October 2017



The Atkins Family Jason, Emily, Savannah, Nathaniel, and Miriam

Serving in Guinea-Bissau with



We're back in Michigan until we return to Guinea-Bissau on Dec. 9th!

October in Guinea-Bissau by Jason

My October trip to Guinea-Bissau was very useful. Thank you for the support that allows us to be part of impacting ministries like these! The trip was busy, but largely productively so, and it was great to be back in Guinea-Bissau; sweating, working, cooking and eating great fresh seafood, and spending time with our coworkers, church family, and neighbors.

I spent a significant amount of time with the welding department teachers and school administration to introduce the new department structure and curriculum that we've developed. The changes will help simultaneously teach the students in a more linear, organized order while organizing the interns to do the production jobs that help subsidize the department.



This year's welding students had their first demonstration of the computerized cutting table. It never gets old watching their eyes get wide seeing the machine do automatically in 20 minutes what would've taken a day by hand.



Above: The Explorer is back in action after a replacement wheel bearing/hub and tie rod end on one side, and cleaning, repacking, and resealing the CV joint on the

Below: Interns worked to cut apart a medium-duty truck chassis from the scrap yard in order to harvest a pair of stout beams that we used to reinforce my sagging welding table. Having a non-bowed space to work will save a lot of time and clever clamping trickery in the future as we're making products like grade school desks, doors, and burglar bars for sale to help support the welding school.





Factory Water by Jason

Though I'd hoped to get further (when isn't that the case?), the drinking water filter factory now has running water from a solar electric well pump! I brought the pump and controller over in my luggage and bought solar panels in Bissau. The panels are mounted permanently on the factory roof (an angle grinder would be required to remove them since they're such a theft target), the pump is in the well, and the plumbing has been run from the water tank to two faucets in the factory and one at the front of the property for the neighbors' household needs. There is still work to do in January to make the system automatic (stopping the pump when the well water level gets too low or the water tank is full), building a water tower to put the tank on, and putting the electrical into conduit to protect it, but the water is flowing and should help save the factory workers a good deal of time and tiredness compared to pulling buckets out of the 40' well. The system can supply 500 gallons of water a day on about 100 watts of solar power.



Commercial solar panel mounts just bolt together, so the panels are easy to steal. I had to work out a new system that could be installed without a welder (as I didn't have one at the site) but not be unscrew-able. The system I came up with is screwed down to the roof, then a bar is dropped inside a closed section of tube, blocking access to the screw heads.

Unfortunately, the 2nd water project of the trip, which was to replace the industrial school's broken well pump, wasn't able to be completed. Richard, the brains behind the filter factory, had planned to meet me in Guinea-Bissau and bring that pump with him, but was unable to make the trip because of the passing of his mother. (Please join us in praying for comfort for his family.) We looked for a place to buy a replacement pump locally, and although we did find the correct model, the pump which costs \$656 on Amazon was \$2,727 from the vendor in Guinea-Bissau. I didn't mistype that. 415% of the Amazon price. So, the school leadership made the decision to limp along for a few more months without running water until a replacement pump can be brought from the U.S. in January.







Just another day in paradise. (Not pictured: heat index on the ground was $110^{\circ}F$, I was baking on the steel roof!)



I did a little swimming inside a tank of toasty water to install the inside part of the tank spigot. Not refreshing on a sweaty day!



Viola!!!



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