



Y6: Changing Circuits Workshops with Mercedes (School Scientist-in-Residence) Autumn 2022

- **LO:** To be able to plan, carry out and evaluate an experiment to see how changing the wire in a circuit affects the speed of a motor or sound of a buzzer.

This week, Year 6 have been planning and carrying out their own experiment with Mercedes, to test how different wires affect the speed of a motor. The students were split into groups and given an outline for the experiment, testing the wires using cars, which they then had to complete. Tasks included drawing a circuit diagram, completing the method, deciding what their independent, dependent, and controlled variables were, and making their hypothesis.



Next, they built their cars, making sure the wires didn't touch and that the wheels turned in the same direction! Once the cars were built, Year 6 measured the time it took the cars to travel their chosen distance with different wires. They found that the copper wire made the cars travel the fastest, which was what many had hypothesised!



The students also looked at some of the amazing uses of electricity and the scientists behind them, including Tesla coils, which can generate wireless electricity (or play music using lightning), prostheses which can use electrical signals from the brain to move like an actual limb, and light shows, where lights, water and projections in water are all timed and programmed to create a spectacular show!

"This reminded me of our trip in Year 5 to the NHM where we made cars out of circuits."

"I learnt that different wires effect the speed of the car."

"We got our hypothesis right!"

"I loved the light show and finding out about all the different careers you can have from electricity."

Kind regards, Miss Kelly & Mrs Wordsworth – Science coordinators



