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Team 8

Drip Irrigation

Prototype 1:

We first poured water through a pipe and hose shown in the following picture. After steady observations, no leaks occurred. One of the main problems with this solution is that the hot glue used to hold the pipe and hosing together may not be the best material to use. For future experiments, a rubber gasket should be used to fill the space between the hose and PVC.

As you can see from the picture above it is

Simply 2 PVC pipes connected with a piece

Of hosing with a T-connector held together

With hot glue.

Prototype 2:

Another test that we tried was instead of having curved hosing, which it naturally is, we tried to rewrap the hosing in the opposite direction to make it straight. After doing this it really didn't work because there were kinks in the hosing. A solution to this is t rewrap the hosing without any kinks or just try to find straight hosing.

Prototype 3:

During this stage of testing we poked holes in the hosing to test which hole was the right size to let the water drip out and not pour out. When the water was coming out at a high pressure, the water would continuously come out rather than when it was at a lower pressure. This worked when the water pressure was low.

This is a picture of the drilling process to see which

Hole was the right size.

Cost:

Our design could easily fit the fifty dollar budget because of the use of materials. Instead of using PVC for the entire prototype, we used hosing which is much more flexible and cheap. Another way is because we used simple T-connectors which don't cost too much money. In all I believe that we are under the fifty dollar cut.

Recommendations:

Wood glue doesn't work at all. Hot glue works but you need to put a lot on. I would recommend trying some sort of adhesive that will give a more permanent connection rather than a glue. Other recommendations include taking your time drilling and handle the object with care and precision.

More Pictures:

Testing to see if water flow is correct.

Testing the holes to see which size is best for water to drip slowly