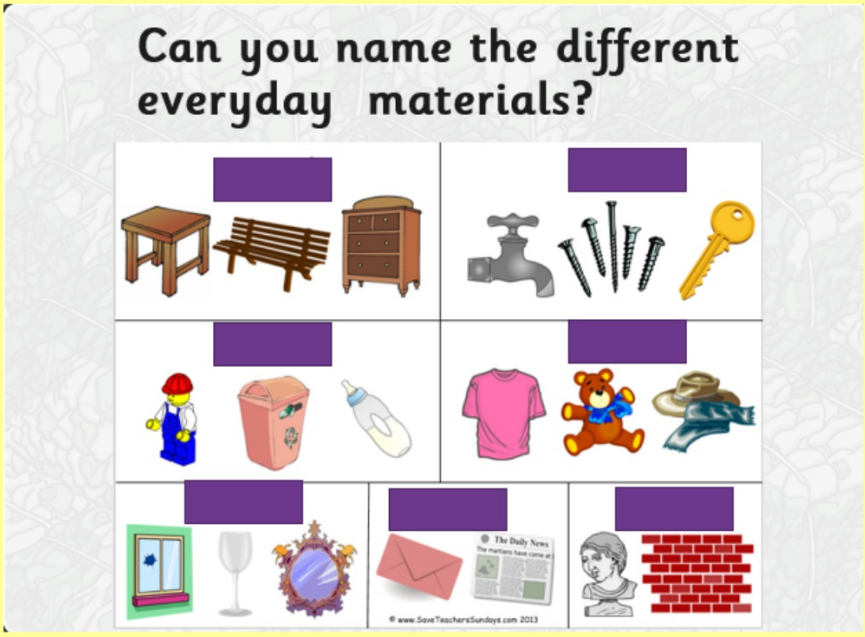
Wednesday 24th February

WALT: Investigate how strong different types of paper are



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I need to wrap my niece's birthday present in paper that will not rip easily as I need to send it in the post.

Can you help me find the strongest paper?

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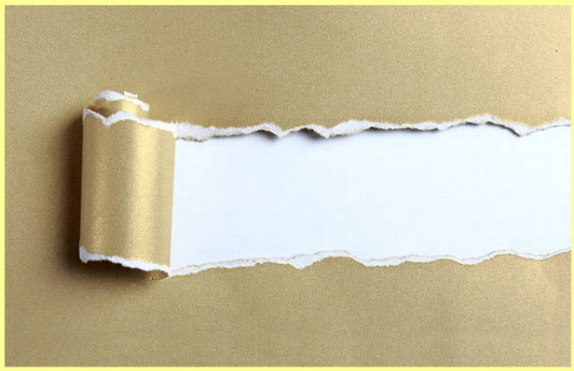
How could we carry out this experiment?



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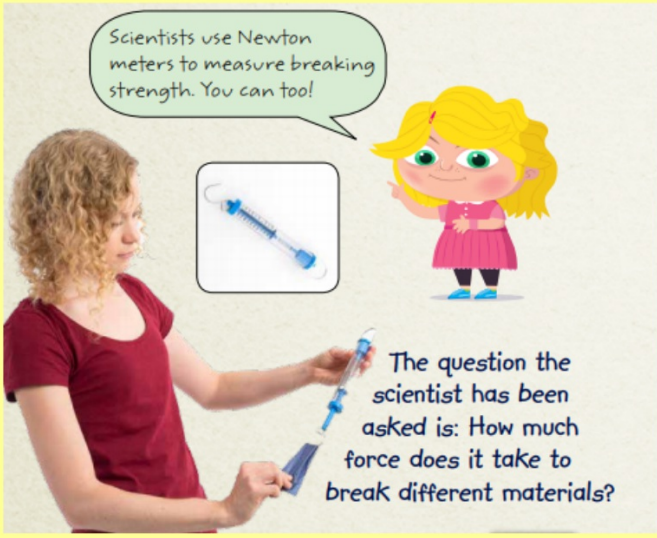
Scientists can measure how easily things break or rip.
This is measured in Newtons
If a material rips with 1 Newton of pull, it is weaker than a material that rips with 10 Newtons.



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Being a Scientist

All scientists do things in the same way. They:

- decide on an **aim** (what they want to find out)
- make a **prediction** (what they think will be the right answer)
- decide how to test their prediction (a **method**)
- **test** their predictions (by investigating)
- record what happens (their **results**)
- come to a **conclusion** (see what they found out)

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Deciding on an aim

To find the strongest paper to wrap up a present.

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Making a prediction

Making a **prediction** means saying what we think will happen.

We should always try to give a reason for our **predictions**, so we use the word 'because'.

I **predict** that _____

because _____

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Method

The **method** means how we plan to test our predictions.
We have to try and plan to do a **fair test**, so that we find out the correct answer.

To make it **fair test** we must only change one thing and keep the rest the same.
We need to decide what we will change and what we will keep the same.

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Change

Kitchen roll

Tissue Paper

Writing Paper

Newspaper

Brown paper

Keep the same

The size of the material

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Method of the investigation

You will need:-

- Different types of paper
- Scissors
- Ruler
- Pencil
- Newton Meter
- Investigation write up

What you will do:-

1. Cut the different types of paper into 2cm by 10cm rectangular strips.
2. Fold the strips of paper in half.
3. Taking each strip of paper in turn hook the paper onto the Newton meter at the fold.
4. One person hold the Newton meter, another person pull the end of the paper until it rips.
5. Read the number of Newtons it took to rip the paper and record on results table.
6. Repeat stages 3 to 6 with each strip of paper.

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Results

Our **results** mean what we found out when we did our investigating.

Scientists often record their **results** in a table.

We will record our **results** in a table and a block graph.

Conclusion

Our **conclusion** means what we found out when we did our investigation.

Today, our **conclusion** will help me know which material/paper to use to wrap up and send my niece Amelia's birthday present.

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After we have pulled the paper until it rips we need to read in the newton meter how many Newton it took and record it in the table

Results table

Type of paper					
Force used to rip in Newtons					

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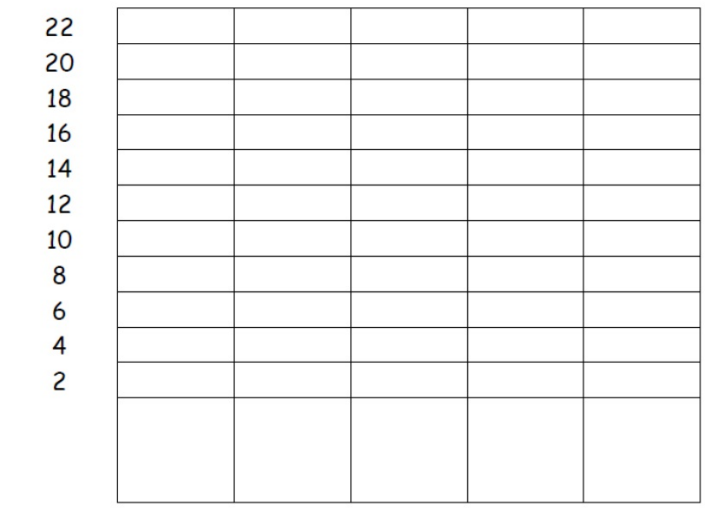
Use the results table to show the results in a block chart

Results Block chart



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24.2.21 Gold

Plan and Carry out an Investigation

Aim:

I am trying to find out _____

_____

Prediction:-

I predict that the _____ paper will be the strongest,

because _____

Method:-

I will keep these things the same_____

I will change _____

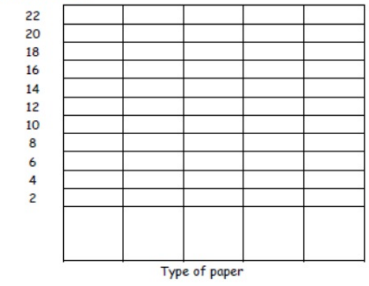
What I will do

1. Cut the _____ into strips of _____ of ___cm by ___cm.
2. Fold the _____in half.
3. Hook _____
4. Pull _____
5. Read _____
6. Repeat_____

Results table

Type of paper					
Force used to rip in Newtons					

Results Block chart



Conclusion

My prediction was right/ wrong because _____ paper was the strongest. I know this because _____

24.2.21 Silver

Plan and Carry out an Investigation

Aim:

I am trying to find out _____

_____

Prediction:-

I predict that the _____ paper will be the strongest,

because _____

Method:-

I will keep these things the same

_____

I will change

_____

Diagram of the investigation with labels.