

 **BUILDING BLOCKS STUDENT WORKSHEET**

Calculating energy costs

Many of the things we use in our homes require electricity, which costs money. The less electricity we use, the more money we can save on our power bills.

Instructions

- ① Read the "About energy costs" paragraph.
- ② Calculate and fill in the missing amounts in "The cost of using appliances" table. Your teacher will tell you what electricity price to use.
- ③ Use the completed table to answer the "Comparing Energy Star and standard appliances" questions.
- ④ Review the table on light bulbs and use the information in the table to answer the "Comparing Energy Star and standard light bulbs" questions.
- ⑤ Answer the reflection questions.

About energy costs

Kilowatts are the way we measure how much energy certain products use. The Environmental Protection Agency, which is part of the U.S. government, runs a program called Energy Star to show people how energy-efficient different products are. Energy efficiency means using less energy to get the same job done. This helps lower electric bills and reduce pollution.



The cost of using appliances

Figure out what it costs to use each appliance for one year by multiplying the kilowatts per year and the average price of electricity. Your teacher will tell you the average price of electricity. Compare the Energy Star appliances to standard appliances.



Energy Star appliances

Appliance	Kilowatts per year	Average price of electricity	Cost for one year
Television	81	x \$0.13	\$10.53
Refrigerator	488	x \$	\$
Dishwasher	181	x \$	\$
Clothes washer	316	x \$	\$
Clothes dryer	480	x \$	\$
Total			\$

Standard appliances

Appliance	Kilowatts per year	Average price of electricity	Cost for one year
Television	112	x \$0.13	\$14.56
Refrigerator	538	x \$	\$
Dishwasher	206	x \$	\$
Clothes washer	409	x \$	\$
Clothes dryer	607	x \$	\$
Total			\$

Note: The numbers in the tables are examples. Actual kilowatts and costs may be higher or lower.

Comparing Energy Star and standard appliances

- How much money could a household save in one year by using Energy Star appliances? \$ _____
- How much money could a household save in 10 years by using Energy Star appliances? \$ _____

Comparing Energy Star and standard light bulbs

Use this information about light bulbs to answer the questions below.

Energy Star light bulb			Standard light bulb		
Kilowatts per year	Average price of electricity	Cost for one year	Kilowatts per year	Average price of electricity	Cost for one year
10	x \$0.13	\$1.30	47	x \$0.13	\$6.11

- How much could a household save in one year for each Energy Star light bulb they use? \$ _____
- The average U.S. household has 40 light bulbs. How much could a household save in one year by using 40 Energy Star light bulbs? \$ _____

Reflection questions

Name three other things where you live that use electricity and may cause your power bill to be higher.

- _____
- _____
- _____

What are other ways you can save energy in your home?