

Starters for Science are 4 activities that parents can use at home to help children develop their science alongside the key learning and vocabulary children are using at school. The activities are easy to resource and provide children with the stimulus to learn and talk about their science topic. Encourage children to use the correct vocabulary as they talk about what they are doing and finding out. Don't forget to share your work on social media

## #ScienceFromHome

### Key Learning:

Forces are acting on everything, all of the time.

Forces can cause a movement, a change in speed or direction of an object. They can also cause a change in shape.

Forces act upon objects when they are not moving, the forces are balanced.

Forces are also balanced when something is moving at a steady speed.

When something is increasing or decreasing in speed then the forces are unbalanced.

Friction is a force that opposes the movement of something across its surface. It occurs when two things are in contact and one of them is moving. For example a toy car travelling across the floor.

Air resistance slows down objects that are moving through the air, slowing them down. A child running across a field or playground will feel air resistance slowing them down.

Shapes that are more streamlined will move more easily through the air.

### Vocabulary:

push

pull

balanced forces

unbalanced forces

friction

low friction

high friction

slippy

grippy

gravity

air resistance

streamlined

### Take the plunge

Cut the top off a tall container, like a 2 litre drink bottle, and put sellotape over the sharp, cut edge. Fill with water and put a line where the water is so you can refill to the same level. Take a lump of playdough or bluetack and shape it into a ball. Time how long it takes to fall to the bottom. Make more shapes with the bluetack and time how long they take to fall. Which shape was the quickest and which was the slowest? Do you have any ideas why this might be?

### Brilliant boats

Using just 1 sheet of paper and some paperclips design a raft that will hold as many coins or marbles as possible. You can download the activity card here to help you. <https://bit.ly/34E7YWs>

### Jelly race

Time how long it takes to transfer cubes of jelly from one plate to another using chopsticks or the ends of two spoons. Add some orange juice now try again. Which was easier? Why do you think this?

### Fun with flight

Design and make a paper aeroplane that will travel the furthest.

Draw a diagram of the forces acting on your plane as it flies through the air. Can you name any of the forces? Does changing your design make it go further?

[www.stem.org.uk/rxfjy7](http://www.stem.org.uk/rxfjy7)