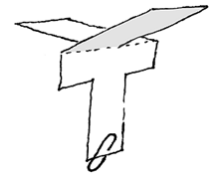


Topic: Forces	Year 5 Age 9-10	Title: Spinners table
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Working Scientifically Focus Do: taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	Conceptual Knowledge Context identify the effects of air resistance
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Example

Children were asked to choose a feature of a spinner to investigate, for example, size of wings, height dropped or number of paper clips. The children were asked to repeat their measurements to improve the accuracy of their results.



In a Spin!

We wanted to find out if the spinner would go faster or slower if we added paperclips to it.

We only changed **one** factor to make it a **fair** test.
We decided to only change: the amount of paperclips

We recorded the time it took the spinners to drop.

We repeated each test three times to work out the average (or mean).

We recorded the time it took for the spinner template to fall:

Drop 1	Drop 2	Drop 3	Total	Average
1.78 seconds	1.93 seconds	1.71 seconds	5.42	1.8066 seconds

We started to make changes to our spinner:

Change	Drop 1	Drop 2	Drop 3	Total	Average
Add one paperclip	1.52 seconds	1.83 seconds	1.56 seconds	4.91 seconds	1.6366 seconds
Two paperclips	1.70 seconds	1.35 seconds	1.42 seconds	4.47 seconds	1.49 seconds
Three paperclips	1.43 seconds	1.38 seconds	1.21 seconds	4.22 seconds	1.4066 seconds
Four paperclips	1.30 seconds	1.25 seconds	0.95 seconds	3.50 seconds	1.1666 seconds
Five paperclips	0.95 seconds	0.83 seconds	0.95 seconds	2.73 seconds	0.91 seconds

Our results show that:
They show that it doesn't matter how many paperclips are there because it doesn't make it go faster to reach the ground.

☺ Great work finding the mean
→ look at your results. Does the time change when you add more paper clips?

Children meeting the objective would be able to use a stopwatch to measure times in milliseconds. They would systematically repeat their measurements.