Service Learning in Belize: Christ the King Water Fountain

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Christ the King

- Christ the King Primary School is situated on the coast of Dangriga, Belize, next to the Caribbean Sea. Dangriga is the largest urban area in southern Belize and is the capital of Stann Creek District.
- About 210 students attend school at Christ the King in Infant one and two and Standards one through six, corresponding to grades one through eight in the United States.

The Old Fountains

- The school had previously installed two water fountains located outside the classrooms. This method proved to be unsustainable in the social system because the children were unsupervised.
- The fountain was vandalized on a regular basis and unauthorized use became a problem. Christ the King is not located in a residential area and is adjacent to a basketball court that is frequented in the evenings. Because there was no protective structure built to enclose the fountains, they were unsustainable in the built system.

The New Fountain

- A group of six students, representing industrial, civil, and mechanical engineering disciplines, built a new fountain in two days.
- The decided location was visible from most classrooms and the principal’s office. After the length for pipe was measured and the least amount of pipe elbows needed was determined, the protective structure was designed.
- It was decided that a wood box would be constructed flush with the side of the building to enclose the fountain. The length and width of the box would be two feet, while the height would be three feet, allowing for a vertical staff that would be two feet tall, so that a bucket could be filled. The front of the box would open like a door and be locked in the evenings.
- A teacher at Ecumenical High School donated most of the tools and Peacework donated wood. Twenty-seven two-feet planks and four-fourths inch PVC pipe was purchased at $1 BZ per foot.
- Fifty feet of three-fourths inch PVC pipe was purchased at $1 BZ per foot. Four hinges, sixty-eight screws, a bottle of glue, a pipe cutter, connectors, two valves, a spout and a lock were purchased at a total of $40 BZ, totaling $90 BZ for the entire project.
- The trench was dug eighteen inches in the ground so that rain, severe weather and children playing could not damage the pipe. Pressure was tested after the glue dried, and the trench was then filled.
- For the box, the four posts were placed in four holes that had been dug with a posthole digger and the top and sides were constructed. The door was constructed and attached last.

Sustainability

- The project was implemented in a manner that solved the school’s financial boundary. It addresses all of the problems with the old fountains and kitchen use.
- The principal expects the new fountain to last up to three years. She held a fountain dedication for the school.

Results

Built Sustainability
- The built system of sustainability includes the design and construction of structures in a manner that poses little impact on the environment and takes into account location and surroundings.
- The fountain was built with minimal material waste. The donated wood was left over from another project. Only the necessary amount of pipe materials and screws were purchased. The tools were loaned to the group so they would not need to be purchased.
- The protective wood box enclosing the fountain will discourage vandalism, and the lock on the door will prevent unauthorized use. It will also protect the fountain from children playing around it and severe weather, which could cause damage.
- The trench was dug eighteen inches in the ground so that rain, severe weather and children playing could not damage the pipe.
- The pipe stands two feet tall so that a bucket could be filled for a classroom. This way, children will not have to continually disrupt class to fill their cups and may drink more water.
- The fountain is not in an inconvenient location for anyone and is not near anything that could cause harm to the water quality.

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