

Let's Plan For College

WebQuest Description: In this webquest, students will learn how to plan a budget in order to save for a computer they want, graph the results, and calculate how long it will take them to save for the computer.

Grade Level: 9-12

Curriculum: Math

Keywords: budget, math, graph, equation, linear, laptop, college,

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Introduction

You've just graduated high school, and your parents tell you that you will be given a \$300 a month allowance once you start college. You've earned \$100 over the summer mowing lawns and you realize that you would like a laptop to take to class next year at school but \$100 isn't enough. You will need to plan out a monthly budget, with enough money to set aside each month to eventually save up for your dream computer.

Tasks

TEKS:111.39 C. 1. Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;111.39 C. 2. Write linear equations in two variables given a table of values, a graph, and a verbal description;111.40 C. 1. Apply mathematics to problem arising in everyday life, society, and the workplace;111.43 C. 2. Use rates and linear functions to solve problems involving personal finance and budgeting, including compensations and deductions. Now that the school year is quickly approaching it's time to become more financially responsible. Using your knowledge of mathematics, you'll need to complete the following tasks:1.) Plan a monthly budget.2.) Find a laptop that you want to buy.3.) Create a pie chart of your monthly budget and calculate how long it will take for you to buy a new laptop.4.) Re-plan your monthly budget to set aside more money for your laptop.5.) Calculate how long it will take to purchase a new laptop with your new monthly budget and record the difference.

Process

Step 1: Visit www.amazon.com, www.bestbuy.com, and www.officedepot.com to compare prices of laptops and choose a laptop that you want. Step 2: Plan a monthly budget around saving up for your new computer. Make sure to include expenses for food, entertainment, school supplies, and most importantly, your new laptop. Step 3: Using Microsoft Excel, create a pie chart with all of the different elements of your budget. Print out pie chart. Step 4: Come up with an equation to calculate how many months it will take to save up for your laptop, using the budget that you created. This equation should be in the form: $y = mx + b$. (Hint: Don't forget to add in the money you earned over the summer.) Step 5: Find one area of your budget that you can remove at least \$10 and move it towards your laptop savings. Step 6: Recreate the equation using your new budget and calculate the new amount of time it would take you to save up for your laptop. Step 7: Calculate the difference in time that the small change in your budget made. Step 8: Decide if you need to keep taking from other expenses to save up for your laptop or if the budget you have now is acceptable. (Is the laptop you picked out too expensive? Do you need to pick out another laptop to stay in your budget?) Step 9: What did you learn from this experience? How will this help you create a budget in the future once you get a job and want more expensive things?

Evaluation

The student will show results to the teacher. They will be evaluated in four categories: Budget, Graph, Equation, and Task Completion. The budget category will evaluate how well the student allocated his/her money. The graph category will evaluate how well the student graph his/her results. The equation category will evaluate how well the student was able to come up with an equation and use it to estimate how long it will take to save up for a laptop. The task completion category will evaluate how well the student completed all of the tasks listed. Students can receive a score ranging from 1-4, 1 is the beginning level, 2 is developing, 3 is very good, and 4 is exemplary.

Category and Score	Beginning	Developing	Very Good	Exemplary	Score
Budget	The student went over his/her budget by more than \$50.	The student went over his/her budget by less than \$50.	The student did not allocate the entire budget, but did not go over.	The student allocated the budget perfectly (used all of the money but did not go over).	4

Category and Score	Beginning	Developing	Very Good	Exemplary	Score
Graph	The student did not create a graph.	The student created a graph with three or more errors.	The student created a graph with 1-2 errors.	The student created a graph with no errors.	4
Equation	The student didn't create an equation.	The student only came up with one equation, or two equations with two or more errors.	The student did both equations with one error.	The student did both equations with no errors.	4
Task Completion	The student only picked out a laptop. Didn't complete any further tasks.	The student only completed the budget, but didn't formulate any equations.	The student completed almost all of the tasks in the assignment, but didn't go back and redo the budget.	The student completed all tasks in the assignment.	4
				Total Score	16

Conclusion

After completing this assignment, the student should be able to organize and create a balanced budget. This will help them learn how to put money aside to save for something that they want. Students also will also be able to practice their graphing skills and improve on creating and using linear equations. The student will also realize that he/she will use math in his/her future.

Teacher Page

This hands-on experience will get high school students excited about their future. Students will learn about budgeting, saving money, and using equation in real life situations. The best way to carry out this WebQuest is to complete it all in the same day. This assignment would best be used for Algebra 1 or Algebra 2 classes. To complete the assignment, students will need access to computers and the internet.

Standards

111.39 C. 1. B

use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;

111.39 C. 2. C

write linear equations in two variables given a table of values, a graph, and a verbal description;

111.40 C. 1. A

apply mathematics to problem arising in everyday life, society, and the workplace;

111.43 C. 2. A

use rates and linear functions to solve problems involving personal finance and budgeting, including compensations and deductions.

Credits

Other