Title: T-Shirt Business Math: Lesson Plan on Using Profits to Grow

Lesson 4 of 4

Series: T-Shirt Business Math Project

Level Up Your T-Shirt Empire: The CEO's Final Report & Investing for Growth

Materials Needed

- Pencil and paper
- Calculator
- Completed "Monthly Business Report" (from Lesson 2)
- Completed "Sales Strategy Report" (from Lesson 3)
- New "Future Growth Plan" worksheet (details provided below)

Learning Objectives

Building on our analysis of sales strategies, by the end of this final lesson, you will be able to:

- Calculate the total revenue and final net profit/loss for a business period.
- Evaluate the success of a chosen sales strategy against a profit goal.
- Analyze how investing profits can change a business's cost structure (fixed vs. variable costs).
- Make a strategic decision about the future of the business based on financial data.

Lesson Structure

I. Introduction (5-10 minutes)

Review of Previous Lesson

"Last time, you stepped into the role of a Marketing Strategist. You had a profit goal of $150 and had to choose between two strategies: the 'Full-Price Pro' and the 'Discount Dynamo'. Which strategy did you choose for your business, and what was your reason?"

(Guide them to recall their choice from the 'Sales Strategy Report'.)

"Excellent. And what did we discover about running a sale? How did a discount affect the number of shirts you needed to sell to reach your goal?"

(Answer: A discount lowers the profit per shirt, so you have to sell a lot more shirts to cover your costs and reach your profit goal.)

Hook & Engagement

"The month is over, the sales have been counted, and your customers are happy. Now it's time for the moment every business owner waits for: the final report. Did all your hard work pay off? Did you make a profit? But a great CEO doesn't just count the money and go home. They immediately ask, 'What's next? How can we get bigger and better?'"

Setting the Stage

"Today, you're the CEO making the final decisions. First, we'll calculate your final profit for the month and see if your strategy worked. Then, you'll get to do the most exciting part of being a business owner: deciding how to invest your profits to grow your company for the future. Let's see what kind of leader you are!"

II. Body: From Profit to Power (25-30 minutes)

Part 1: The "I Do" - The Final Tally (10 mins)

Educator explains and models the final profit calculation.

"Let's check in on my 'Math-Tastic Tees' business. I chose my 20% OFF sale strategy, where my new price was $10.00 and my profit per shirt was $2.50. My goal was to sell at least 8 shirts just to break even.

"The sale was a success! I sold **20 shirts** this month. Now let's calculate my final profit.

(Educator writes out the calculation.)

Step 1: Calculate Total Revenue. This is how much money came in.

20 shirts sold × $10.00 (sale price) = $200.00 in Revenue.

Step 2: Calculate Total Variable Costs. This is the cost of all the shirts I sold.

20 shirts sold × $7.50 (unit cost) = $150.00 in Variable Costs.

Step 3: Calculate Net Profit. This is what's left after paying ALL the bills.

Formula: Revenue - Variable Costs - Fixed Costs = Net Profit

$200.00 - $150.00 - $20.00 (my fixed costs) = **$30.00 Net Profit**.

"Great! I made a $30 profit. It's not a million dollars, but it's a start. Now I have to decide how to use this $30 to help my business next month."

Formative Assessment (Quick Check): "If I had sold 20 shirts at my original full price of $12.50, would my profit have been higher or lower than $30?" (Answer: Much higher, because both the revenue and the profit per shirt would have been greater.)

Part 2: The "We Do" - Your Company's Report Card (5 mins)

Learner and educator solve a problem together, using the learner's business numbers.

"Now for your business. Pull out your 'Sales Strategy Report'. Based on the strategy you chose, let's imagine how many shirts you sold. If you stayed at full price, maybe you sold 15. If you ran the big discount, maybe you sold 35. You pick a realistic number."

(Learner picks a number of shirts sold, e.g., 35 shirts using Strategy B).

"Okay, 35 shirts! Let's calculate your Net Profit together. What was your sale price from that worksheet?"

(Guide the learner to calculate their Total Revenue, Total Variable Costs, and then subtract their Total Fixed Costs to find the Net Profit. Compare this final number to their $150 goal and discuss the results.)

Part 3: The "You Do" - Your Future Growth Plan (15 mins)

Learner applies all concepts independently using a new worksheet.

"You've analyzed the past, and now it's time to plan for the future. You have your profit, and you need to invest it wisely. This worksheet will help you analyze two options to grow your company."

Worksheet: Future Growth Plan

Company Name: _____

My Final Net Profit This Month: $_____ (From our "We Do" calculation)

Part 1: Review Your Core Numbers (From previous worksheets)

- My Original Selling Price: $_____
- My Unit Cost (Variable Cost): $_____
- My Original Profit per Shirt: $_____
- My Total Monthly Fixed Costs: $_____

Part 2: Analyze Your Investment Options

You have a choice for how to improve your business for next month.

OPTION A: Marketing Blitz

Spend $20 of your profit on online ads. This will increase your monthly fixed costs, but hopefully attract more customers.

- **Step 1:** Calculate your NEW Total Monthly Fixed Costs.
- (Original Fixed Costs + $20.00) = $_____
- **Step 2:** Calculate your NEW Break-Even Point with this higher cost.
- Formula: New Fixed Costs ÷ Original Profit per Shirt = _____ shirts.

OPTION B: Better Supplier Deal

Use your profit to buy materials in bulk. This lowers your variable cost for each shirt by $2.00. (For example, if your shirt cost was $8, it's now $6).

- **Step 1:** Calculate your NEW Unit Cost per shirt.
- (Original Unit Cost - $2.00) = $_____
- **Step 2:** Calculate your NEW, bigger Profit per Shirt.
- (Original Selling Price - New Unit Cost) = $_____
- **Step 3:** Calculate your NEW Break-Even Point with this higher profit.
- Formula: Original Fixed Costs ÷ New Profit per Shirt = _____ shirts.

Part 3: Make Your CEO Decision

- Which option makes it easier to break even next month? _____

- Which investment would you choose for your business and why? (Think about long-term benefits! Is it better to spend more to get more customers, or to make more profit on every customer you have?)
- _____

III. Conclusion (5 minutes)

Share and Recap

The learner shares their "Future Growth Plan," explaining their calculations and, most importantly, their final investment decision and the reasoning behind it.

"That is an outstanding final decision. You didn't just pick one; you used math to prove it was a smart choice. Today, we brought everything together. We calculated final profit and then used that profit to make a strategic investment."

Reinforce the Progression

"This is the end of our project, and look how far you've come. In Lesson 1, you were a designer pricing one item. In Lesson 2, you were a manager handling monthly costs. In Lesson 3, you were a marketer planning a sale. And today, you were the CEO, evaluating performance and planning for the future. You have completed the entire business cycle, from a single idea to a long-term growth strategy, using math as your most powerful tool."

Assessment & Success Criteria

- **Formative:** Answering the quick check question and correctly participating in the "We Do" profit calculation.
- **Summative:** The completed "Future Growth Plan" worksheet is the final assessment for the series.
    - **Success looks like:** The learner correctly calculates the new break-even points for both Option A and Option B. Critically, they provide a well-reasoned justification for their final investment choice, using business terms like "break-even," "fixed costs," or "profit margin" to support their decision.

Differentiation & Adaptability

- **Scaffolding for Support:**
    - Provide the calculated numbers in the worksheet prompts (e.g., "Your New Fixed Costs for Option A will be $55.00.").
    - Simplify the final decision to a multiple-choice question with sentence starters (e.g., "I choose Option A because _____.").
- **Extension for Challenge:**
    - "What if you could invest in BOTH options? Calculate the combined impact on your fixed costs, variable costs, and final break-even point. Is this combined strategy better than choosing just one?"
    - Ask the learner to invent their own third investment option (e.g., "Buy a new piece of equipment for $100") and have them determine how it would affect their business's numbers.
- **Adaptability for Other Contexts:** This capstone lesson can be adapted for any business

simulation. In a workplace training, it could be "Analyzing Quarterly Performance." Employees would calculate the department's actual profit against the forecast (Lesson 3's goal), and then analyze two proposed budget items for the next quarter (e.g., investing in new software vs. hiring a contractor), calculating the potential return on investment for each.