

In science, for the rest of the term we are going to be learning about forces.

Key Vocabulary	
<b>forces</b>	Pushes or pulls.
<b>friction</b>	A <b>force</b> that acts between two <b>surfaces</b> or objects that are moving, or trying to move, across each other.
<b>surface</b>	The top layer of something.

**Key Knowledge**

Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.

The driving **force** pushes the bicycle, making it move.



**Friction** pushes on the bicycle, slowing it down.



**Pushes**



**Pulls**



**Forces** will change the motion of an object. They will either make it start to move, speed up, slow it down

LI: I can explain what friction is and use results from an experiment to reach a conclusion.

Success  
Criteria

I can use  
scientific  
vocabulary.

I can record  
my results  
and use  
them to  
write my  
conclusion.

This week we are going to learn about Friction

Friction is a force **between two surfaces** that are sliding, or trying to slide, across each other. For example, when you try to push a book along the floor, friction makes this difficult. Friction always works in the direction **opposite** to the direction in which the object is moving, or trying to move. Friction always **slows** a moving object down.

Watch the video to find out more

<https://www.bbc.co.uk/bitesize/topics/zsxxsbk/articles/zxqrdXS>



Wood bank: forces, friction, surface, push, pull, strength, speed up slow down and change direction

LI: I can explain what friction is and use results from an experiment to reach a conclusion.

Your experiment this week is to test various surfaces around your house for the amount of friction they produce.

## Success Criteria

I can use scientific vocabulary.

I can record my results and use them to write my conclusion.

### Equipment

You will need 2p or 10p coins

A range of surfaces around your home. This could include including foam, carpet, vinyl, wood and plastic.

A ruler.

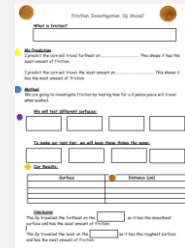
### Method

For our experiment was to slide a 2p coin along each surface, and then measure how far it has travelled. The surface that allowed the coin to travel the furthest would contain the least friction.

Think about how to keep the test fair?

Wood bank: forces, friction, surface, push, pull, strength, speed up slow down and change direction

Print off the worksheet in the learning grid



LI: I can explain what friction is and use results from an experiment to reach a conclusion.

**Did you come up with this factors?**

Success  
Criteria

Each coin needed to be pushed with the same amount of force.  
The coins also had to be released at the same point.  
The surface needed to be flat.

I can use  
scientific  
vocabulary.

Log the results on a sheet of paper or the worksheet provided.

I can record  
my results  
and use  
them to  
write my  
conclusion.

Now write your conclusion.



Which surface had the least amount of friction?

Which surface had the most amount of friction?

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slow down and change direction