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# NEED Energy

— 703 —

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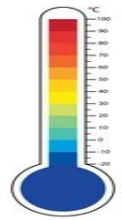
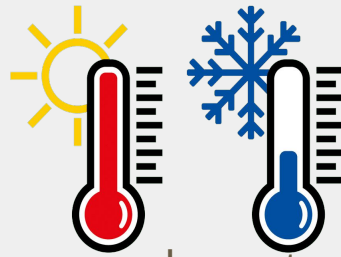
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# Insulation/Draft Detector



The insulation is a powerhouse compared to other energy saving products and it is cost effective and it can keep your house cold or warm its up to you and thar are different kinds of insulation such as foam , bords ect.

# Temperature

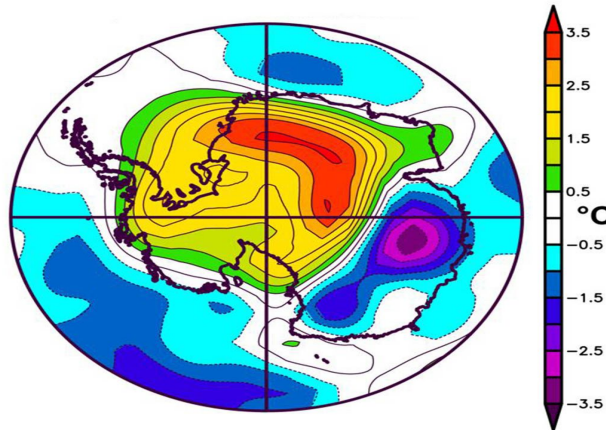


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To maintain a temperature you have to have good insulation. But also keep in mind of more efficient ways to get air or heat without using too much money on it. If it's cold outside and you are using your heat and your house is not insulated then the heat will not warm up the house, same goes for if it's hot out and you are using your air conditioning.



Antarctic Air Temperature  
Difference From Average, January 1 to February 15, 2022



Credit: NSIDC. Courtesy: NOAA/ESRL Physical Sciences Laboratory



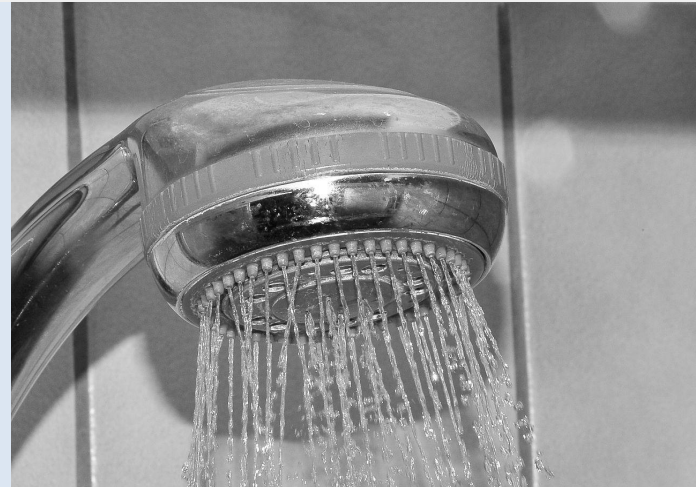
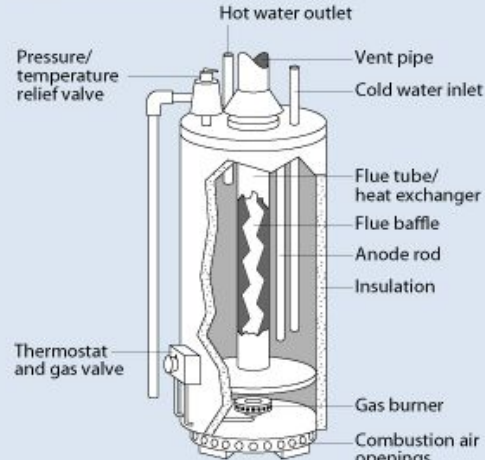


# Water Use

Water plays a big part in your house. It can also be expensive, there are many ways to conserve your water but use what you need as well. Don't leave water running in situations where you are not using it. You can turn the water off after wetting your toothbrush.



Storage Water Heater



# Lighting/Light Bulb Comparison



Our group compared different light bulbs. Knowing which light bulb saves more energy and is more efficient is key!

When comparing light bulbs, we concluded that the LED light bulb costed the least all around. The LED light bulb also SAVES more energy than the incandescent, Halogen, and the CFL light bulbs!

**Facts of Light**  
How much does it cost to create 25,000 hours of light from each bulb?

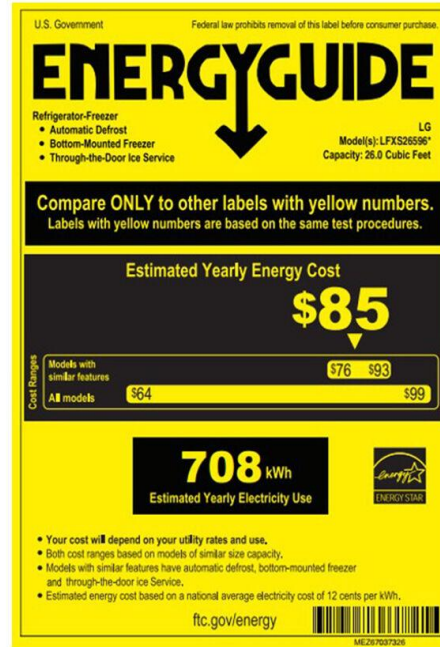
Handwritten calculations:  
25,000  
160  
150  
360  
126  
1000  
8000

	INCANDESCENT BULB	HALOGEN	COMPACT FLUORESCENT (CFL)	LIGHT EMITTING DIODE (LED)
<b>COST OF BULB</b>				
Life of bulb (how long it will light)	1,000 hours	3,000 hours	10,000 hours	25,000 hours
How many bulbs do you need to get 25,000 hours?	25	13	3	1
Price per bulb	\$1.50	\$1.50	\$1.50	\$1.50
Cost of bulbs for 25,000 hours of light	37.50	19.50	4.50	1.50
<b>COST OF ELECTRICITY</b>				
Wattage	25,000 Watts	25,000 Watts	25,000 Watts	25,000 Watts
Total kWh consumption	60 kWh = 0.600 kWh	47 kWh = 0.467 kWh	13 kWh = 0.133 kWh	11 kWh = 0.110 kWh
Price of electricity per kWh	\$0.125	\$0.125	\$0.125	\$0.125
Cost of Electricity	7.50	5.84	1.66	1.37
<b>LIFE CYCLE COST</b>				
Cost of bulbs	37.50	19.50	4.50	1.50
Cost of electricity	7.50	5.84	1.66	1.37
Life cycle cost	45.00	25.34	6.16	2.87



# Appliances/Energy Guide Labels

As our appliance we chose the LG Instaview Smart Refrigerator, because it is very spacious (26 cubic feet). The estimated yearly energy usage is 708 kWh, and the estimated yearly cost is \$85. Some of the features in this refrigerator is that it has french doors with a dual ice maker. It is made of stainless steel, and is fingerprint resistant. It also has a sleek glass panel that lets you see what all is inside of the fridge. This is why we chose this refrigerator.



# Circuit Activity

What did we do??

A well done circuit can add light to a home.using copper tape, a battery, and a little light with the positively charged side on one specific side of the battery and attached to the side of the house. This can show us how a light/circuit can benefit a house.

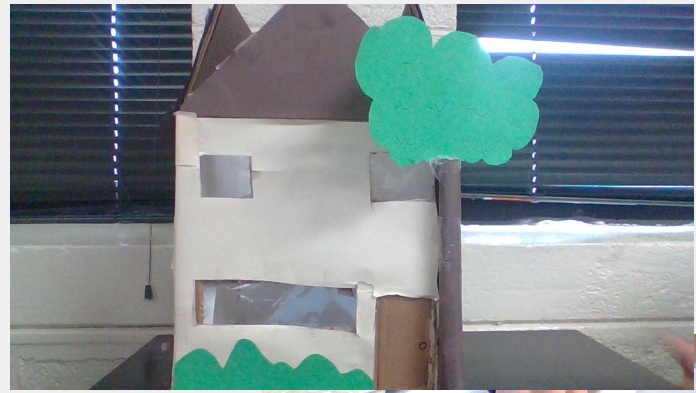
Our goal is to teach you circuits and how they work.

Student leadership:we have a group project of 4 people.we all worked on the project and one of us(abby) documented and wrote the whole thing.(hayden)took pictures of the house on his chromebook  
Evaluation:this activity taught us how using a light circuit and just a couple of supplies.



# Landscaping

A well-designed landscape not only can add beauty to your home but also can reduce your heating and cooling costs. A well-placed plant can deliver effective shade, act as a windbreak, and reduce your energy bills. Carefully positioned trees can save up to 25% of the energy a typical household uses.



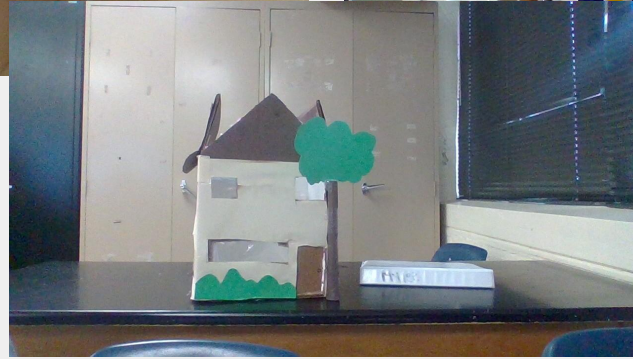


# Energy House

Step 1: Cut out the outline of the doors to the building code.



Step 2: Add insulation and cover with a poster board as drywall.



Step 3: Cover outside with landscaping and cut roof.

These energy efficient house showed us ways to conserve energy and how the landscaping provide that conservation.

# School Energy Assessment

In the school we can save energy by turning off lights when nobody is in the classroom. We can also save energy by making sure the water is all the way turned off when we leave the bathroom.



# Family Energy/Science Night

On this night we are going to play with and learn about different energy types.