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Electromagnets II

The researcher's purpose for this experiment was to determine whether or not the wire coil number on an electromagnet would affect its strength. This project could help doctors, junkyard workers, or even people at home! The hypothesis was: the number of wire coils will affect the strength of an electromagnet. The hypothesis was correct, and the greater amount of wire coils the stronger the electromagnet. The researcher's electromagnet was basically copper wire wound around each of three steel rods. Each one had a different interval of wraps around it. One had 100, one had 200, and one had 300. The beginning end and ending end of the wire were each connected to a bolt which sufficed as something to clamp the twelve volt battery charger onto. To test the electromagnets a key stock was placed on top of each of the electromagnets one at a time, and washers were placed on top of the end of the key stock. The total mass picked up was determined when the structure collapsed. The researcher discovered that each electromagnet became hot fairly quickly. The electromagnet with the least coils became the hottest because it used more amperage. The heat came from a continuous circuit. The researcher concluded the experiment with a correct hypothesis. The more coils an electromagnet has the stronger it is. The 100 coil electromagnet picked up an average mass of 470.61 grams, the 200 coil picked up about 544.32 grams, and the 300 coil picked up about 595.35 grams.