

# EWB-USU Uganda Newsletter

## Utah State University Engineers Without Borders July 18 to Aug. 16 in Uganda

A team of USU students and professional engineers spent July 18 to August 16, 2007 in Uganda, East Africa providing major improvements for the Byana Mary Hill orphanage school.

### The Needs

The orphanage provides for about 225 students who live there and 100 day students. Children carried water from an open source in a valley a quarter mile away. Electrical power service is not available and light was provided by kerosene lamps. Boys moved the desks at night to sleep on the floor in the large classroom. Six other smaller classrooms had clay floors that turned to mud when rain blew in through the large holes in the walls that serve as windows. Girls sleep in a crowded building on triple-decker bunks with two girls to a bed. The school did not have children's reading books or recreational facilities.

Medical treatment is provided by "Doctor", a resident physician's assistant, in a small room with kerosene lamps. Along with normal childhood illnesses and injuries he treats malaria and dysentery, and cares for children with AIDS. He uses a razor blade to scrape parasites from the scalps of children on a daily basis.

### The EWB-USU Response

The original mission for the July trip was to install a solar pump. However, unexpected substantial donations permitted the accomplishment of additional significant tasks. Not only were new large solar panels and a solar pump installed, but also wiring and fixtures for 27 new solar lights. The team installed 2,000 square feet of concrete floors in six classrooms and expanded and installed roof rainwater catchment systems. In addition, the team took over 200 children's reading books in their luggage and installed shelves to start a library. They also built three tire swings, a basketball court, and a volleyball court. The team provided the children with Frisbees, hula hoops, kites, blankets, and over 150 boxes of crayons.

### Sustainability and Educational Enhancement

Many of the teachers are graduates of the school with limited additional education. EWB-USU has initiated four scholarships for them to insure sustainability and to enhance their education. Tuition is needed for one to study solar equipment maintenance and operation, and for two to pursue their teaching certificates at the local college. A young woman wishes to extend here education at the Datamine Technical Institute in Kampala. Tuition costs are about \$400 per semester.

### Objectives for the December 2007 Trip

A team plans to return over the Christmas break to provide clean water near the latrine and bathing areas, improve conditions and equipment for "Doctor", start construction of a girls' dormitory, start installing windows in the classrooms, and provide means for training staff for medical assistance. Your donation will make a difference.



USU Team at the Byana Mary Hill orphanage school

On the web go to: [www.usu.edu](http://www.usu.edu) and click on "Alumni & Friends" in the top bar.  
Click on "Ways to Give" and then click on "Give Now Online"  
"I would like to support the following": select "Other" and Specify "EWB-Uganda"  
Instructions lead you through the giving process

Credit Cards are accepted by calling: (435) 797-1323 or (435) 797-3582

Or make your check out to: "EWB-Uganda Account" and mail to:

Utah State University Development Office  
1140 Old Main Hill  
Logan, UT 84322-1420

William Grenney  
Faculty Advisor  
[grenney@cc.usu.edu](mailto:grenney@cc.usu.edu)  
(435) 797-3186

# AROUND THE SCHOOL



"Doctor" scraping parasites off the scalp with a razor blade before applying salve



Water is not available near the latrines for washing hands



Water is not available near bathing and washing areas



Alexis helps fit donated shoes



Les discusses weighty issues with a teacher



Paul and Melissa provide music lessons with donated instruments



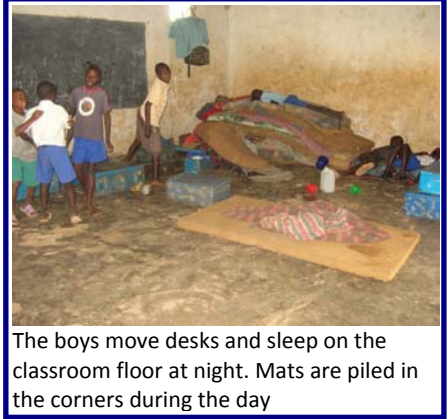
Lee describes his GPS unit



Alexis helps with gathering fruit



Girls sleep in a poorly lit building on triple-decker bunks with two girls to a bed



The boys move desks and sleep on the classroom floor at night. Mats are piled in the corners during the day



School girls hauling produce from the school's fields. Notice sleeping mats being aired on the grass



Christa helps haul corn from the school's fields



An art class using some of the 150 boxes of donated crayons

# WATER, SOLAR POWER, AND TUITION FOR LOCAL EDUCATION



Hauling PVC well casing



Holli using a coping saw to prepare 5 feet of slotted screen



Les extending the handle on the auger in order to deepen the pilot well



School children learn how to auger a well hole



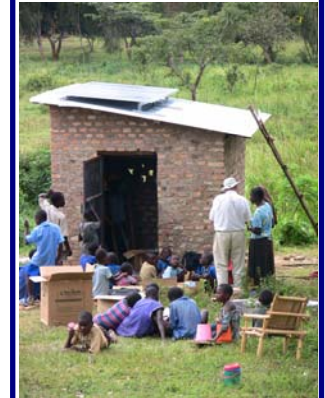
Developing the well using PVC pipe with a check valve on the end



Les tests the solar pump after it has been installed in the completed well



Bill and the school head mistress examine the final product



Solar panels were installed on the roof of the new solar equipment building



Students and staff digging a trench for the underground solar power cable



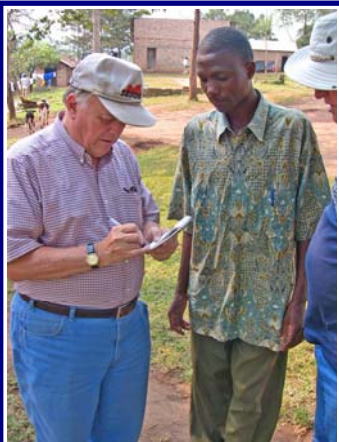
Schoolboys haul cement to build a foundation for the roof rainwater catchment tank



The roof catchment system with a first-flush bypass



Bricks are made and fired using the clay at the school. Bricks are available to build a dormitory for the girls. Donations are needed for concrete, windows, and lighting.



Richard teaching Joseph about solar power. Joseph would like to take solar power classes in Kampala.



Peter would like to pursue his teaching certificate at the local college. Tuition is about \$400 per semester. Violet wishes to continue studies at Datamine Technical Institute in Kampala.

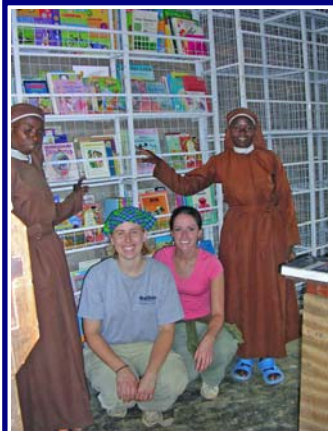


Judy would like to pursue her teaching certificate at the local college. Tuition is about \$400 per semester. She could also use a new crutch



Christa and Holly with their sand bio-filter

# NEW CLASSROOM FLOORS, STEPS, LIBRARY AND RECREATION



Alexis and Melissa with teachers in the new library displaying some of the donated books



Christa leveling a classroom floor with rock



Melissa and students compacting the base layer of concrete



Volunteers provide the finishing touches



Melissa, Christa, and Holli help break rock into smaller aggregate for the sand bio-filter



Christa lays out drainage pipe



Holli and Andrew cut a tire for one of three swings.



Children are excited to play on a swing for the first time



Bill demonstrating how to fly a kite



Andrew coaching basketball using the new hoop and backboard that he built with the students



Melissa and Les playing volleyball with students and teachers using the new net



Lee showed the kids how to build a simple teeter-totter



Holli teaches hula hoop basics



Students loved tossing the new Frisbees