



Year 5 Science Home Learning



Forces

Gravity is a force that pulls toward the centre of the Earth (downwards) and Isaac Newton's First Law of Motion says that once an object is moving it will continue moving in that direction unless a new force is applied. Prove this by completing the Egg Inertia challenge. Instructions:

<https://www.fizzicseducation.com.au/150-science-experiments/force-movementexperiments/egg-inertia/>

Video demonstration: <https://www.youtube.com/watch?v=6gzCeXDhUAA>

Friction is a force that happens when one surface/object meets another while moving. It opposes this and can slow objects down or stop them moving – this can be useful when designing tires on bikes and cars. Either: Test which shoes in your house create the most friction (are hardest to move) over carpet OR which surface in your house creates the most friction with a trainer.

Enquiry page: <https://www.ogdentrust.com/resources/phizzi-enquiry-slippy-shoes>

What examples of friction being helpful can you find in your home? How about if you look out of your window?

What if there was no friction?

Air resistance (drag) is a force that acts against gravity – as an object is pulled downwards, the air resistance pushes it upwards. Air resistance is how parachutes work. Test falling paper with a small surface area (scrunched up into a ball) and a large surface area (left as a flat sheet) when dropped from the same height – what do you notice about how quickly they fall? Use what you learn to design a parachute with good air resistance. You could make your design out of anything and test it out your window (with adult supervision). <https://www.youtube.com/watch?v=w4Jgh9V9gwE>

Where in your home are levers, gears or pulleys used to make things easier?



Don't forget your Purple Mash Science To Dos too!