

GLS10 Unit 1: Learning Skills

Activity 3: Math in Everyday Life

Overview

In this activity, math will be seen in the context of everyday situations. The student will learn about financial transactions, budgeting money, reading charts and graphs, and problem-solving. The student will have an opportunity to apply specific mathematical strategies to help manage numbers in practical ways.

Lesson

Money Matters!



Money management is an important part of everyone's life. There are many decisions to be made about how to make money, spend money and (hopefully) save some of it too.

Determining how much money you will need for a purchase requires many skills such as:

- Making sure you have enough money;
- Knowing how much money you should hand over;
- Knowing how much change you should get back.

There are also many ways to complete financial transactions besides cash, such as banking cards (also called debit cards), credit cards and checks. If you have a part-time job or receive an allowance, you will have an income to control. One way to do this is to keep track of how you spend your money for one week. Use this template below:

Day	Item Purchased	Amount Spent
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		

Now consider the following questions:

- What are the common categories for the expenses in your spending diary?
- How much do you spend in each category?
- Do you have enough money to cover all of your expenses?

Interpreting Charts and Graphs



Charts and graphs are very important in everyday life. Anytime you are dealing with plenty of data, they are a way of clearly showing the information.

Most graphs and charts are easier to read if you look at them in terms of rows and columns. Though the lines that form the rows and columns are often left out on graphs and charts, you can draw your own lines to generate distinguishable rows and columns that will help you see how the information in the charts and graphs are related.

Here are some tips to help you interpret your charts and graphs:

1. Draw lines so you can see the information in terms of rows and columns if the lines are not already present.
2. Look at the information in the rows. This data is usually written in terms of numerical data or words. If it is written in words, this is the subject, person or thing the data in the columns will give you some information about. If it is written in numerical data, this is quantitative information about the subject, person or thing in the columns.
3. Look at the information in the columns. This data is usually written in terms of numerical data or words. If it is written in numerical data, this is quantitative information about the subject, person or thing in rows. If it is written in words, this is the subject, person or thing the data in the rows will give you information about.
4. Read the first row along with the first column that corresponds to it. The first column will give you information about the first row or the first row will give you data about the first column.
5. Follow the directions above for every row and its corresponding column.

Strategies for Completing Equations



To help you complete an equation correctly, you can use an acronym to do the calculating in the proper order:

1. Perform operations that are inside **Brackets** or parentheses;
2. Perform any powers or **Exponents** next (like 2 3);
3. **Division**;
4. **Multiplication**;
5. **Addition**;
6. **Subtraction**.

Some people remember this as **BEDMAS**.

Try it on this equation:

$$(3 \times 2) + 10 - 8 = ?$$

If you got an answer of 8, you are correct!

Problem-Solving Strategies



Here are some common problem-solving strategies for mathematics:

- Look for a pattern;
- Construct a table;
- Make an organized list;
- Act it out;
- Draw a picture;
- Use real objects;
- Guess and check;
- Work backwards;
- Write an equation;
- Solve a simpler (or similar) problem;
- Make a model.

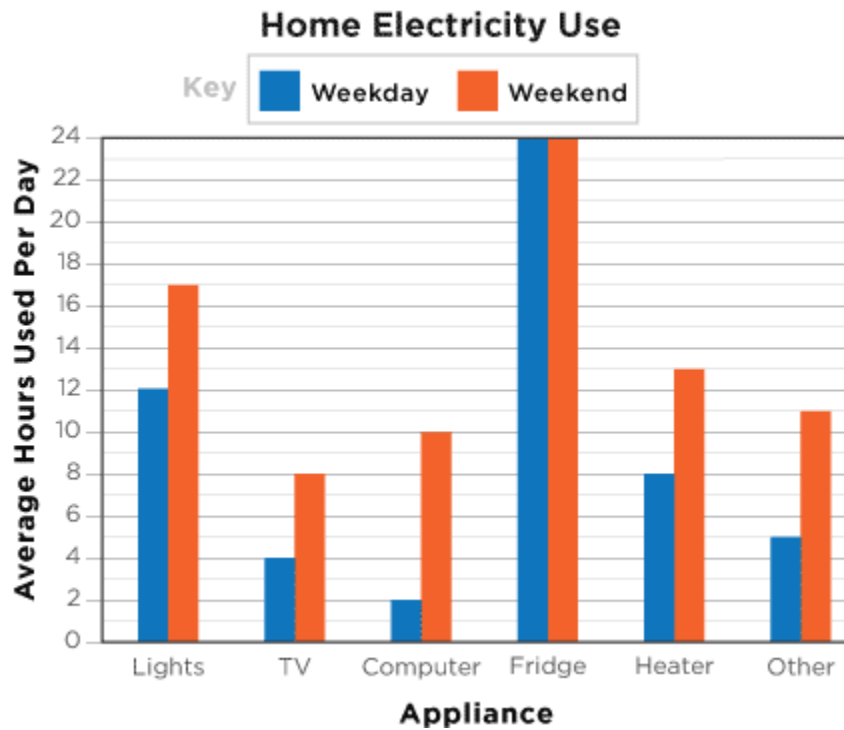
Sometimes you can use a combination of these strategies. Use the ***Problem-Solving Template*** below to help you put your problem into perspective:

Problem: (Write out the problem here)
Possible or reasonable strategies to use:
Which strategy or combination of strategies will you try first to solve the problem?
Solution:
Did you change strategies or use others as well? Describe:

Assignment

1. What are three ways to complete a financial transaction besides using cash?
2. What is the easiest method for reading charts and graphs?
3. What does the acronym BEDMAS mean? Answer the following equations correctly:
a. $(6 \times 2) + 14 - 10 = ?$ b. $(8 \times 3) + 9 - 11 = ?$ c. $(8 \div 4) + 16 - 20 = ?$ d. $(40 \div 5) - 4 + 50 = ?$
4. Identify, explain and attempt to solve a problem in your student life by using the *Problem Solving Template* above. Be as detailed as possible.

5. Examine the following graph and answer the 10 Multiple Choice questions below:



1. What does the bar graph measure?
 - A. Kilowatts used by appliances
 - B. Hours appliance used per day
 - C. Total electricity per year
 - D. Hours appliance used monthly
2. What do the numbers in the vertical axis of this graph represent?
 - A. Hours in a day
 - B. Days of the week
 - C. Types of appliances
 - D. Amount of electricity used
3. Now read what's on the horizontal axis, the line that runs along the bottom of the graph from left to right. It is labeled Appliance. Each appliance in the graph has two bars. What is measured by the blue bar?
 - A. Amount of electricity used
 - B. Weekday: hours of use
 - C. Number of appliances used
 - D. Weekend: hours of use
4. Which appliance has the most total usage?
 - A. Refrigerator (fridge)
 - B. Heater
 - C. Lights
 - D. Television

5. On average, how many hours a day is the computer used on weekdays?
- A. 8
 - B. 16
 - C. 2
 - D. 10
6. What is the average number of hours a day the heater is used on weekends?
- A. 13
 - B. 8
 - C. 14
 - D. 5
7. Which appliances are each used for 5 more hours a day on weekends than on weekdays?
- A. Lights and Television
 - B. Television and Other
 - C. Lights and Heater
 - D. Heater and Computer
8. After the refrigerator, which appliance is used for the most hours on weekdays?
- A. Television
 - B. Lights
 - C. Heater
 - D. Computer
9. Which appliance is used twice as many hours on the weekends as it is on weekdays?
- A. Television
 - B. Lights
 - C. Heater
 - D. Computer
10. Which appliance is used for more hours on weekdays than on weekends?
- A. Television
 - B. Lights
 - C. Computer
 - D. None of the Above