Bulletproof Backpack-A Unique Solution for Unique Times

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The purpose of this project was to create a bulletproof plate that could be inserted into a backpack to help keep students and staff safe in the event of a school shooting. I wanted to create something that would be able to stop bullets from several commonly used firearms. If this could be done, it would help provide a sense of security for many. The idea was to construct a bulletproof plate that was lighter and less expensive than a metal one. Thin layers of a fiberglass welding blanket were glued together with fiberglass resin and then shaped to size after drying overnight. Because the plate was light and solid, it inserted easily into the computer sleeve of a backpack. After firing several rounds at the backpack from each of the different guns, it was clear the fiberglass plate was able to stop the bullets. The 17th round that was shot was the 12 gauge slug (muzzle velocity 1600 fps). This bullet hit where several other rounds had also hit, and it did go through the plate at this weak point. While the last bullet did make it through the plate, I do believe this project still has several benefits. A bulletproof backpack can be accessible to everyone. Using fiberglass materials, the plate can be made for a cheaper price and it can still have positive results of stopping bullets. It can provide safety, and it can also help provide a sense of security.

Awards Won: