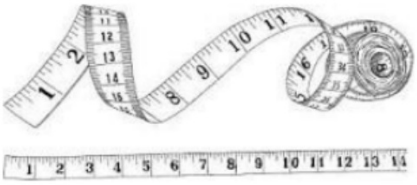
How far does a toy vehicle travel on different surfaces?



During this lesson we will plan and carry out an investigation.

We will predict, observe and look at our results so that we can make a conclusion about our findings.

Carry out the simple investigations.

Scientific words we need to explore:

Hypothesis
Variables
Constants
Measure
Observe
Equipment
Apparatus
Method
Results
Conclusion

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face on the ramp

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WAGOLL

Planning Our Investigation

Question (hypothesis) Some surfaces have more friction t

We will change this factor/variable	We will measure/observe
The surface	**The distance the travels.**

To make it a fair test we will keep these factors/variables the same (constan

Height of the ramp	**Level of the ramp**	**The car**	**The way the car is released**

We will need this equipment (apparatus)
Car; different surfaces; ramp; tape measure; person.

This is what we will do (method)

1. Set the ramp at a specific height;
2. Choose the first surface to go on the ramp;
3. Let go of the car at the top of the ramp without pushing it;
4. Measure distance travelled;
5. Change the surface and repeat the experiment.

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n?

Prediction

I predict that because

Prediction

I predict that the car will travel the furthest on the _____ because there will be less friction.

I predict the car will travel the least on the _____ because there will be more friction.

The investigation

Tuesday 26th January 2021

Focus: I can graph my results and draw a conclusion.

Prediction - what might happen and why.

Conclusion - what did happen and why.

Planning Our Investigation

Question (hypothesis) Some surfaces have more friction than others.

We will change this factor/variable

The surface

We will measure/observe

The distance the car travels.

To make it a fair test we will keep these factors/variables the same (constant)

Height of the ramp	**Level of the ramp**	**The car**	**The way the car is released**	**Where we measure from**

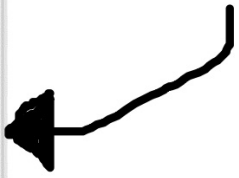
We will need this equipment (apparatus)

Car; different surfaces; ramp; tape measure; person.

This is what we will do (method)

1. Set the ramp at a specific height;
2. Choose the first surface to go on the ramp;
3. Let go of the car at the top of the ramp without pushing it;
4. Measure distance travelled;
5. Change the surface and repeat the experiment.

Draw a diagram of your experiment in the box



Results

Type of surface	Distance travelled (cm)
Blue fluffy carpet	50cm
Brown hardboard	220 cm
White laminate	345 cm
Black Corrugated cardboard	230cm
Black rubber	230 cm
Thin black carpet	270 cm
Yellow sandpaper	20 cm

Graph to show how far the vehicle travelled on a different surface

Y-axis Distance travelled in centimetres

400							
380							
360							
340							
320							
300							
280							
240							
220							
200							
180							
160							
140							
120							
100							
80							
60							
40							
20							
	Blue Fluffy carpet	Brown Hardboard	White laminate	Black Corrugated cardboard	Black rubber	Thin black carpet	Yellow Sand Paper

Think about what we have found out.

What is the best surface for a toy car?

How has friction impacted our results?

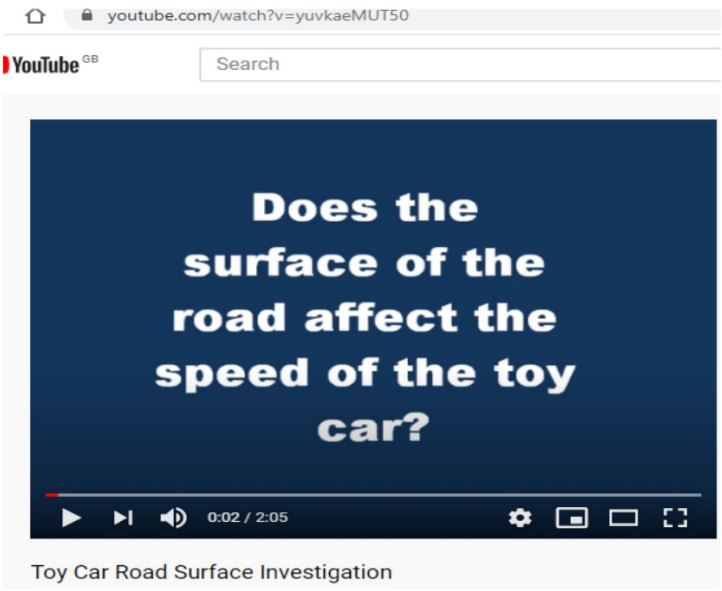
Conclusion

My Conclusion

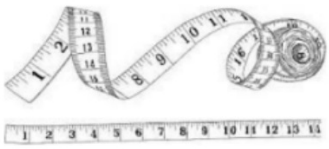
is

Now look at this experiment how is it similar or different to our investigation?

https://www.youtube.com/watch?v=yuvkaeMUT50



Try and investigation at home.



During this lesson we have predicted, observed and looked at our results so that we could make a conclusion about our findings.

Carry out the simple investigations.

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