



# Y4 SCIENCE – SUMMER TERM 1

RATHER THAN FOCUSING ON A PARTICULAR TOPIC IN SCIENCE THIS TERM, WE ARE GOING TO SUGGEST SOME THINGS YOU CAN TRY OUT AT HOME TO HELP YOU UNDERSTAND SOME OF THE 'BIG IDEAS' OF SCIENCE LEARNING.

TO START WITH, RELATED TO OUR LAW & ORDER TOPIC, WE'RE THINKING ABOUT HOW CHANGING THE MOVEMENT OF AN OBJECT REQUIRES A NET FORCE TO BE ACTING ON IT. THERE IS A KIND OF LINK HERE TO STOPPING THE TRAIN IN THE GREAT TRAIN ROBBERY - HOW DO WE SLOW AND STOP THINGS MOVING?



Did you know that things don't automatically stop eventually? It all depends on what 'forces' are acting on them. On Earth, we can't escape the force of gravity, for example – but without this, in space, objects just keep moving around. We also have to work with forces like friction, air resistance, upthrust and magnetism. These forces can help speed things up, slow things down or change the direction they're moving in.



Have a look at some of these videos: <https://www.bbc.co.uk/bitesize/clips/zch4wxw>

<https://www.bbc.co.uk/bitesize/clips/zkw8q6f>

[http://archive.teachfind.com/ttv/www.teachers.tv/videos/k\\_s1-science-stopping-moving-objects.html](http://archive.teachfind.com/ttv/www.teachers.tv/videos/k_s1-science-stopping-moving-objects.html)



So, what did you learn? Delete the incorrect words from the options in the sentences below.

**Heavier/lighter** objects travel further, once they're moving, as they require **more/less** friction to counteract the strength of force.

**Smooth/rough** surfaces create **more/less** friction, so they slow objects down quicker.

A steeper angled ramp will make an object travel **less far/further**.

Have a go at setting up an experiment, using toy cars or marbles (or anything that rolls along), to see how the weight of an object OR the angle of a slope it rolls down OR the texture of the surface it is moving on, affect how far they travel. [https://www.youtube.com/watch?v=y6VjHcOX8\\_o](https://www.youtube.com/watch?v=y6VjHcOX8_o)