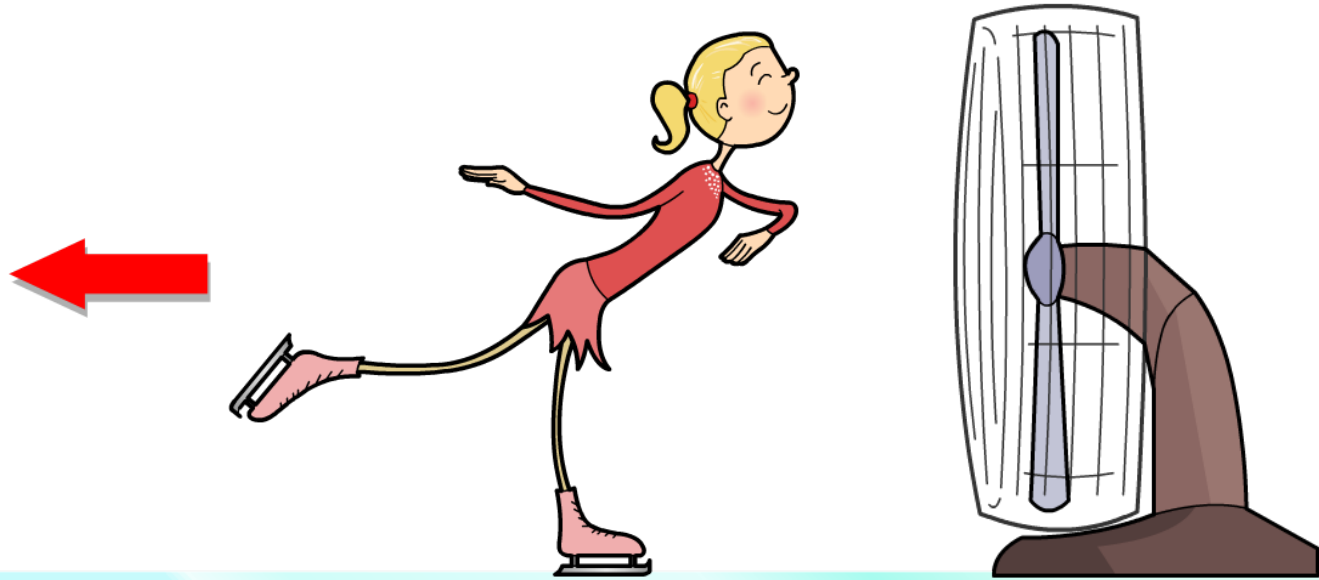




There are two wind machines applying forces to the ice skater. The forces acting on the skater are equal in magnitude and opposite in direction.

The forces are **balanced**, so they cancel each other out. The skater does not move.





What if only one wind machine is blowing on the skater?

The forces acting on her are no longer balanced so she will start to move to the left. Her speed will change – this is called acceleration.

Unbalanced forces lead to a change in speed or direction.

What is a force meter?

Force is measured in newtons (N).

A forcemeter is an instrument that is used to measure forces.

Click "**play**" to find out more.

