

It was really tough to decide winners and runners up in every class. Well done to everyone who took part and thank you for the effort you put into your presentations. We were all very impressed and hope you enjoyed taking part!

By taking part you showed lots of working scientifically skills!



### Special mentions to...

Elianah in Year 6 for a very well-planned presentation. You considered the pitfalls carefully and thought of ways to overcome any challenges you might face!

Imogen in Year 5 for combining your science and computing knowledge to create a clever presentation using Scratch!

Agnes in Year 4 for carefully considering lots of ways to ensure your results were accurate. You thought of everything!

If you are a winner or runner up, Miss Brenta will be in touch soon!

Explain why the size of the pulley affects the hill climbing ability of your buggy.

smaller pulley      larger pulley

If the pulley is bigger, then the rim force is bigger. This helps climbing steep hills. (Note, I tried not to copy the answer)

---

Explain why the size of the pulley affects the speed of your buggy.

6 turns of motor shaft & pulley (5mm dia)      1 turn of large pulley (20mm dia)

6 turns of motor shaft & pulley (5mm dia)      1.5 turns of smaller pulley (20mm dia)

If the larger pulley is turned once, because the diameter is six times as big as that of the motor shaft, the motor shaft will have to turn six times. The larger pulley has more torque, whereas the motor shaft is faster.

### VARIABLES I KEPT THE SAME

- I KEPT THE TEMPERATURE THE SAME. MY EXPERIMENT WAS IN ONE ROOM, I MADE SURE THAT THE GLASSES WERE THE SAME TEMPERATURE.
- I KEPT THE GLASSES, THE SCOOP AND THE SPOON CLEAN AND DRY SO NOTHING ELSE COULD AFFECT MY EXPERIMENT
- I USED THE SAME SCOOP TO MEASURE THE 3 VARIABLES
- I USED WHITE PAPER AND CLEAR GLASSES SO THE COLOUR WAS THE SAME COLOUR TO OUR EYES.
- I MADE ONE BOWL OF RED CABBAGE LIQUID SO THAT THE ANTHOCYANIN WAS THE SAME STRENGTH FOR EACH TEST.
- I USED THE SAME AMOUNT OF LIQUID IN EACH TEST

### My Predictions!

Material (in ascending order of sound proofing)	
Kitchen Roll	LEAST
Foam Sheet	↓
Oling Film	
Bubble wrap	
Leather	
Muslin	
Aluminium Foil	

