

If a fan were a
▶ planet?

Explanation

- ▶ We chose to do the topic of what if a fan spin is equal to one day, and 30 spins is equivalent to a month and 360 is a year. We know that one year is 365 days but when you try and divide the number up equal 30.4166666666667 so we just round to the close one's unit and got 30. We will use fan speed 2 to compare between earth's speed because it is in the middle of the speeds.

Choice of topic

- ▶ At first, we were thinking of using a fidget spinner but then we changed our mind because we would not be able to control the speed of the fidget spinner and we also forgot to bring the fidget spinner.
- ▶ We were looking through many of the ideas and this one was one we were all passionate seemed the most exciting and we knew that this would be manageable and we would be able to supply the equipment necessary for this job.

Prediction

- ▶ A

I predict that one spin will take: 1 second on speed 1. .6 seconds on speed 2. and .4 seconds on speed 3.

At normal speed

- ▶ B

I predict that at the start it might that 3 seconds to do a rotation and after that it takes longer as it slows down.

- ▶ C

I predict that it will take around 5 seconds for a full rotation slowed down

Plan of the investigation

The mathematical strategies we used were...

- ▶ Mathematical strategies we used were slowing the footage down (dividing) then after we multiplied it to get RPS (rotations per second)

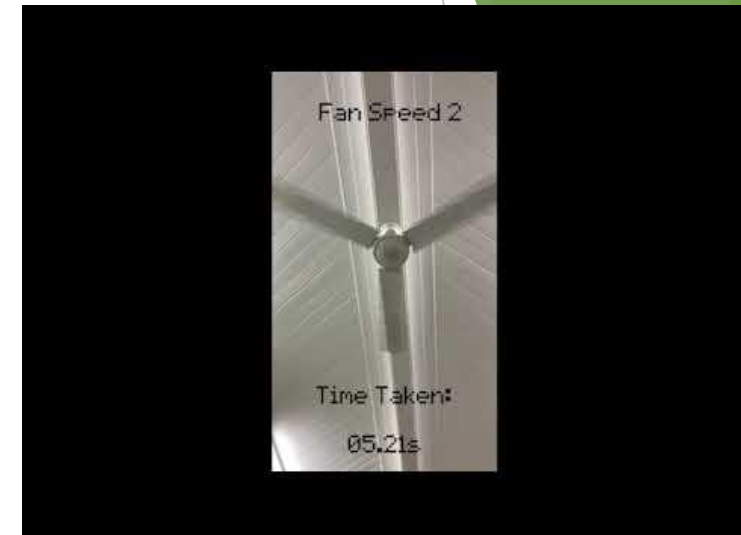
We will be using this to calculate the speed of the day.

- ▶ Measurement

We used this to figure out how long the arms are.

Results 1

<https://safeYouTube.net/w/U7gQ>



Fan Speed	Time Taken (slowed down) (s)
1	07:59
2	05:21
3	03:01

Results 2

- ▶ The end of the fan blade to the centre of the fan was 63cm
- ▶ Earths distance from the sun is 151.56 million km
- ▶ The actual time of the it took to do one spin (real time) was 01.25s

Fan Time (Days)	Fan Time (s)
1	1.25
30	37.5
360	450
Earth Time (Days)	Earth Time (s)
1	86,400
30	2,592,000
360	31,104,000

JUDGE NUMBER/NAME: _____

			5 Exceed expectations of students learning level	4	3 Evident and appropriate to learning level	2	1	0 Not evident
Investigation process	Choice of topic	1. Provides an appropriate aim or learning intention. Predicts results and/or describes a hypotheses to be tested.						
		2. Explains how and why they chose the topic and approach to the investigation.						
	Plan of the investigation	3. Lists the mathematical strategies and content that have been used in the investigation..						
		4. Describes how the mathematical strategies and content have been used to achieve results.						
	Communication of findings	5. Analyses their findings and publishes these appropriately.						
		6. Writes a conclusion that discusses the key findings of the investigation. Was my initial aim/ hypotheses achieved?						
		7. Reflects on the mathematical learning achieved from the investigation.						
		8. Communicates the investigations and findings appropriately to the given audience.						
Maths focus	Validity	9. Uses correct mathematical terms and symbols.						
		10. Uses accurate mathematical skills.						
	Understanding	11. Analyses mathematical connections within the investigation.						
Creative	12. Uses critical and creative thinking to explore mathematics within the investigation.							
Application	Legibility	13. Presents the investigation in a legible, logical and appealing manner.						
	Acknowledgements	14. Acknowledges resources used (including reference materials and assistance from other people).						
	Evidence	15. Has provided detailed evidence of work (such as draft, workings and/or notes) ensuring the investigation is a true representation of the students learning and understanding.						
Total (maximum 60)								