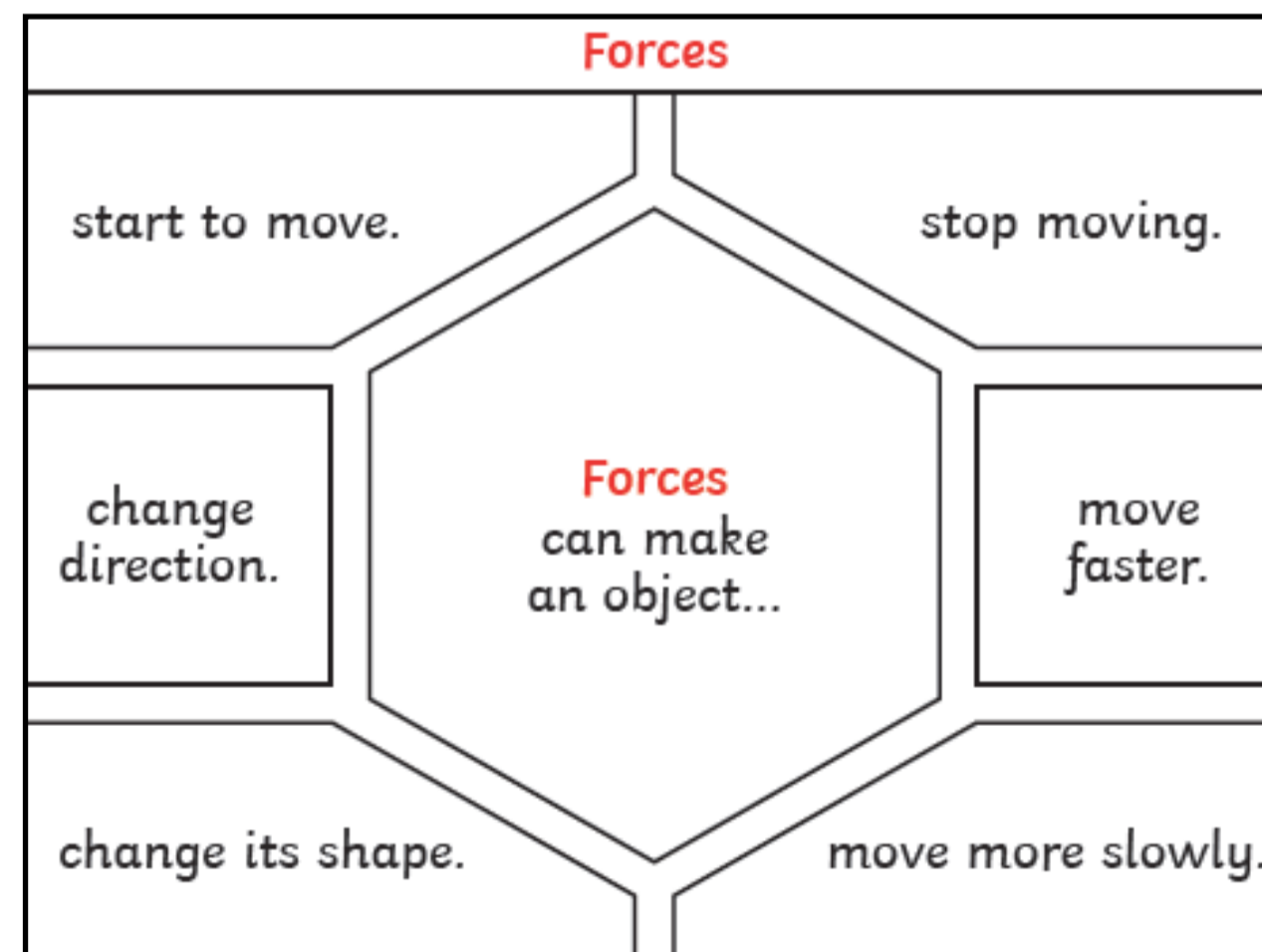
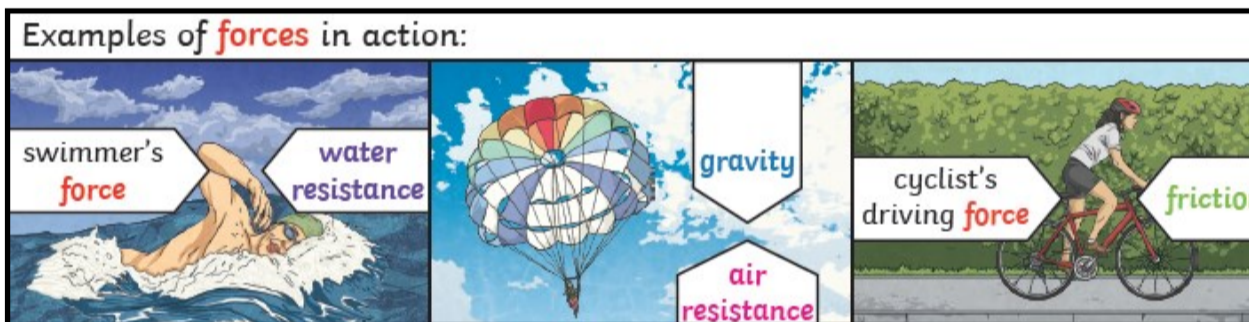
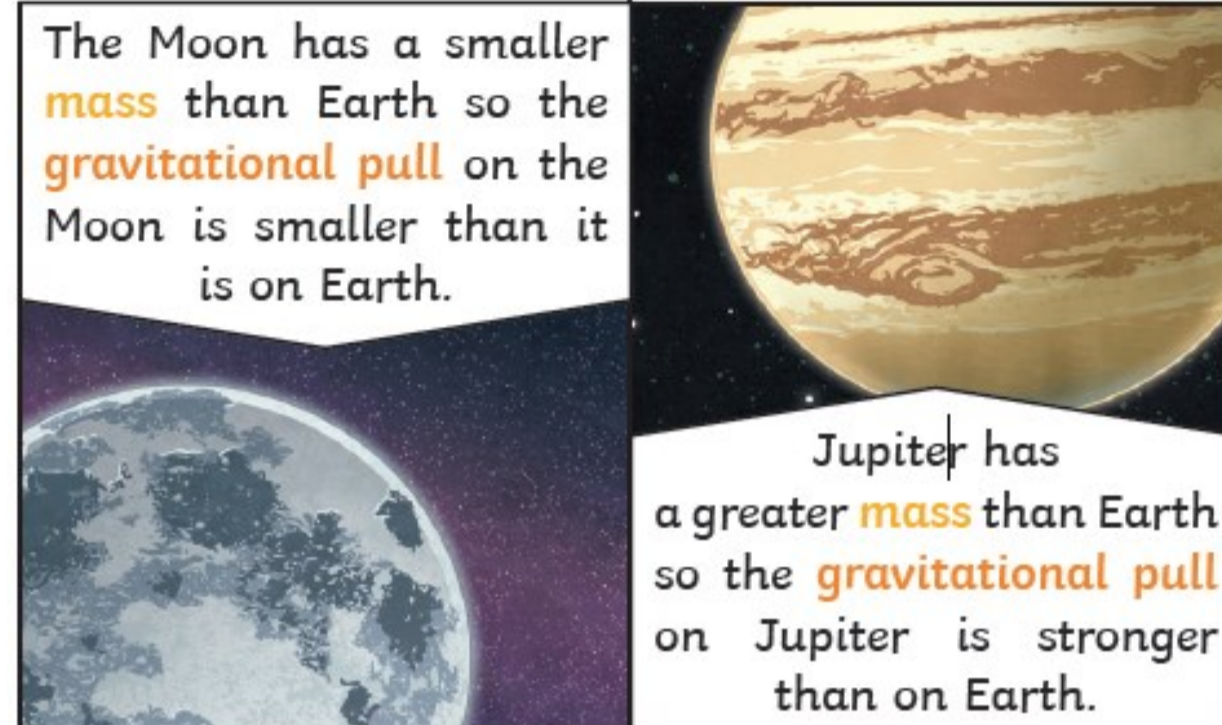


Vocabulary

gravity	A pulling force exerted by the Earth (or anything else which has mass).
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
air resistance	A type of friction caused by air pushing against any moving object.
water resistance	A type of friction caused by water pushing against any moving object.
weight	The measure of the force of gravity on an object.
mass	A measure of how much matter (or 'stuff') is inside an object.
forces	Pushes or pulls.
mechanism	Mechanisms are simple machines with moving parts that change input forces and movement into a set of useful output forces. Examples of mechanisms are
pulley	A pulley is a wheel on a fixed axle with a groove in it to guide a rope or cable. The rope or cable is attached to the object you want to lift
lever	A lever is a simple machine which helps us to lift objects. It has a long arm and a fulcrum, which is where the arm pivots

Forces



Key Knowledge

Water resistance and air resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful as it stops the skydiver hitting the ground at high speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

Pulleys can be used to make a small force lift a heavier load. The more wheels in a pulley, the less force is needed to lift a weight.

Gears or cogs can be used to change the speed, force or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.

Lever can be used to make a small force lift a heavier load. A lever always rests on a pivot.

Mass is how much matter is inside an object. It is measured in kilograms (kg).

Weight is how strongly gravity is pulling an object down. It is measured in newtons (N).

