We're in a Lot of Hot Water

Constellation
An Exelon Company

Hot water in a tank requires energy to keep it at the set temperature. The higher the temperature setting, the more energy is needed to keep that water hot so it's ready when needed. Serious injury in the form of scalding burns can occur when hot water is above 140 °F. Keeping the temperature at an energy-saving level can not only save money, it can keep everyone safe.

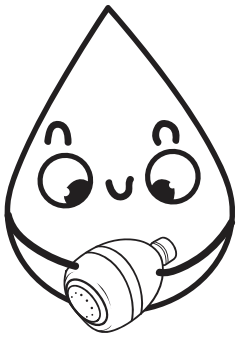
Materials

- Flow meter bag from kit
- Hot water gauge from kit
- Faucet aerators from kit
- Low flow shower head from kit
- Teflon tape from kit
- Timer or stop watch

Safety and Procedure Notes

- Young children should have appropriate supervision to prevent burns from hot water.
- A candy thermometer can substitute for the hot water gauge.
- If you don't have a flow meter bag you can use a bucket to collect the water for one minute, then measure the water with a measuring cup.

Procedure



1. Start in the room closest to the water heater that has a faucet – the kitchen or a bathroom. Following the directions on the flow meter bag, hold the bag beneath the faucet.
2. At the same time, turn the faucet on all the way on cold and start the stop watch or timer.
3. Turn the water off after one minute and read the amount of water that has run into the bag. Record data in the data chart. Water a plant, if you can, with the water collected so the water does not go to waste.
4. Turn the hot water on and allow it to run until it is at its hottest temperature.
5. Put the hot water gauge in the stream of water and measure the temperature. Record the data on the data chart.
6. Repeat the procedure for the rest of the faucets in your home, including all showers.
7. Permanently install the aerators and low flow shower head where they will be most effective in reducing water use.
8. After the aerators and shower head have been installed, repeat the flow test and compare.

Data

Room	Type of Water Source	Water Flow Rate	Hot Water Temperature
	☐ Faucet ☐ Shower		
	☐ Faucet ☐ Shower		
	☐ Faucet ☐ Shower		
	☐ Faucet ☐ Shower		
	☐ Faucet ☐ Shower		
	☐ Faucet ☐ Shower		
Bathroom after aerator	☒ Faucet ☐ Shower		
Bathroom after shower head installed	☐ Faucet ☒ Shower		
Kitchen after aerator	☒ Faucet ☐ Shower		

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Discussion

1. On average, how long are showers in your household? _____ minutes.
2. Using the flow rate for your shower before the low flow shower head was installed, calculate how many gallons of water are used for each shower. _____ gallons.
3. Using the flow rate for your shower after the low flow shower head was installed, calculate how many gallons of water will now be used for each shower. _____ gallons.
4. How many gallons of water will now be saved for each shower of average length taken in your home? _____ gallons.
5. If your household pays its own water bill, use the rate charged by your water provider to calculate how much money you will save on each shower by using the low flow shower head. $_____.
6. A water heater jacket costs $20-30 and will save 7-16% on water heating costs. Use the Energy Saver website to review information about water heater jackets and discuss whether this would be a good investment for your home to help save money. Navigate to https://energy.gov/energysaver/projects/savings-project-insulate-your-water-heater-tank.