

Some forces, such as gravity, do not need contact between two objects to make things move. Gravity is a force that pulls everything towards the centre of the Earth. Without gravity, everything would be weightless.

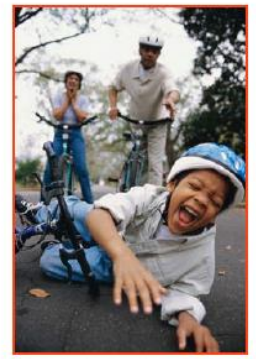
Can you think of any forces that do not need contact to make things move?



Gravity is what makes fruits fall from trees.



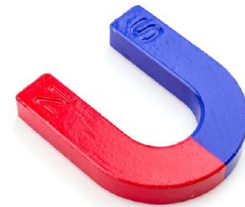
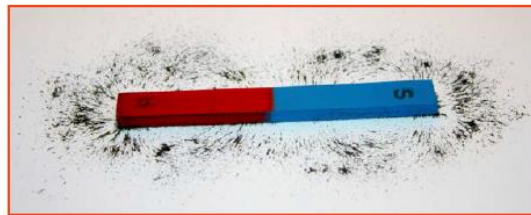
Gravity is what makes rain fall from the clouds.



Gravity is what makes you fall downwards.

Another force that doesn't need contact between objects to make things move is magnetism. Magnets are rocks or pieces of metal that have a magnetic field around them. This means they can pull objects towards them or push objects away from them without having to make contact with the other object.

You can't usually see the force around a magnet but if you drop iron filings around one, you can see the magnetic field.



Why do magnets have two different ends?

Each magnet has two poles, a north pole and a south pole. They are called the north and south poles because if a bar magnet is able to rotate, the north pole will always point north and the south pole will always point south.



This is how a compass works. When the needle on the compass spins, the north pole spins towards the north and the south pole spins towards the south. This way, you can use a compass to work out which direction you need to go.

Watch the video clip:

<https://www.bbc.co.uk/bitesize/topics/zyttyrd/articles/zpvcrdm>

Then complete the task below (print the sheet, or draw the diagrams and use the statements and headings).



Today you will be exploring what happens when magnets are put together. Answer the questions below and then draw each example you test.

What do you think will happen when like poles (poles that are the same) are put together? _____

What do you think will happen when opposite poles are put together? _____

Draw a diagram for each test and describe what happened for each example:

North pole to north pole:

South pole to south pole:

North pole to south pole:

Conclusion:

What happens when like poles are put together?

What happens when opposite poles are put together?