



## Types of Force

Forces are either pushes or pulls. They can't be seen, but their effects can. Forces can make things stay still, start to move, speed up, slow down, change direction or change shape.

## Gravity

Ball games are an ideal way to introduce the concept of gravity. What happens when they let go of the ball? Can they make a ball fall upwards? Do balls move on a flat surface? Experiment with pushing, rolling, kicking, throwing, bouncing, stopping and hitting the ball.



## Play Dough

A perfect material to investigate pushing pulling and changing shape. Ask them to pull, push, squeeze, squash, twist, cut and roll it. What happens? How can you make it longer?

## Speed

Make simple ramps from empty paper towel rolls or bent pieces of card. Attach together to make them longer. Time how long it takes for cars to reach the bottom. Which is the quickest? Why do you think that is?



## Static Butterflies

Make a tissue paper butterfly and attach to cardboard. Blow up a balloon, rub it on your clothing to create static electricity and then use it to make the wings move and the butterfly 'fly'.



## Friction

Create ramps with bricks/blocks/boxes/containers and a plank/piece of wood/piece of cardboard. Take the same vehicle and measure how far it will travel. Change the height of the ramp and if possible, the texture of the ramp e.g. add material. Talk about speed and friction.

## Spinning Tops

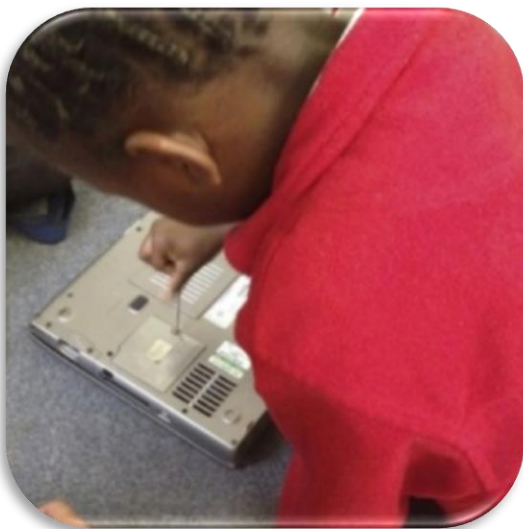
Make spinning tops from card and cocktail sticks. How do they make them spin? Can they make them spin faster/slower? How can they stop them from spinning?





## Parachutes

Make people and parachutes from bun cases, tissues, cloth and pipe cleaners. Drop them from the top of the stairs or a window. Which lands first? Which went faster/slower? Why?

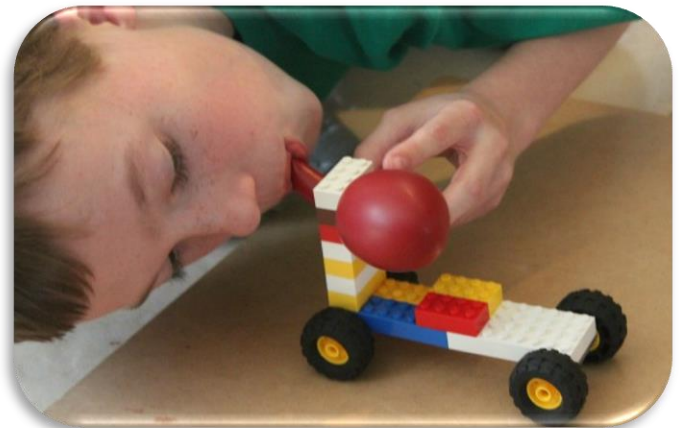


## Disassembling

Find obsolete IT equipment. Allow your child to use real tools to take the equipment apart. What force are they using? This not only encourages questions about force, but also supports their fine motor skills too.

## Balloon Powered Lego Cars

Build a car and attach a balloon. Blow up the balloon and see the car move. What has happened? Why?



## Push & Pull Toy Box

Make holes in an empty shoe box and encourage your child to push and pull straws, in and out of the holes. Does twisting help? Time them to see how quickly they can push them all in and pull them all out. Which is quicker? Why?