

Nova's Guide to Forces: How the World Moves

Get ready to explore the invisible pushes and pulls that keep our world in motion!

- **Gravity is the force that pulls objects towards the centre of the Earth, giving us weight. What is the standard unit of measurement we use for force?**
- **Friction is a contact force that acts between two surfaces sliding against each other. It always acts in the opposite direction to the movement.**
- **Air resistance is a type of friction caused by air particles pushing against a moving object. A larger surface area usually leads to more air resistance.**
- **Water resistance works similarly to air resistance but occurs when an object moves through a liquid. This is why streamlined shapes are used for ships and submarines.**
- **When forces on an object are balanced, the object will either stay still or continue moving at a steady speed in a straight line.**
- **Unbalanced forces cause a change in an object's motion, such as speeding up, slowing down, or changing direction.**

Did you know? Did you know? If you were to drop a feather and a hammer on the Moon, they would hit the ground at exactly the same time! This is because there is no air on the Moon to create air resistance, meaning gravity acts on both objects equally regardless of their shape or mass.

Key vocabulary: Gravity · Air Resistance · Water Resistance · Friction · Surface Area · Newton · Balanced Forces · Unbalanced Forces