Science Knowledge Organiser

Year 6	Forces	Summer 1

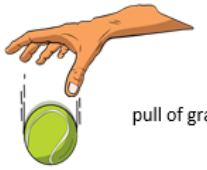
Key Vocabulary

attract	To pull towards.
contact	When objects touch.
distance	The length between two objects.
force	A push or pull that acts on an object that can cause it to move, change shape or change direction.
friction	The force that acts upon one surface when it moves against another.
gravity	A pull force that acts at a distance.
pull	To move something towards.
push	To move something away.
repel	To push away.
air resistance	Air resistance is a force which acts in the opposite direction to gravity. It is a type of friction.
water resistance	Water resistance is the force responsible for making it difficult for us to move through the water.
molecules	A molecule is a particle made up of two or more atoms that have bonded together. A water molecule, for example, is made up of two hydrogen atoms and one oxygen atom; - its chemical formula is therefore H2O. All matter is made up of molecules - they are all around us.

Sticky Knowledge

Gravity

Gravity is a force which **acts at a distance**. It is a **pull force** that pulls objects towards the centre of the Earth.



pull of gravity

The planets and the Sun do not touch, yet the **planets stay in orbit** around the Sun due to the force of gravity.



Water resistance

Water resistance is the force responsible for making it difficult for us to **move through the water**. It acts between a moving object and the **water molecules** around it, **slowing the object down**.



ir Isaac Newton was a **scientist who leveloped the first description of the orce of gravity**. Newton said that he tarted thinking about **gravity** after vatching an **apple fall from a tree** but it lid not actually hit him on the head, as it



Air resistance

Air resistance is a force that acts **in the opposite direction to gravity. It acts between** a moving object and the air molecules around it, slowing the object down. Air resistance is a type of **friction**. **Parachutes** are used to increase air resistance and slow down the parachutist, so they can land safely. Modern cars and planes are **streamlined in design** to reduce air resistance, allowing them to move faster.

