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| **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. |

**Year 5 – Autumn 2 – Forces**





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| **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. |