True or False: Space heaters are more energy efficient and inexpensive to heat large areas than central heating systems.
Bedroom 200

Insulation:
A) Facilitates the exchange of air from external sources to internal sources
B) Slows down the heat flow throughout a home
C) Does not allow any air infiltration from inside to outside sources
What is weatherization of an existing building?
What does R-value stand for?
Bedroom 200

B) Slows down the heat flow throughout a home
Bedroom 100

**False** – space heaters are less efficient because they are designed to heat small areas for short periods of time
Bedroom 1000

Thermal Resistance Value

*A high R-value is better than a low R-value*
Modifying a building to reduce energy consumption and optimize energy efficiency.
True or False: A concrete foundation is a great insulator.
When caulking windows and trim, what angle should the caulk gun be held for best results?

A) 15°
B) 45°
C) 90°
D) 360°
Basement 500
Blankets are needed for extra insulation on
A) Only electric water heaters
B) New and old water heaters
C) Old water heaters (both electric and natural gas)
What is a rim joist?
Basement 200

B) 45
False – A concrete foundation has an R-value of 1; insulating the foundation could increase the R-value to 18.
Basement 1000

Where the house meets the foundation; the boards that surround the floor on the underside. Also called band joist, header joist, perimeter joist.
A) **Old water heaters** (both electric and natural gas). New water heaters are built with internal insulation. Additional insulation is not necessary or cost effective.
Utility Room 100

True or False: Only hot water pipes need to be insulated
True or False: Lighting is the #1 energy consumer in your home.
Utility Room 500

What is the name of the vents that transport forced-air heating and air-conditioning and can become large wasters if not sealed properly?
A front-loading washer uses ___% less energy than a conventional top-loading washer
A) 25%
B) 50%
C) 65%
D) None. A top-loader uses less
Utility Room 200

False: Heating/Cooling (48% of energy; lighting is 10% of energy)
False: cold water pipes should be insulated to avoid condensation and to prevent freezing in unheated areas or when away from home.
Utility Room 1000

C) 65%
Utility Room 500

Ducts

(not ducks ;-P)
True or False: A chimney can produce heat and make your house cooler at the same time
What type of landscaping can you do to help heat and cool your house?
Outdoors 500

What is a geothermal heat pump?

A) A device that blows in hot air during winter months through fans

B) A pump that uses the constant temperature below ground to heat/cool your house

C) A device that boils water and funnels the heated water through your house

D) A pump that forces magma up to ground level to heat houses
To minimize heat loss, what temperature should your thermostat be at when you are using your fireplace?
Outdoors 200

Plant Trees – evergreens on the north and northwest sides; deciduous trees on the south, east, and west
True: warm air rises through the chimney
Outdoors 1000

55º- Warm air will go right up the chimney
Outdoors 500

B) A pump that uses the constant temperature below ground to heat/cool your house
True or False: The exhaust fan in the bathroom needs to be vented outdoors instead to the attic, otherwise the attic insulation may become ineffective.
Bathroom 200

A five minute shower on average takes ___ gallons of hot water

A) 5
B) 10
C) 15
D) 20
Bathroom 500

The average water per flush has decreased from __ to __ gallons since 1980.

A) 10 to 1.6
B) 3 to 1.6
C) 7 to 1.6
D) 5 to 1.6
What are two things you can change in your bathroom to reduce energy use?
Bathroom 200

B) 10

A bath uses 15-25 gallons of hot water.
Bathroom 100

**True:** Air vented from the bathroom is moist and can dampen the insulation, causing it to compress.
Bathroom 1000

• Insulate light switches/outlets on exterior walls
  • Caulk exterior baseboards/windows
  • Caulk around vent casing in ceiling
  • Insulate recessed lighting
• Replace incandescent bulbs with compact fluorescents or LEDs.
Bathroom 500

C) 7 to 1.6
True or False: Every time the fridge door is open, up to 30% of the cooled air can escape.
Some utility companies offer rebates for energy efficient:

A) Refrigerators
B) Clothes Washers
C) Air conditioners
D) Freezers
E) All of the above
What should the temperature be on an average water heater?

A) 120° F
B) 150° F
C) 180° F
D) 212° F
Where should you use caulk around windows to prevent drafts and energy leakage?
Kitchen 200

E) All of the above
Kitchen 100

True
Both sides of trim boards, top and bottom. Removable caulk can be used to caulk the window shut in the winter
Kitchen 500

A) 120° F

Temperatures below 120° F can promote the growth of bacteria. Higher temperatures waste energy.
True or False: You need to insulate between the floors of a two-story house
Living Room 200

The highest R-value currently possible from a new window is:

A) 1
B) 4
C) 10
D) 14
Living Room 500

What is the desired R-value for insulation in your walls?

A) 4
B) 8
C) 10
D) 18
What is Phantom Energy?
B) 4
Living Room 100

False
Living Room 1000

Energy that is being used by an appliance when it is in standby mode or not being used. *Phantom energy use can be stopped by using power strips or by unplugging appliances when not in use.*
Living Room 500

D) 18
True or False: The color of your roof affects the temperature of your house
Attic 200

True or False: If you have an insulated attic, you don’t need to insulate or weather-strip your attic hatch.
Attic 500
What should the minimum depth of insulation be in your attic?

A) 4”
B) 6”
C) 12”
D) 20”
Name three kinds of insulation.
False – warm air can leak to the attic through and around the hatch
True – white or light-colored roofs reflect more sunlight, leading to a cooler house
Attic 1000

fiberglass, denim, cellulose, spray foam, rockwool
(not legal for new installation),
hard foam, styrofoam, vermiculite
Attic 500

A) 12"
Greater depth of insulation will help, but it is not cost effective at today’s energy prices.