

Rubric for Car Wash Project Name: _____ Co. _____

Each section of the project is 100 points, final grade will be an average of all sections

<p>Technical Requirements. Acquire all necessary materials as outlined in the handout. Student teams are clearly established</p>	<p>A. Find a “CAUSE” for your fundraiser, Give it a name and research the types of fundraisers and organizations that are typical in town.</p>	<p>Points 100</p>	<p>SWR EE ME NI</p>
<p>Academic Requirements A. Read the objectives and instructions carefully.</p>	<p>A. The student shows a clear understanding of each section of the project by producing evidence of completion at specified milestones. B. All instructions are understood and followed with accuracy</p>	<p>A. 50 B. 50</p>	<p>1.2.1</p>
<p>5-1 *Feasibility study * Setting the goals. * Modeling the income, determining prices and costs. * Creating the spreadsheet. using Excel</p>	<p>5-1 (36) a. Set the goal of the fundraiser. b. <i>Make a spreadsheet</i> to model the income for \$3 per car. c. Examine the effect for \$2 per car. d. Speculate highest price people will pay without losing business</p>	<p>5-1 (36) a.. 20 b. 40 c. 20 d. 20</p>	<p>2.1.1</p>
<p>5-2 Advertising and marketing plans. *Advertising costs * Costs of supplies and best suppliers</p> <p>All Writing Components: 25 words TYPED Title – 16 point ARIEL font Body – 12 point ARIEL font</p>	<p>5-2 (37) a. <i>Writing</i> – discuss the different ways to advertise and how many customers you may attract. b. <i>Research-</i> Determine costs of advertising c. Using cost and advertising data decide three ways to advertise your car wash. (38) <i>Supplies</i> a. Make a list of supplies you will need for the car wash b. <i>Research-</i> Find the least expensive store or supplier.</p>	<p>5-2 (37) a. 20 b. 20 c. 20 (38) a. 20 b. 20</p>	<p>1.1.1</p>
<p>5-3 Equations .and Predictions</p> <p>*Write and solve an equation to predict how many cars you will need to wash to reach your goal. * Find the total cost of advertising * Write the equation that models your total income. *Break even point – how many cars to cover the costs. *Does it make sense?</p> <p>All Writing Components: 25 words TYPED Title – 16 point ARIEL font Body – 12 point ARIEL font</p>	<p>5-3 <i>Equation</i> (34) a. \$3.00 per car b. \$5.00 per car c. Another amount you were thinking of (35) <i>Supplies</i> a Total cost analysis. b. Equation for total income (36) <i>Break even point equation</i> a. Write and solve the equation that shows the break even point b. <i>Writing-</i> explain if your answer makes sense. Discuss what changes can you make to give a better result;</p>	<p>5-3 (34) a. 10 b. 10 c. 10 (35) a. 15 b. 15 (36) a. 20 b. 20</p>	<p>1.1.2 1.3.1 1.4.1</p>

<p>5 -4 Inequality equations</p> <p>Write and solve the following inequalities:</p> <p>*How many cars will it take to make at least \$300.00?</p> <p>*How many cars will it take at your price to reach your goal?</p> <p>*How many cars will it take at your price to surpass your break even point</p> <p>*Decide the price you will charge. Explain your decision.</p> <p>All Writing Components: 25 words TYPED Title – 16 point ARIEL font Body – 12 point ARIEL font</p>	<p>5-4</p> <p>(42) Inequality Equation 1</p> <p>(43) Inequality Equation 2</p> <p>(44) Inequality Equation 3</p> <p>(45) Writing – Explanation</p>	<p>Points 5-4</p> <p>(42) 25</p> <p>(43) 25</p> <p>(44) 25</p> <p>(45) 25</p>	<p>1.3.1</p> <p>1.1.2</p>
<p>5-5 Profit Formula and estimates</p> <p>Profit is equal to the total income minus the total costs.</p> <ul style="list-style-type: none"> - Write a formula for your profit after expenses – let “n” be the number of cars you wash. -Traffic Pattern Study- Choose three locations -To study the traffic patterns . - Design and carry out an experiment at the three locations including different times, days of week, etc. <p>All Writing Components: 25 words TYPED Title – 16 point ARIEL font Body – 12 point ARIEL font</p>	<p>5-5</p> <p>(32) Formula for the Profit is accurate</p> <p>(33) Research- Traffic Pattern Study</p> <ul style="list-style-type: none"> a. Writing- write up of experiment and what you hope to prove b. Technology- use spreadsheet to analyze your collected data and display information c. Writing -Analysis and Reasons for choice of one location over another. d. Choose location of your car wash . 	<p>5-5</p> <p>(32) 25</p> <p>(33)</p> <ul style="list-style-type: none"> a. 25 b. 25 c. 20 d. 5 	<p>1.3.1</p> <p>1.1.1</p> <p>1.1.2</p>

<p>5-6 Rates and ratios, (slope)</p> <p>*f a student can wash one car in 20 min. Then in one minute a student can wash 1/20 of a car. *Thus the rate of washing is 1/20 of a car per minute. *To find the group’s rate of car washing, use the following relationship:</p> $\text{Group rate of washing} = \frac{1}{\text{group time to wash a car}}$ <p>All Writing Components: 25 words TYPED Title – 16 point ARIEL font Body – 12 point ARIEL font</p>	<p>5-6 (30) a. Mathematics-Use the formula to calculate what part of a car 10 students can wash in one minute. b. Writing -Explain whether or not 20 students can wash a car in one minute (31) a. Research- Calculations that show different group washing rates and how many people it takes to wash a car. b. Mathematics-Using the group size you chose in part (a) how long will it take to wash enough cars to reach your goal? c. Writing- explain whether there will be enough time in one day for your group to reach the goal. d. Writing –What if your calculations show that you do not have enough time , what other changes could you make to reach your goal?</p>	<p>5-6 (30) a. 20 b. 10 (31) a. 10 b. 20 c. 20 d. 20</p>	<p>1.3.1 1.1.2 1.4.1</p>
<p>5-7 Personnel Requirements Logistics and Location Plan Time Management</p> <p>*Make the list of the number of people who will be required to work the car wash. * Make a Diagram of the car wash area *Decide the hours of the car wash.</p>	<p>5-7 (28)Technology- Create a spreadsheet Detailing the names, numbers and tasks that will be required (29) Make a diagram of the area (30) Technology – create a spreadsheet showing the hours and number of students assigned for each time period</p>	<p>5-7 (28) 30 (29) 30 (30) 40</p>	<p>2.1.1</p>
<p>5-8 Profit Equation</p> <p>a. P = I – E , “P” is the profit after you subtract the expenses for the car wash from your income. Substitute your Goal for “P” and your total Expenses for “E”.</p> <p>b. Write an equation to represent your income after washing “n” cars at your price.</p> <p>c. Write a <i>system of equations</i> using part (a) and (b).</p> <p>d. Solve the system you wrote in part (c) to find out how many cars you need to wash to make goal.</p>	<p>5-8 Mathematics- (28) a. Mathematics- using the equation and your data calculate your Profit b. Mathematics-Write the equation showing your income after washing “n” cars at your price c. Mathematics-Write a system of equations using part (a) and (b). d. Mathematics- Solve the system you wrote in part (c) to find out how many cars you need to wash to make goal.</p>	<p>5-8 a. 25 b. 25 c. 25 d. 25</p>	<p>1.3.1</p>

<p>Project Completion</p> <p>Presentation of Project Plan.</p> <p>Students will present their projects in front of the class .</p> <p>All Writing Components: 25 words TYPED Title – 16 point ARIEL font Body – 12 point ARIEL font</p>	<p>Presentation of Project Plan</p> <p>a. Writing- A description of the best location for the car wash.</p> <p>b. Mathematics-The price you have decided to charge for each car.</p> <p>c. Technology- A list of supplies you need and where you will purchase the items.</p> <p>d. Writing/Mathematics - A discussion of how many cars you will need to wash to break even.</p> <p>e. Technology /Mathematics- A table showing your income and how many cars you need to wash to meet your fundraising goal.</p> <p>f. Samples of advertisements and posters.</p> <p>g. A diagram of the car wash area.</p> <p>h. Technology /Mathematics -A list of jobs and the number of people required to run the car wash efficiently.</p> <p>i. Writing- *Reflection ;</p>	<p>a. 5</p> <p>b. 5</p> <p>c. 10</p> <p>d. 10</p> <p>e. 15</p> <p>f. 10</p> <p>g. 15</p> <p>h. 10</p> <p>i. 20</p>	<p>1.1.1</p> <p>1.3.1</p> <p>2.1.1</p> <p>2.1.2</p>

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