

Science - Year 5 - Physics

Forces



Key Vocabulary



forces

gravity

Earth's gravitational pull

weight

mass

friction

air resistance

water resistance

buoyancy

streamlined

mechanism

Science GOLDEN WORDS:

prediction

measurements

conclusion

explain

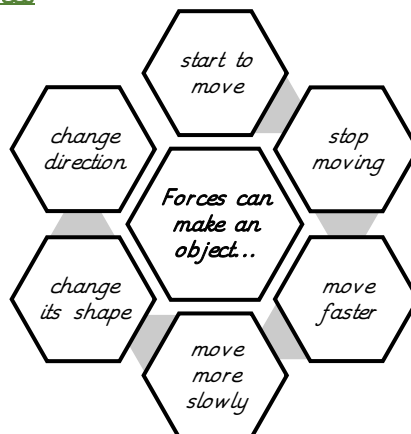
classify

Key Facts



- Friction is a force between two surfaces that are sliding, or trying to slide, across each other.
- **Water resistance** and **air resistance** are forms of friction.
- **Gravity** is a pulling force exerted by the Earth (or anything else which has mass).
- **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).
- Isaac Newton is famously thought to have developed his theory of gravity when he saw an apple fall to the ground from an apple tree.

Forces



Streamlined

This shark is streamlined. It has a pointed nose to cut through the water, and a smooth, low, curved back to allow water to flow over and around it.



Pulleys

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



Gears

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.



Levers

Levers can be used to make a small forces lift a lighter load. A lever always rests on a pivot.



Our 'forces' knowledge journey:

The children have learnt about 'friction' and 'pushes and pulls' in year 3.

Working Scientifically:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs