

Spring 2 Year 3 Knowledge Organiser: How are toys and games based on Science?

Science Vocabulary

Physics: This is an area of science that explains how the world around us works. It is the study of the relationship of objects, forces and energy. It also helps us understand behaviour and movement of energy such as heat, light and electricity.

Magnet: A magnet is an object that is made of materials that create a magnetic field.

Force: In physics, force is a push or pull on an object. A force can cause an object to accelerate, slow down, remain in place, or change shape.

Gravity: An invisible force that pulls objects towards each other.

Magnetism: An invisible force or field that causes objects to attract or repel one another.

Poles: the ends of each magnet are called poles. These are either north or south poles.

Magnetic force: When an object is moved by a magnet however the magnet does not touch the object.

Attract: When an object is pulled towards the magnet.

Repel: When an object is pushed away from a magnet.

Measure: Is the way to find the size of something.

Plot: Is one of the ways we can display a set of data collected.

Contact: When objects touch.

Newton: is the amount of force required to make a mass of 1kg accelerate (move) at a rate of 1 metre per second squared.

Force/ newton Metre: A piece of equipment used to measure the forces acting on an object.

Magnets

Magnets **attract**, or **pull**, objects **made with iron**. Paper clips, scissors, screws, nuts, and bolts are just a few common everyday objects that are magnetic.



Opposite poles attract.

ATTRACTION



REPULSION



Same
poles
repel.

OR



Magnets

south
magnetic pole



north
magnetic pole

Magnets are usually made from iron. They can attract and repel other objects with their magnetic forces. Magnetic forces act at a distance meaning that a magnet does not need to be in contact with another object for the magnetic forces to act.

Fair Testing:

A fair test is a **test that controls all but one variable when attempting to answer a scientific question**. Only changing one variable allows the person conducting the test to know that no other variable has affected the results of the test.

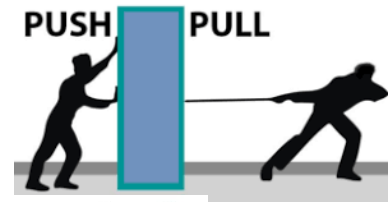
Variable- A variable is anything that can change or be changed.

How to Plan a Fair Test

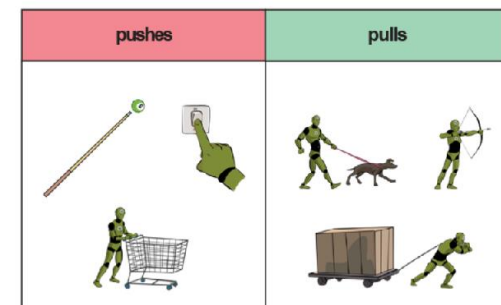
Cows Change one thing

Moo Measure something

Softly Keep everything else the Same



Examples of pushes and pulls



Examples of magnetic objects:



iron nails



steel spoon



steel paperclip