Creative Cooling

Journal

the Air conditioning Jurnal

What is Air conditioning?
Air conditioning is the Proseth of removing heat from an inclosed space to create a Comfortible indoor omviorment.

How does Air conditioning worcle?

Ive Learnd that refrigrint takes heat from inside a closed room and transfers it out side. Throgh Colad evaproation and condensation absorbs heat and transfers it.

Can I bild an air conditioner

Perfogrimal refrence
Land R mechanical
discussion, how does an air conditioner worcle can I bild my own air conditioner

The five main Parts
Fan, refrigerant, Compressor, evaporator, condenser.

Fan, - moves the air
refrigerant - Media that transfers heat
Compressor - it compresses and moves the refrigerant
Evaporator - evaporates the refrigerant and cools the coil
Condenser - condenses refrigerant and exchanges heat

Can I build my own air conditioner
Simple answer yes. I can build a tipe of Air conditioner with theese matiereals
Bucket
ice
Water
pump
Coil
Fan
Power sorse
extension cord
Some of the tools I will need
dykes
hanksaw
needle nose Pliers
Air compresser
infred thermoniter

Prokedure

1 Remove coil from old machine. I worked with cand r mechanical to recycle old machine I cut out coil from old machine and other components. removed old evaporater coil to be used in project.

2 Used band saw to cut of old fittings. I learnd what the evaporator is and how it workes. I learnd how I can move water and air through and across to acheave cooling.

3 cleand coil with air compresor. learned about safty and tools. turned on air compresor cleand coil with solvent and compress air.

4 Hooked hose to coil. I cut vinyl hoses for the coil. these hoses will move water from my condensing unit to coil making it cold.

5 make adaptor fittings from pump to hose. I placed adaptor fittings in vice and tighten them so they dont leak this connects pump to hose

6 Placed hose in bucket. Fill bucket with ice and water. This is to hold cold refrigrant, ice water. the Bucket's cup Condenser

7 test the water flow in coil by turning on the Power source for the Pump. Verify Pump is moving the water in the right direction. the Pump represents a compressor moving refrigerant

8 mount coil to fan with zip ties. Fan moves the air across the coil to exchange heat. the warmer air moves across the coil and exchanges heat with the cold refrigrint. this cools down the air temperature

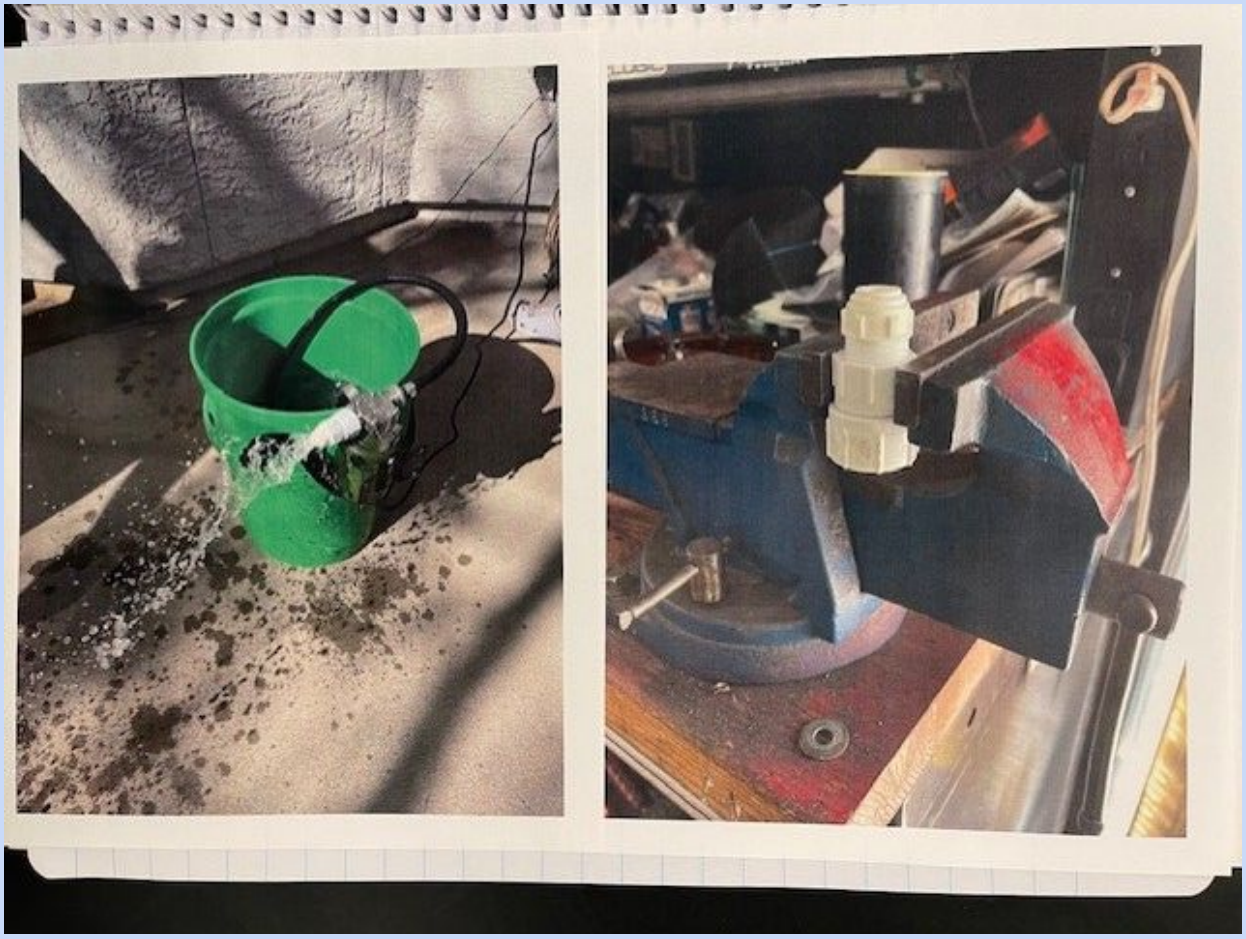
9 re-Plug in the Power source to run system. With all the components working together my Project is running

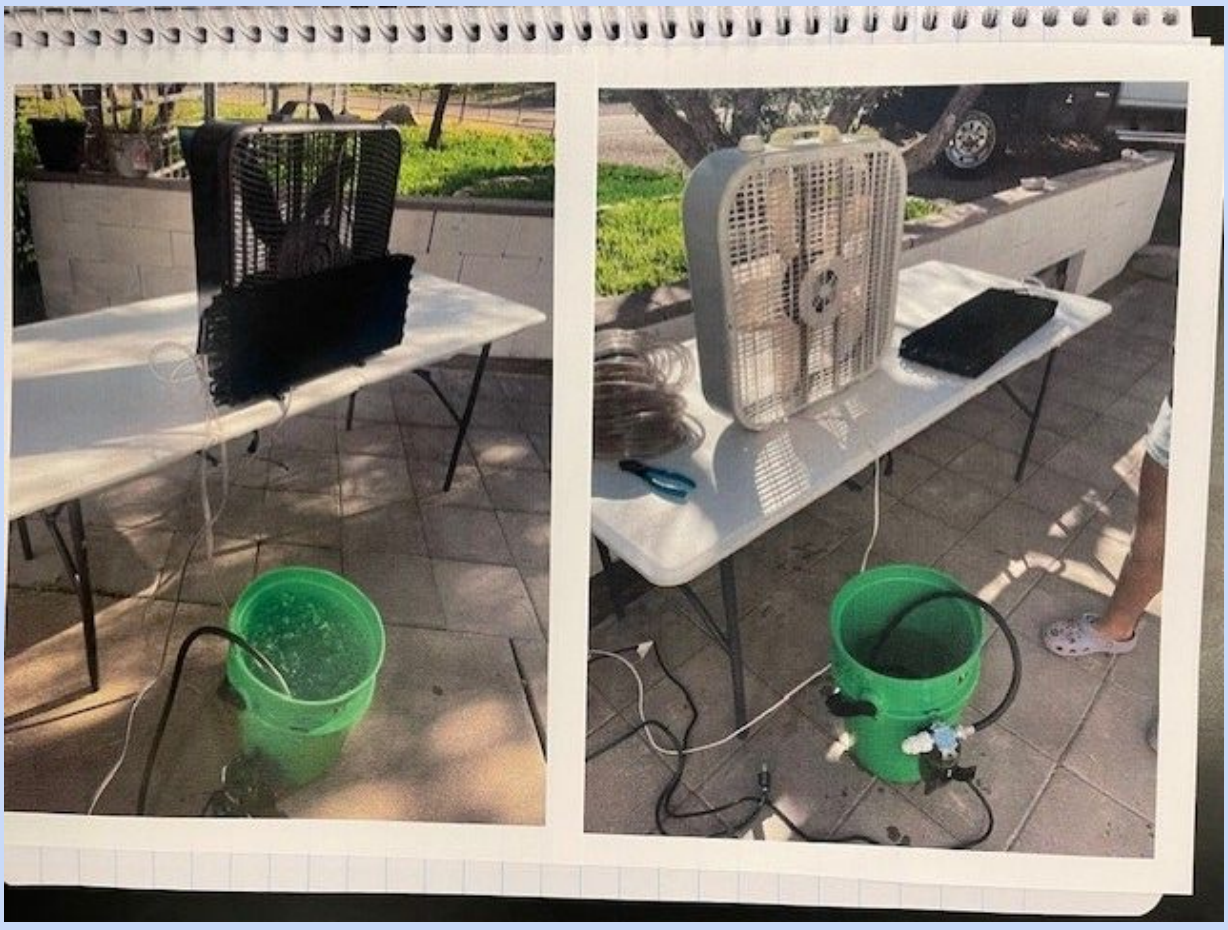
10 verify cooling with an infrared thermometer. I used the monitor to measure the air coming in to the coil and out of the Fan. I was able to produce 16 degrees of cooling. I could also measure water temperature in the bucket and after the

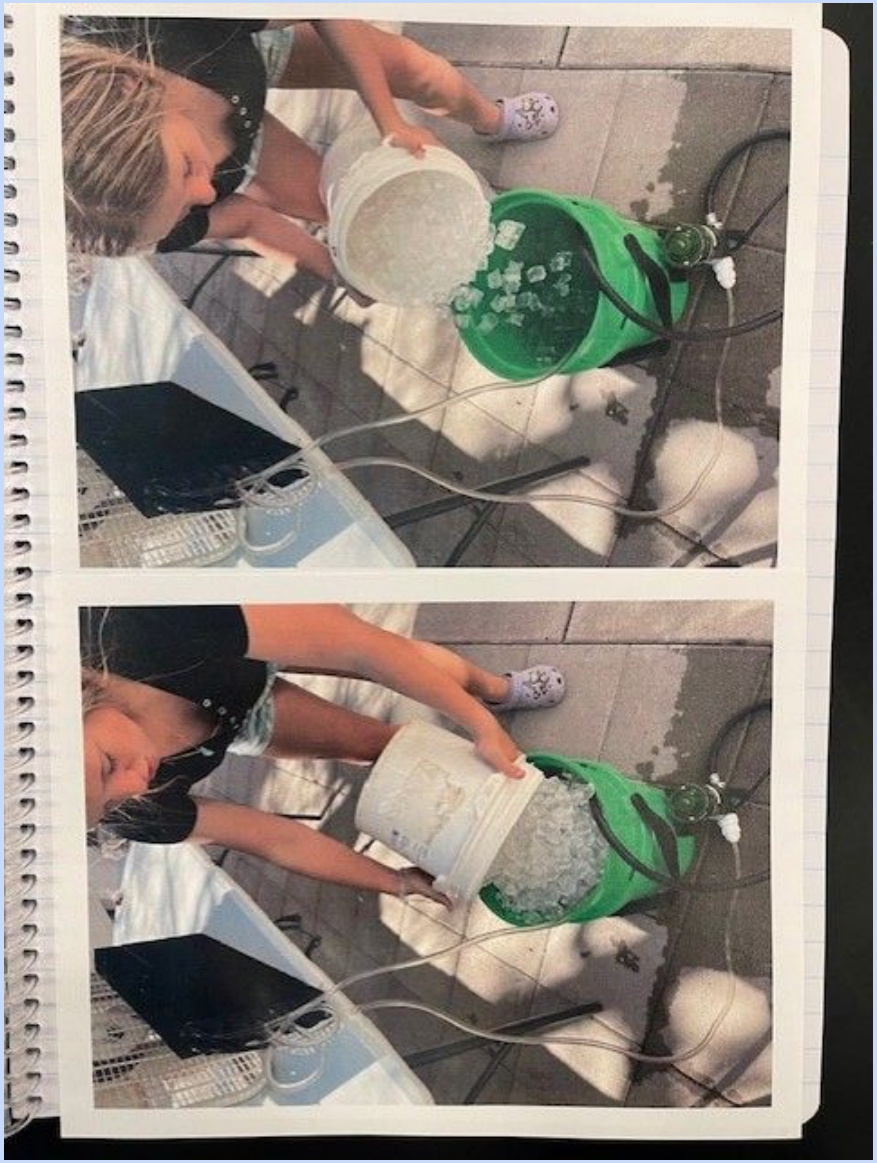
Coil showing heat transfer.

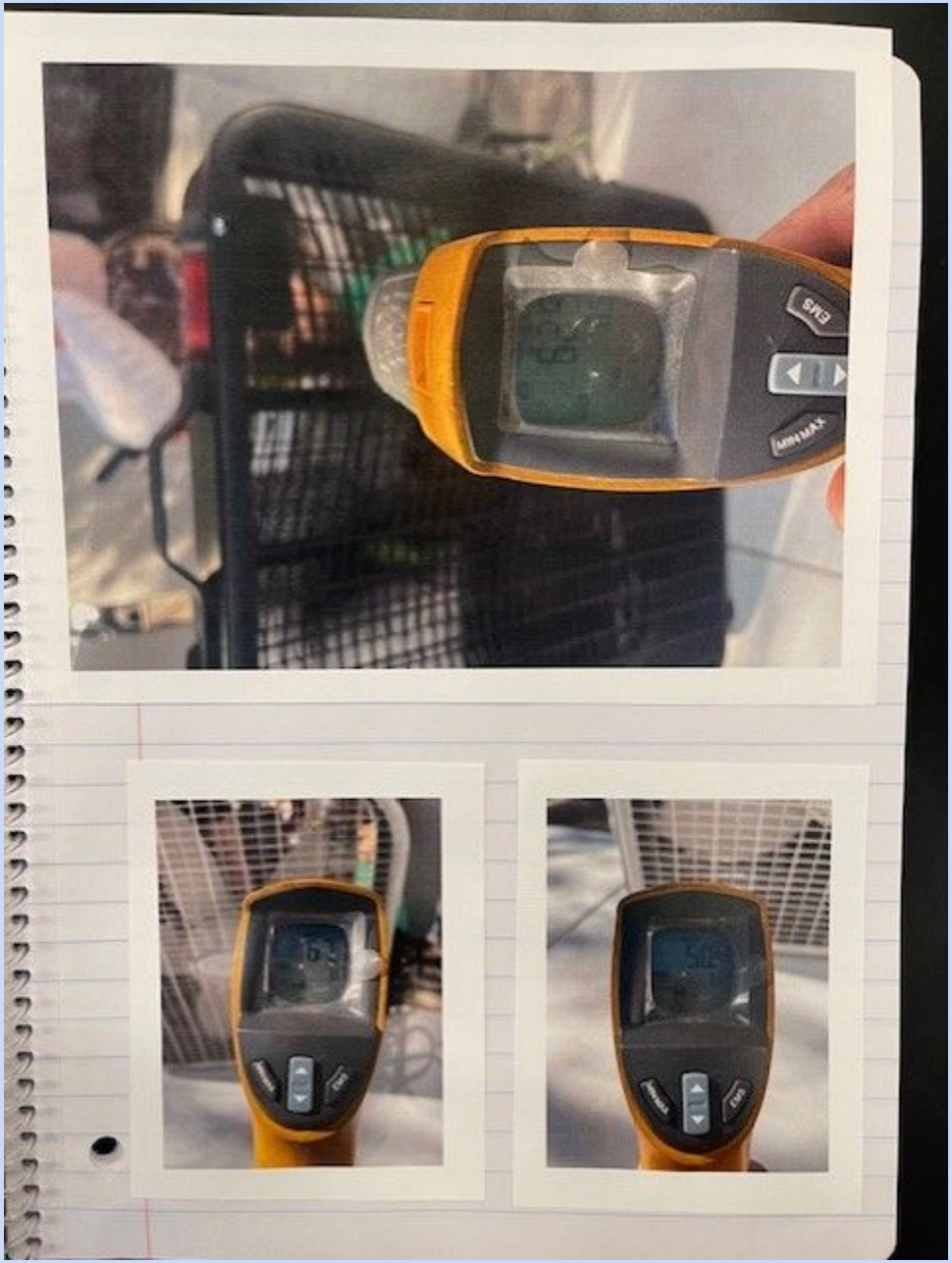
Observations

I observed the top half of the fan was blowing warmer air compared to the bottom half of the fan with the coil transfer causing of 4 degrees of heat making it cooler. testing my project in different places gave me different outcomes. Of temperatures varied from 9 to 22 degrees





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