

**Vocabulary**

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| air resistance | the frictional force air exerts against a moving object. |
| buoyancy | the ability of objects to float in water or air. |
| force meter | a piece of equipment containing a spring, used to measure forces |
| friction | the resistance of motion when one object rubs against another |
| gravity | a pulling force that works across space |
| mass | the amount of matter or substance that makes up an object, measured in units called kilograms |
| Newton | a unit of force  |
| repel | A force that pushed away from something else |



**Key questions: How do magnets make trains move?**

**Key Learning: Magnets create a force which is used to repel the train and glide it over special tracks.**

**Key questions:** **Can you disprove the theory that heavy things can’t float?**

**Key Learning: Ships weighing thousands of tonnes can float easily on water due to the force of upthrust in the water and the way that its weight is dispersed (shared across its shape).**





**Key questions:**: **What is the best design for a parachute?**

**Key Learning: The shape and design of a parachute affects the amount of air resistance that is needed to safely land.**

Super Scientist Investigates:

What it the best shape for the canopy of a parachute?

**Key questions: What is gravity and how is Isaac Newton involved?**

**Key Learning: Isaac Newton described gravity as a pulling force that keeps people on the ground rather than floating off and which keeps the moon in orbit. He also told the story of seeing an apple fall to the ground from a tree which inspired him to wonder why it fell down, rather than up or across.**

**FPS SCIENCE**

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