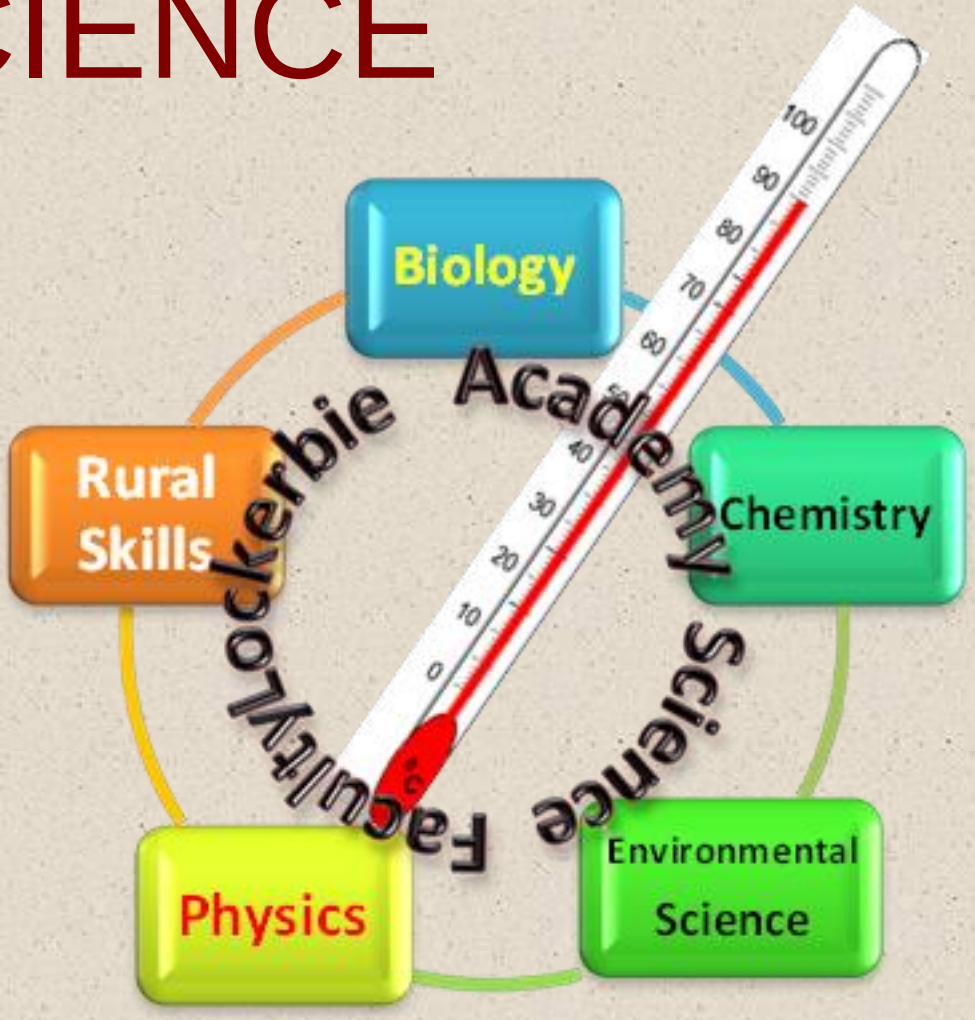
INVESTIGATION

S1 SCIENCE



By J Hargreaves

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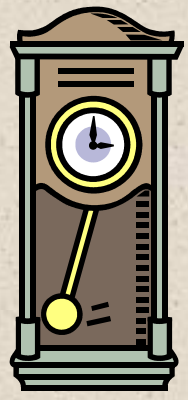
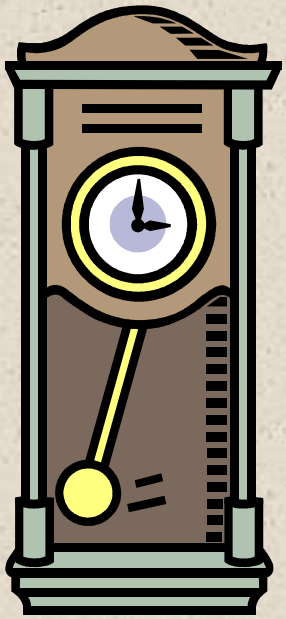
Slide 2



So WHAT is a pendulum?



Something that swings back and forth

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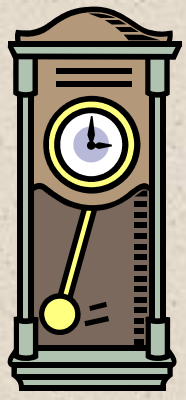

Q1 What affects the time for one swing of a pendulum?

- Length of the pendulum
- Angle of the swing
- Mass on the end

With your teacher's help choose an investigation to do (pick one of the ones above)

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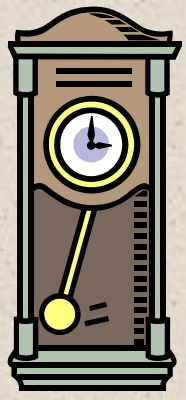

Q2 What is the aim of your experiment?

OR What do you hope to find out?

To find out if the….

- Length of the pendulum

affects the time for one swing of a pendulum.

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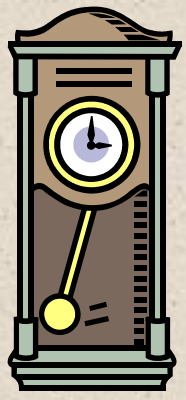

Q3 What will you expect to happen?

As the

- Length of the pendulum

increases the time for one swing of a pendulum……..

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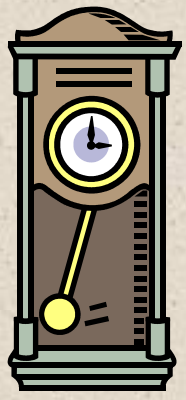

Q4 What variable will you change?

Look at the list in question 1 to help you!

HOW WILL YOU CHANGE YOUR VARIABLE?

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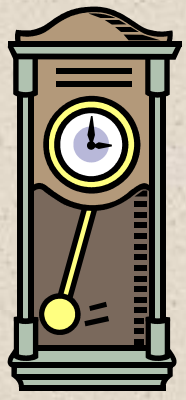

Q5 What two things will you measure?

What equipment will you use to measure these two things?

Draw a diagram of your apparatus

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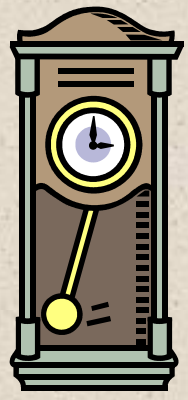
Slide 8



Note 1 swing is BACK and FORTH

What is the problem with timing one swing of a pendulum?

Reaction time!

So how can we overcome this?

Time for 5 swings!

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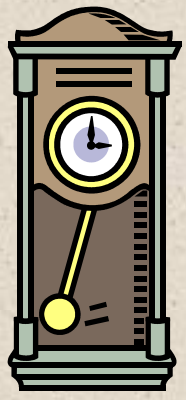

Q6 What variables (things) will you keep the same?

Use question 1 to help you!

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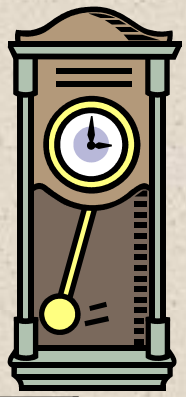

Q7 Draw out a table of your results

Length of pendulum string (cm)	Time for 5 swings (s) 1	2	3	Average time for 5 swings (s)

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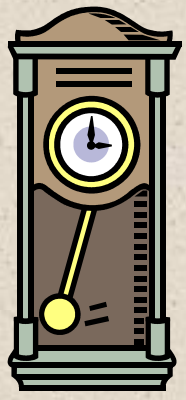

DO YOU KNOW WHAT YOU ARE GOING TO DO?

If YES then get on

If NO put your hand up for help!

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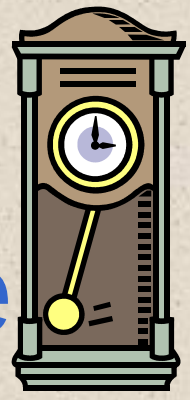
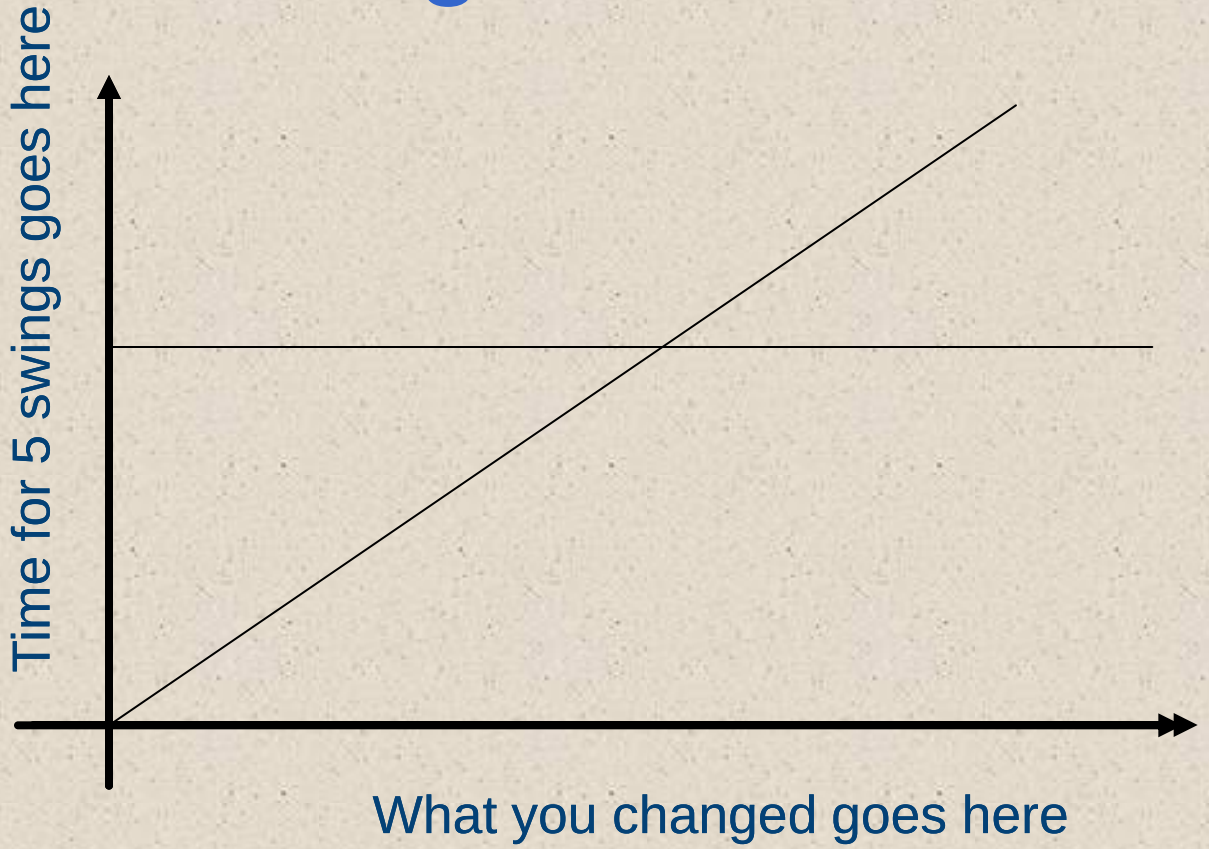


Plot a graph of your variable against time



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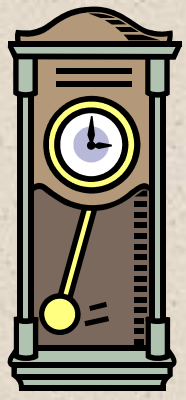

WHAT DID YOU FIND OUT?

As the -------- increases,
The time for one swing ---

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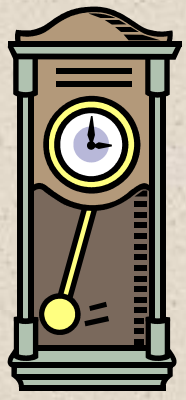

Write up what you did carefully?

Include
A labelled diagram,
How you changed your independent variable
What you measured
What equipment did you use to measure with
What you kept the same
How you kept it a fair test