

SCIENCE HOME CHALLENGES!

In assembly today, the children have been set a challenge about time. It would be great if you could support your child to have a go at one of the challenges and send in any photos, videos or bring in your experiment. I am hoping that on Tuesday 30th April, we will be able to share what the children have made with each other. Thank you in advance for your support. Mr Ford



How long is 30 seconds?

Can you guess how long 30 seconds lasts without looking at a clock?

Can you make a marble run that lasts for exactly 30 seconds?

Here is an example: <https://www.youtube.com/watch?v=UZ8FUWEs0eQ> (30 second marble run).



Can you make a water clock that lasts for 30 seconds?

Here is an example: https://www.youtube.com/watch?v=Q_P96i_bgr4 (making a water clock)



Can you make a sand timer that lasts for 30 seconds?

You do not need to use sand – anything that will pour from one bottle to another.

Here is an example:



Make a sand timer

Making a sand timer is easy! All you need is:



How to:



1. Poke the screw through the middle of both bottle caps. Ask an adult to help you.



2. Attach the two bottle caps together with the electrical tape.



3. Pour sand into one of the bottles and screw the caps on. Screw the empty bottle on.

Now it's time to time your sand timer!



Using a stop watch, see how long it takes for the sand to fall from one bottle to the other. Try to get your sand timer to fall in exactly one minute, two minutes or five!

Can you make a pendulum that lasts for 30 seconds?



Here is an example:
A simple one can be made with just string and a weight (such as coins or lego).
Variables can be changing the length of the string, the height it is released from, the weight or even its size (providing air resistance).



REACTION TEST CHALLENGE!

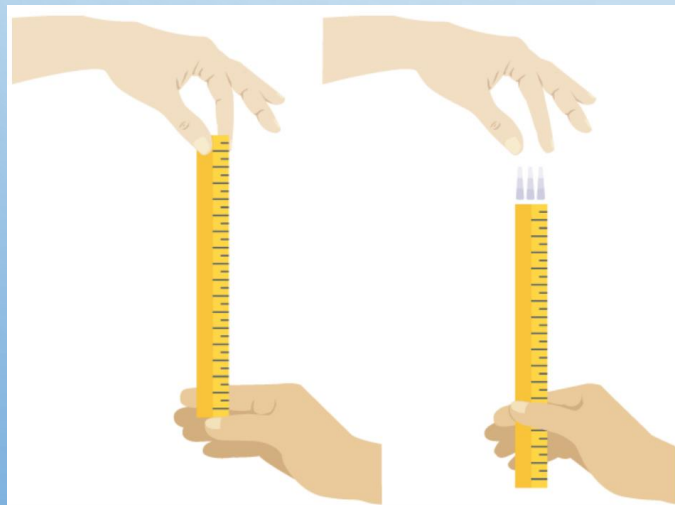
With a partner, person A holds out their hand with a gap between their thumb and first finger.

Person B holds the ruler with the zero at the top of person A's thumb.

Person B drops the ruler without telling person A and they must catch it.

The number level with the top of person A's thumb is recorded in a suitable table. Repeat this five times.

You can use the conversion table to help convert your ruler measurements into reaction times.



Look up table

Use this to convert
drop distance (in cm) to time
(in thousandths of seconds).

distance (cm)	time (milliseconds)
5	101
6	111
7	120
8	128
9	136
10	143
11	150
12	156
13	163
14	169
15	175
16	181
17	186
18	192
19	197
20	202
21	207
22	212
23	217
24	221
25	226
26	230
27	235
28	239
29	243
30	247