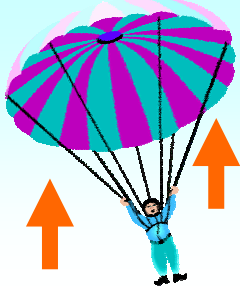


Forces in Action Fact Sheet



Air resistance is a type of **friction** which slows the fall of a parachute or a piece of paper in air. The bigger the surface area the greater the amount of **air resistance**.

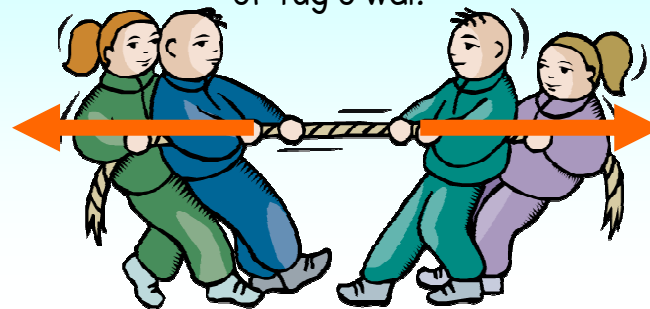


This is a **forcemeter**. It is marked in **newtons**, and is used to measure the **magnitude** of a **force**.

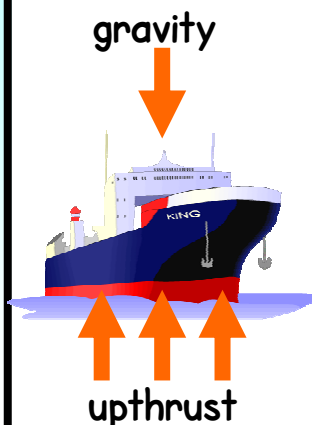
Friction is the force between two surfaces - for example there is friction between a car tyre and the road, or a ski and snow. Melted snow between the ski and the snow **lubricates** the ski and reduces the friction.



These two teams are both **pulling**, in the **direction** of the **arrows**, in this game of tug o' war.



Water resistance is another type of **friction** which slows objects moving through water.



The forces of **gravity** and **upthrust** need to be **balanced** for a ship to float.



The Earth's **gravity** pulls objects to its centre.

Forces in Action Glossary

air resistance - the force that air exerts on a moving object	mass - the amount of material in an object measured in grams (g)
balanced - when the forces acting on an object are opposite and equal such that the object does not move	newtons - the units used to measure forces (N)
force - a push, pull, twist or turn - gravity, friction and upthrust are all examples of forces	speed - how fast an object is moving
force diagram - a diagram which represents forces and the directions they are acting with arrows	stationary - not moving
forcemeter - a device used to measure forces (sometimes called a newtonmeter)	unbalanced - when one force acting on an object is greater than the other forces, the object moves in the direction in which that force is acting
friction - is the force between two moving surfaces	upthrust - a force in water which pushes upwards
gravity - the force that causes all objects to fall to the ground	water resistance - the force that water exerts on a moving object
lubrication - a method to reduce the friction between two surfaces	weight - the force downward on an object caused by gravity



The **forces** on this gymnast are **balanced** - the gymnast is **stationary**.