

Nova's Guide to Fantastic Forces

Explore the invisible pushes and pulls that shape our world with Nova the Owl!

■ **Friction is a force that acts between two surfaces when they rub together, often acting as a 'brake' to slow moving objects down.**

■ **Air resistance is a type of friction caused by air pushing against an object as it moves through it, especially if the object is moving quickly.**

■ **Water resistance acts on objects moving through water, which is why streamlined shapes like dolphins are designed to move through it easily.**

■ **Gravity is the force that pulls all objects towards the center of the Earth, keeping our feet firmly on the ground.**

■ **Upthrust is the upward force that water exerts on an object, which helps things to float if the upthrust is strong enough.**

Did you know? Did you know? If you drop a apartment sheet of paper and a crumpled ball of paper at the same time, the crumpled ball hits the ground first! This is because the apartment sheet has a larger surface area, allowing air resistance to push up against it more effectively and slow its fall.

Key vocabulary: Gravity · Friction · Air resistance · Water resistance · Surface area · Upthrust