Rub your hands together for 10 seconds. What do you feel?

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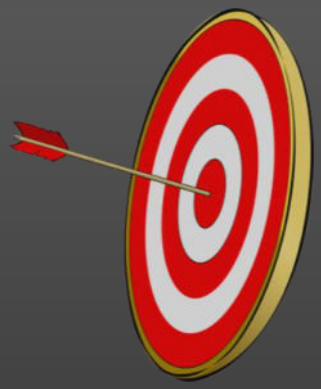


Friction

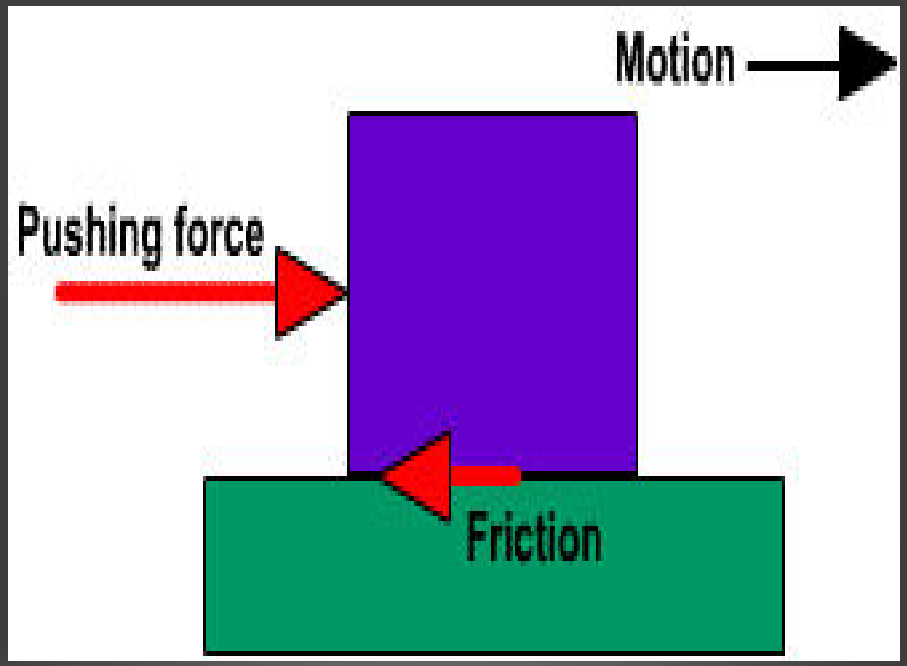
Develop your understanding of friction.

Describe some affects of friction.

Investigate how friction can change on different surfaces.

Friction

Friction happens when one surface passes over another one.



The Affects of Friction

Friction produces heat.

The Affects of Friction

Rough surfaces slow down objects.

The Affects of Friction

Smooth surfaces don't slow objects down as much.

The Affects of Friction

Helps us walk by giving us grip.

What measuring equipment do we use to measure force?

A Newton meter/spring balance.

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Aim

The aim of this investigation is to determine which surface produces the most friction.

Equipment

Newton meter

Different surfaces (eg. Book, cloth, plastic, wood etc.)

Masses

Wooden blocks

Method

1. Place your first surface to test flat on your table.
2. Place your wooden block on top of the surface.
3. Place a mass on top of your block.
4. Connect a Newton meter to your wooden block and very gently and slowly, start to pull.
5. Observe what force is required to make the wooden block start to move.
6. Record the results in your table.
7. Repeat two more times so you can calculate an average.
8. Repeat these stages with other available surfaces you have.

Variables

In all investigations:

The independent variable is……

What I change.

The dependent variable is……..

What I measure.

The control variables are……

What I keep the same to ensure a fair test.

Variables

The independent variable are…

the different surfaces.

The dependent variable is…

the force required to move the block.

The control variables are…

the same mass used each time, the same wooden block, the same person pulling the Newton meter.

Prediction (What do you think will happen?)

Why do good scientists make predictions?

A good scientist will always make predictions before an investigation to state what they think will happen and why.

I think…

Because…

Recording Results

Do you remember why it is important to record your results?

A good scientist will always record their results so other people can see what you have found out.

Recording Results

Surface	Force required to move the block (N)			
	Trial 1	Trial 2	Trial 3	Average

Conclusion

Make a judgement on your investigation and your findings. Use the keywords below to describe what you found out and what it means.

Friction, Newton meter, Force

In pairs, take it in turns to talk for 30 seconds about friction, the investigation you did and your results.

Write a letter home to tell someone what you have learnt today.