

Science

Forces

Summer 1
2023

Class Lynher

First we fired up our memory banks thinking about forces in general but then gravity. We looked at the work of Sir Isaac Newton

It was interesting finding out how he discovered gravity.



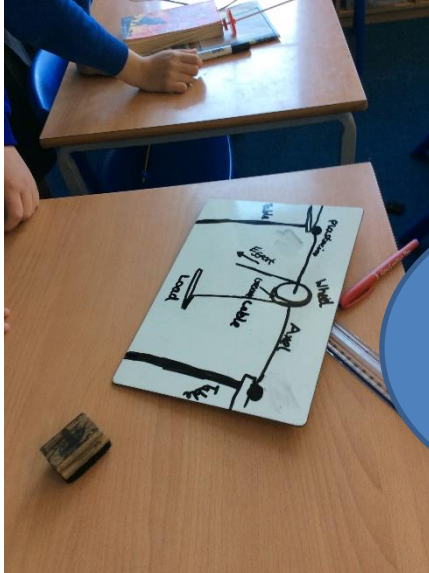
Then we linked this with air resistance and planned and carried out an experiment based around a parachute.



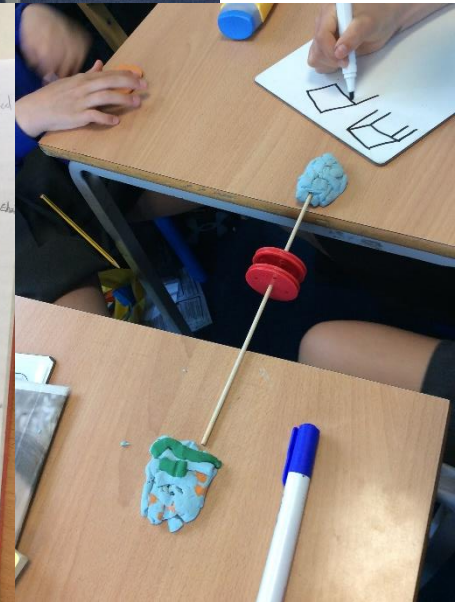
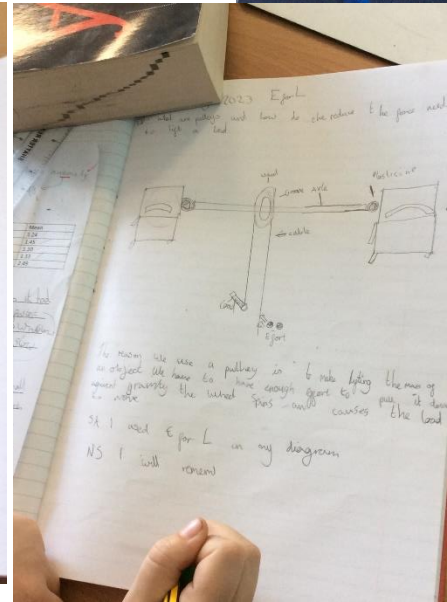
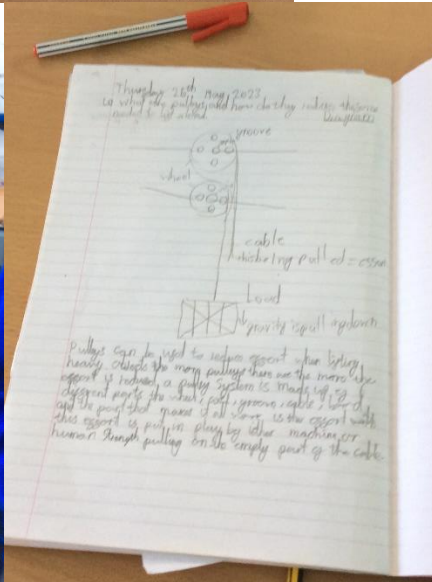
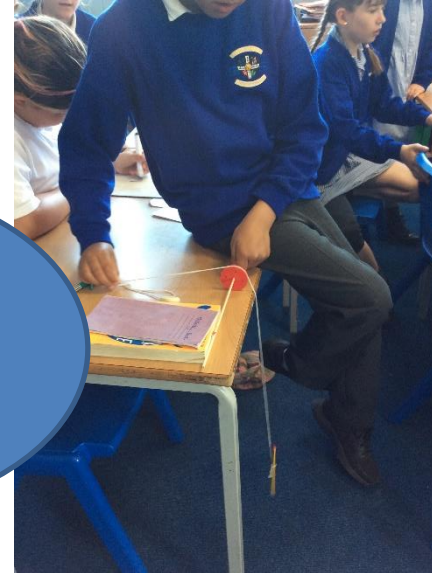
It was fun watching the parachutes go down and seeing how quickly or slowly they fell.



We started to look at pulleys and how they can help to lift things. We then had the challenge to move objects onto our table using a pulley.

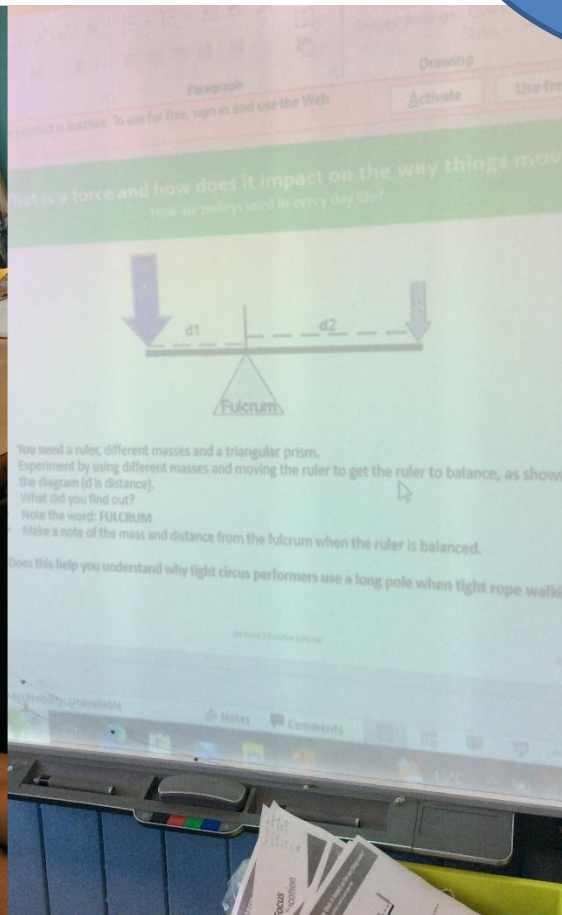


It was interesting how the pulley made it easier to lift things.

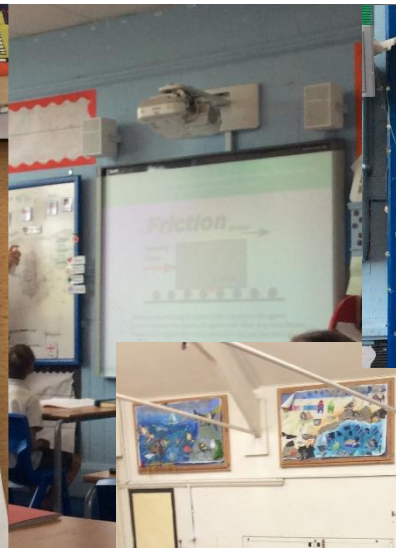
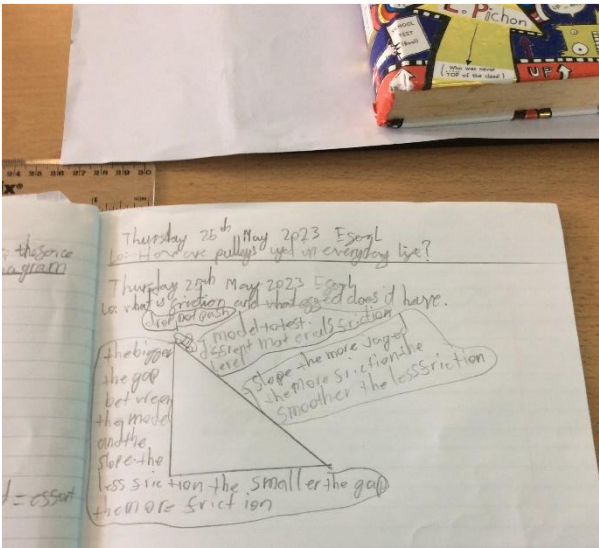


Then we looked more at how pulleys are used in real life. We then looked at how a fulcrum works.

We found that if you moved the fulcrum, you needed more weight on the shorter end.



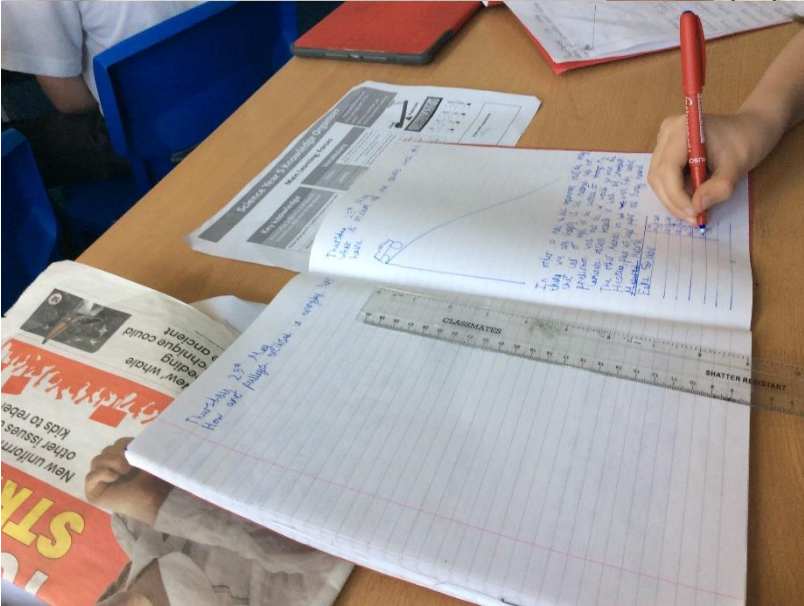
Friction was our next focus and we did an investigation to see which materials would slow a car down the most.



Ms. Atkinson's

Materials	Time to
fake leather	1.66
Flexian	1.15
Plain card	1.01
Laminite	1.00
Sugar paper	1.02
Bumpy material	1.39

The plain card let the car down fastest and the fake leather made it go slowest.

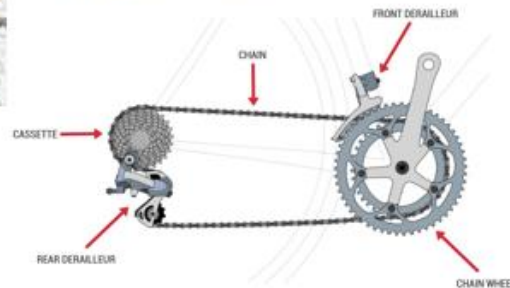
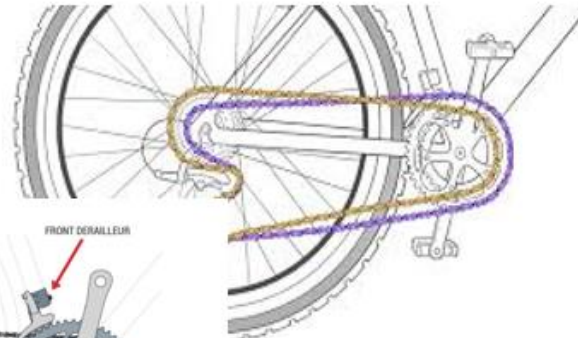


Finally we looked at how gears work.

A big gear turns the smaller gear faster.

What makes a bicycle move?

To move the bicycle forward the person needs to push down on the two pedals with their feet.



Science Year 5 Knowledge Organiser

Main Learning: Forces

Key knowledge

Know what a force is and how it impacts on the way things move

Know what gravity is and its impact on our lives

Identify and know the effect of air resistance

Identify and know the effect of water resistance

Identify and know the effect of friction

Explain how levers, pulleys and gears allow a smaller force to have a greater effect

Vocabulary

friction

A force between two surfaces that are sliding, or trying to slide, across each other

gravity

A force which tries to pull two objects towards each other

air resistance

A type of friction between air and another material. For example, when an aeroplane flies through the air

water resistance

If you go swimming, there is friction between your skin and the water particles

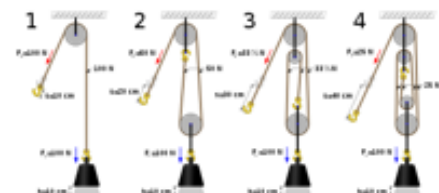
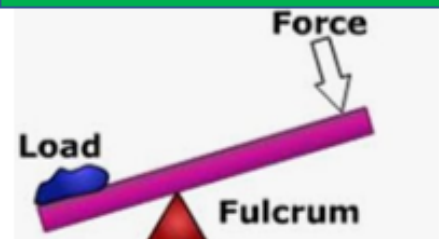
levers

A long rigid body with a fulcrum along its length

pulleys

A simple machine and comprises of a wheel on a fixed axle, with a groove along the edges to guide a rope or cable

Personal Development
Awe and wonder of the world
Job links: scientist; job involving problem solving



Prior Knowledge—
Within same subject

In other subjects

From own experience