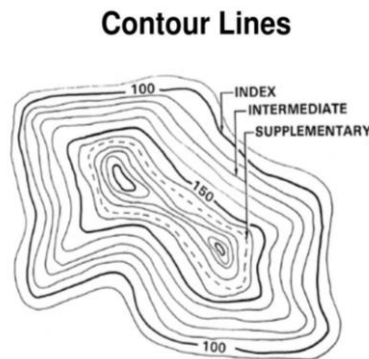
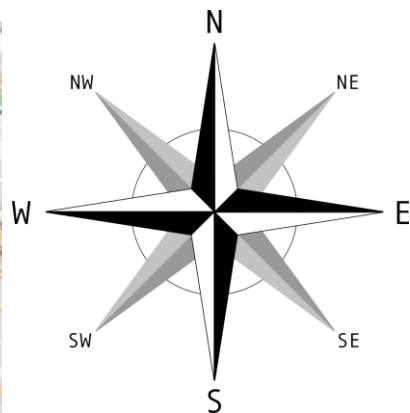


# UKS2 Term 5&6: Scream Machine - Geography

## Key Vocabulary

|                                    |   |
|------------------------------------|---|
| <b>Ordnance Survey (OS)</b>        | Ordnance survey is the national mapping agency for Great Britain.   |
| <b>Grid reference</b>              | A set of numbers used to find an exact location on a map.   |
| <b>Eastings</b>                    | Eastings are the vertical lines on a map that run from north to south. They are used to measure how far east (across) a place is.   |
| <b>Northings</b>                   | Northings are the horizontal lines on a map that run from west to east. They are used to measure how far north (up) a place is.   |
| <b>Scale</b>                       | Scale shows the relationship between distances on a map and real-life distances. For example, 1cm on a map might represent 1km in real life.                              |
| <b>Space</b>                       | In geography, space refers to where things are located and how they are arranged.   |
| <b>Contour lines</b>               | Contour lines are lines on a map that show height above sea level, to help us understand the shape of the land.<br>Close lines = steep slope<br>Wide lines = gentle slope |
| <b>Six-figure grid reference</b>   | A six-figure grid reference gives a more precise location within a square.  |
| <b>Eight-figure grid reference</b> | An eight-figure grid reference is even more accurate, pinpointing a very exact position.  |



## Key knowledge

The UK is made up of England, Scotland, Wales and Northern Ireland

Ordnance Survey maps show both human features (e.g. roads, buildings) and physical features (e.g. rivers, hills).

The grid is made up of eastings (across) and northings (up). You always read grid references; along the corridor, then up the stairs.

The more digits on grid references, the more precise the location.

Scales helps us measure distances and understand how far apart places are. Maps are smaller than real life, so scale helps us work out real distances.

Space helps us understand patterns, such as where people live or where rivers flow.

Geographers study how features are spread out across an area.

OS maps are usually drawn from aerial photographs and surveys.

Grid references are used by emergency services and hikers.

Contour lines can help predict flood risk or suitable building areas.

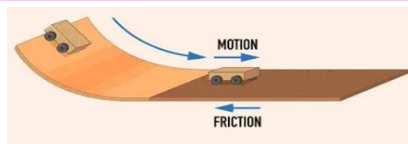
Previously learnt vocabulary:

Compass, direction, location, map key, north, south, east, west, coordinates, position, aerial view, birds eye view.

# UKS2 Term 5&6: Scream Machine - Science

## Key Vocabulary

|                           |   |
|---------------------------|---|
| <b>Force</b>              | A force is a push or a pull. To make an object move, a force must be applied to the object. Forces change how things move.                          |
| <b>Friction</b>           | Friction is a force between two surfaces that rub together. Friction slows down a moving object and produces heat. More friction = slower movement. |
| <b>Gears</b>              | Gears are wheels with teeth that help change the speed or direction of movement. Gears help machines work more efficiently.                         |
| <b>Gravity</b>            | Gravity is a force that pulls object towards the Earth. What goes up must come down!  |
| <b>Parachute</b>          | A parachute is a device that slows falling by increasing air resistance. Bigger surface = slower fall.  |
| <b>Pulley</b>             | A pulley is a simple machine with a wheel and rope used to lift heavy objects more easily. Pulleys reduce the effort needed to lift.                |
| <b>Air resistance</b>     | Air resistance is a force that slows objects moving through the air. More surface area = more air resistance.                                       |
| <b>Surface resistance</b> | Surface resistance is the force that slows objects moving across a surface (another word for friction). Rough surfaces create more resistance.      |
| <b>Water resistance</b>   | Water resistance is a force that slows objects moving through water. Water creates more resistance than air.  |
| <b>Centripetal force</b>  | Centripetal force is a force that pulls object towards the centre when they move in a circle. It keeps objects moving in a circular path.           |



## Key knowledge

The bigger the mass of an object, the stronger the gravitational pull.

Gravity keeps plants in orbit and objects on the ground.

Air and water resistance act in the opposite direction to movement.

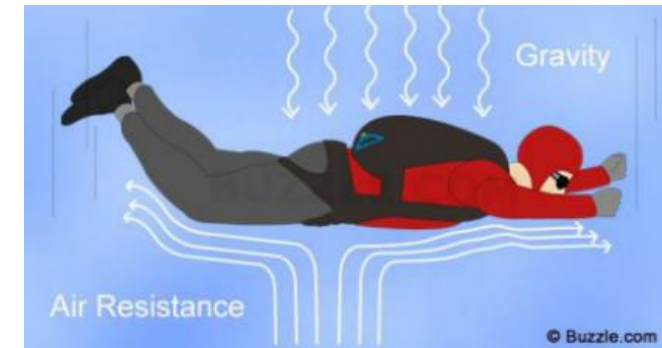
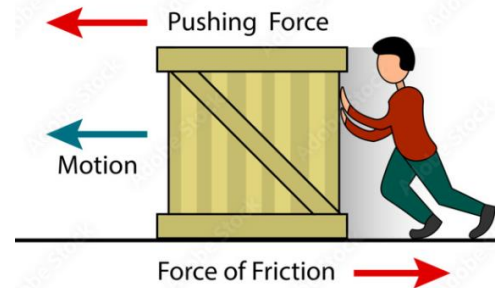
Water resistance is stronger than air resistance.

A small force can have a bigger effect when using a mechanism.

Magnetic forces can act without touching.

Previously learnt vocabulary:

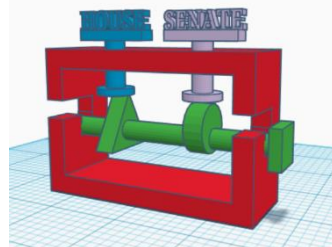
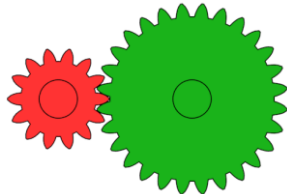
Attract, push, pull, bounce, roll, rub, spin, friction stretch, gravity, float, slide, repel, force, magnet, magnetic, magnetic field, magnetic pole, non-magnetic.



# UKS2 Term 5&6: Scream Machine - D.T

## Key Vocabulary

|                             |   |
|-----------------------------|---|
| <b>Movement</b>             | Movement is the way an object changes positions. Movement can be rotary (circular) or linear (straight line).   |
| <b>Mechanical systems</b>   | A mechanical system is a group of parts that work together to create movement. It uses forces to make things move and make tasks easier or more efficient.                            |
| <b>Gears</b>                | Gears are wheels with teeth that mesh together. They can change the speed, direction or force of movement. When one gear turns, it makes another gear turn.                           |
| <b>Pulleys</b>              | A pulley uses a wheel and rope to lift or move objects. They can reduce the effort needed to lift heavy loads and can change the direction of a force.                                |
| <b>Design specification</b> | A design specification is a list of requirements a product must meet. It includes things like purpose, users, materials, and size. Designers use it to guide and evaluate their work. |
| <b>Diagram</b>              | A diagram is a labelled drawing that shows how something works or is made. It helps explain ideas clearly and simply. Diagram often include arrows and labels.                        |
| <b>Tools</b>                | Tools are equipment used to make or build things. Different tools are used for different tasks, and they must be used safely and correctly.   |
| <b>Assemble</b>             | To assemble means to put parts together to make a finished product. This can involve joining, fixing, or building. Following instructions helps ensure the product works properly.    |



## Key knowledge

The first wheeled roller coaster, known as Russian Mountains opened in France in 1804.

In the 1920s, roller coaster development peaked with rides such as the Scenic Railway being built at Dreamland in Margate.

In 2010, the fastest roller coaster in the world, Formula Rossa, opens in the United Arab Emirates which travels at 150 miles per hour.

A mechanism is a part of a machine or several parts that work together to create movement.

A cam mechanism is made up of three parts: a cam, slide and follower. Cams are found in car engines and steam trains.

### Previously learnt vocabulary:

Lever, linkage, engineer, pneumatic, sketch, prototype, design criteria, investigate, evaluate, tools, cut, join

