

# Energy Conservation in the Home

Consult the web sites <http://www.eere.energy.gov/consumer/tips> , [http://www.eere.energy.gov/consumer/your\\_home/](http://www.eere.energy.gov/consumer/your_home/) , and <http://coloradoenergy.org/procorner/stuff/r-values.htm> to answer the following questions.

1. What percentages of your home's energy use goes to (use the pie chart in "Your Home's Energy Use"):

lighting and appliances \_\_\_\_\_

water heating \_\_\_\_\_

space heating \_\_\_\_\_

2. The R value is a number that indicates how resistive to heat flow a material is. The larger the number the less heat flows through. What is the R value of the common window and how does this compare to a wall assembly?

From these numbers you can see that windows are a big source of heat gain and loss in the home, both convective and conductive. What do these terms mean? What is another way that heat is transferred? (see pages 160-163 of your text as well – 4th edition)

3. Insulation can be of various types - batts, rolls, loose-fill, and rigid foam boards. What kinds of insulating materials are used in these types?

What are some average recommendations for the R values of insulation in the ceiling, walls and floors in this area?

Ceiling \_\_\_\_\_

Walls \_\_\_\_\_

Floors \_\_\_\_\_

4. What should you look for to insure that you are getting the most energy efficient appliances on the market?

5. Where and why should you plant trees around your house? What type of trees are best? (Make sure to include a direction in your answer)

6. What type of heating system (based on the type of energy used) do most people in the U.S. have?

What is a heat pump? Why is it recommended for electricity based heating and cooling systems?