

Wood technology CBA

Screws vs Glue



My CBA:

My goal:

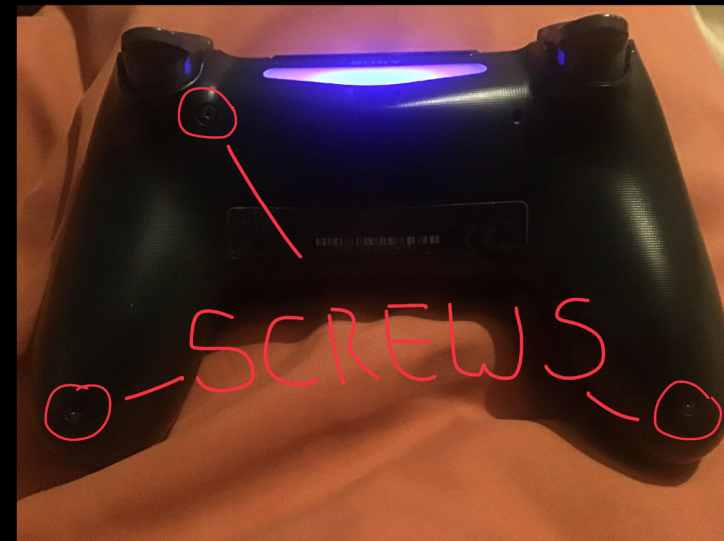
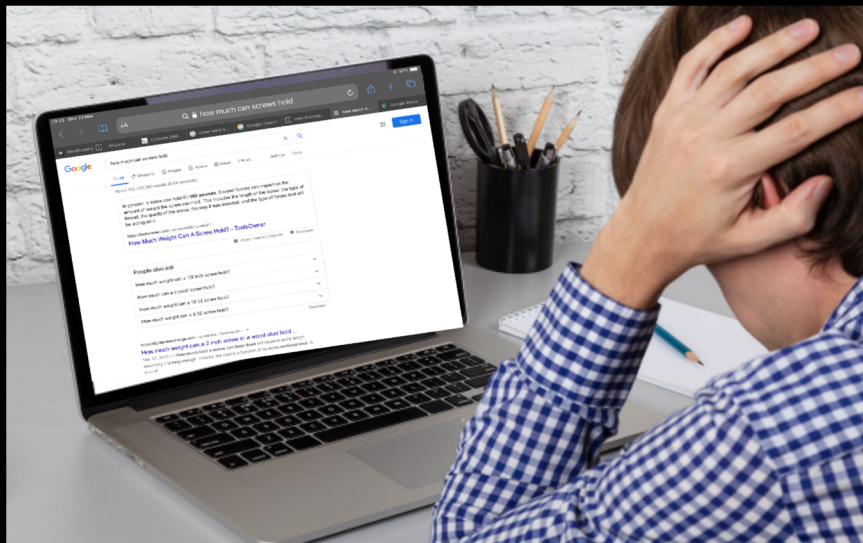
My goal was to see if screws or glue could hold more weight than the other. We accomplished this by doing research and an experiment, the next few slides go into more detail on this.



Online research:

During my online research, I looked up how and when each of these products were made. I found out that glue was created by cavemen in 200,000BC to make cave paintings last longer, hence why they're still here today. Glue is an extremely versatile material, used in everything from cave paintings many millennia ago to industrial gadgets being constructed and used today. It's not only used in everything, but it's used by literally everyone.

Screws are small metal nail-like objects that have treads wrapped around them so you can dig them into something. The heads of these screws (the wide parts at the back) have an engraved pattern in it, made for a specific type of tool, a screwdriver. I'm sure you can guess what they do. These nifty little things were created in the 1st century AD, much newer than it's gluey competitor. Screws are used in many things also, mainly in metal contraptions and wooden creations, they're quite secure in most cases, trusty enough to hold a spaceship together among other things. Most electrical products in your house have screws in them, if you doubt this, just look at the back of your TV remote or something. There's an example below:



Information gathered from my experiment:

Me and a few others from my class conducted an experiment also, we made a capital L shaped piece, in two parts. The two parts seemed to be of equal length, one part was stuck to the other using nails on the first try, and glue on the second try. We started adding weight to the end of the horizontal part to see which of the competitors could hold more before breaking. It started at 1kg, 2kg, 3kg etc. We were testing screws, and we went up and up until it got to 14kg weight. After this, we thought glue wouldn't hold even 10kg, but to our surprise, it actually held more! Although it was only 500g more it was still better than the screws. So I learned quite a bit from this experiment, that glue is slightly stronger than steel and that . The weight that was piled on previously before we reached 14kg most likely had something to do with both of them weakening overtime. If you try to lift 100kg and then put it up by 10s, you'll gradually get weaker and not even be able to lift the initial 100kg. This is what happened with both the glue and the screws I reckon, there have been studies that show glue lifting huge weights and not breaking but they didn't put on any weight previously.



Conclusion:

I personally believe that glue is better now, i originally thought that this wouldn't even be a competition, screws would win easily, but apparently glue is overall the better material. It is more versatile, and can be used by everyone. Glue is stronger than screws, cheaper than screws, and can be used much more often. Screws are made of steel, a more expensive material than animal limbs. Glue has been around longer, it's easier to install and it has been honed for millennia, while screws have been around for much shorter time, and they're harder to install.

Glue 9.5/10

Screws 8/10.



Teacher Annotations

There were effective methods of research used. Good use of secondary research to inform the primary research. The research generated an in-depth analysis of findings which were narrated through the student's own words.

The Classroom-Based Assessment linked to the local issue of when to use screws or glues but could have been elaborated on more.

The evaluation was completed to a high standard include relevant conclusions to the experiment.

The findings were presented to a very high standard and consideration was given to what information from the experiment should have been presented.

Overall Judgement

Above expectations

