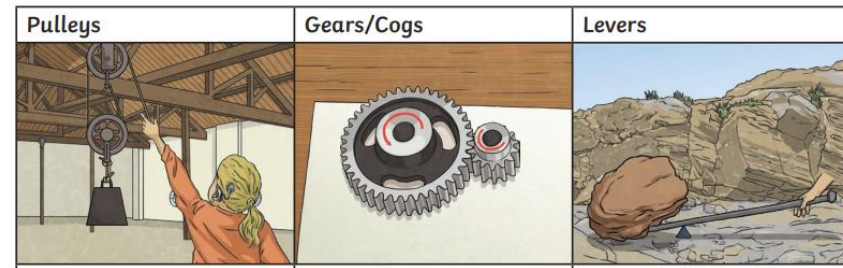
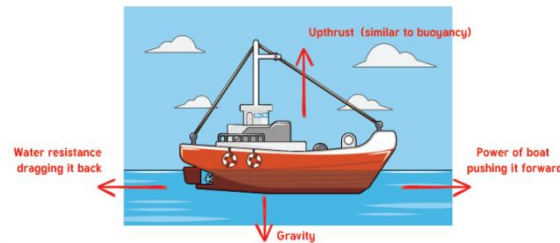
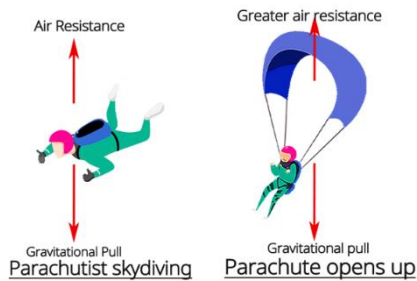
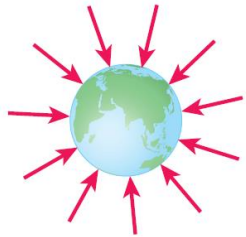




Year 5 - Autumn 2 - Forces



Key Facts

- Isaac Newton (1643-1726) developed his theory of gravity when he saw an apple fall to the ground from an apple tree.
- Unsupported objects fall towards Earth because of the **gravitational pull** of Earth.
- The moon has a smaller **mass** than the Earth so the **gravitational pull** is smaller on the moon than it is on Earth.
- 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** can be used to change the speed, force and direction of motion.
- Levers** can be used to make a small force lift a heavier load. A lever always rests on a pivot.

Key Vocabulary

| | | | |
|-----------------------------------|--|-------------------------|---|
| Gravity | A force that pulls objects towards each other. | Water resistance | A type of friction caused by water pushing against a moving object. |
| Earth's gravitational pull | The pull that Earth exerts on an object, pulling it towards Earth's centre. | Streamlined | A shape that reduces resistance when moving through gas or liquid. |
| Weight | How hard gravity pulls down on an object. It is measured in newtons (N). | Upthrust | A force that pushes an object upwards, usually in water. |
| Mass | How much matter ('stuff') there is in an object. It is measured in grams (g) and kilograms (kg). | Buoyancy | When an object floats. This is because the weight of the object is equal to the upthrust. |
| Air resistance | A type of friction caused by air pushing against a moving object. | Mechanism | Simple machines with moving parts that change input forces into useful output forces. |

