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dreams



**ASSIGN
BUSTER**

Title: Heat Conduction in different time of metals Aim: To observe how long it'd take for the heat to conduct along 3 different metals; brass, steel and copper. We know that by putting a pin that's stuck in the end of the metal by using wax. Hypothesis: When the heat conducts along the 3 different metals, the pins will eventually fall off, because when 1 particle vibrates from the heat, they bump into each other, then the next particle vibrates, until it reaches to the end of the metal, then the pin will fall. Variables: Variables: What is it?

Explanation Impending: The metals There are 3 different metals (brass, copper and steel). We used each metal 3 times, because when we heat each one of them and time them, we will find the average from the 3 different timings, so the results will be more reliable. Dependent: The time Each one of them will take different timings to fall, because each metal will take a specific time to pass the heat from 1 particle to another. Controlled: The distance The distance from the Bunsen burner till the end of the metal where the pin is laced. The distance was CM every time we placed the metals on the tripod over the Bunsen burner.

Copper was the fastest between them and brass was the second, and the steel took the longest, because when the heat reached the particles of the rod, it took longer than the others for the particles to vibrate, till the whole rod is hot. None of them took longer than 1 minute. From this experiment I learned that heat transfers through different metals in different ways.

Evaluation: I think my results were almost reliable. I heated 3 rods of the same type of metal each time.

I timed each one of them, and then I found the average, this will make my results more reliable. I think heating 3 rods for each metal is quite enough, maybe if we did more, of course it'll be more accurate. In this experiment I only used 3 metals. I think its fine, but it would be better if we used more types of metals if possible. The timings were not really accurate because the 3 rods were next to each other, so when the wax melted, which slowed down the pins to fall, and that affected my results. Now I know that steel conducts heat faster than copper and steel.

I think my rabbles were good, and valid, for the independent (things I changed) were the metals, which is the only thing I should change in this experiment. For the Dependent (things I measure) which was the time it took for the pin to fall off as the heat is transferred through the metal. And also that's the only thing I would measure. As for the controlled (things I kept the same) which were the positions of the Bunsen burner and the distance from Bunsen burner until the pin. I could have improved some stuff to make the experiment treatable and more reliable. Problem Solution Amount of wax

The amount of wax that was placed on the rod to stick the pin on it, wasn't always the same, and if there's a lot of wax, it'll take more time for it to melt and my results won't be accurate. The place of the rods on the tripod We put all the 3 rods of the same type of metal on the tripod at the same time; we put them right next to each other, which makes the pins over each other, which will stop them to fall, even if the wax melted. Of course that will affect the results. The only way to fix that is to do every rod alone, but we couldn't do that, because we didn't have enough time in class.