Profits for Penny Blossoms

Goals:

1. Show students how optimizing the production process can help a firm keep costs low.
2. Teach students to distinguish between the short-run and long-run costs of production.
3. Help students understand the relationship between labor-intensive and capital-intensive production.
4. Make the lecture memorable to increase retention.

Overview:

Production is one of the hardest economic concepts for students to learn. Students struggle with this aspect of microeconomics because they lack a fundamental understanding of what it takes to run a business efficiently. Most students have never considered the amount of money it takes to start and run a business so the language of cost (total cost, variable cost, fixed cost, marginal cost, and sunk cost) is foreign to them. In addition, this material is highly mathematical. Students who struggle with simple math and spatial relationships find the computation of cost data to be difficult and the visualization of cost curves to be nearly impossible.

To help introduce the topic of costs we recommend that you show “Profits for Penny Blossoms” to help your students understand that a firm must lower the cost of production in order to be able to effectively compete in the market.

Demonstration:

As a follow up activity you are going to give your students a think-pair-share that looks like an impossible puzzle.

We suggest that your students work in teams of 3 so that they can help each other complete the table. Organize the groups and have them get out calculators.

It is very important that you give this activity a value (points) so that student are aware that they earn more points for completing more of the table correctly. You also need to establish a time limit (we suggest 5 minutes). *We use a box in the center of the room and require all the team answers to be in the box inside of 5 minutes or the group does not earn any points.* This artificial constraint is highly motivating and the level of engagement during the activity is very high.

When you are ready to begin show the following graphic and start a countdown timer:

http://www.online-stopwatch.com/countdown

T-P-S Puzzle (5 minutes to complete!)

Fill in the blanks!

(Teams of 3)

(TC = TFC + TVC, AFC = TFC/Q, AVC = TVC/Q, ATC = TC/Q, MC = change in TC)

Quantity	Total fixed cost	Total variable cost	Total cost	Average fixed cost	Average variable cost	Average total cost	Marginal cost
1	$200	$150	____	____	____	____	
2	____	____	$450	____	____	____	____
3	____	____	$525	____	____	____	____
4	____	____	$575	____	____	____	____
5	____	____	____	____	$80	____	$25
6	____	$240	____	____	____	____	____

Time Required:

The activity takes 5 minutes for students to complete but most groups will not be able to fill in all the blanks in that amount of time so it is crucial that you debrief them afterward. Spend another five minutes to fill in the missing parts of the table as you explain how you made each calculation. As you go through the table point out how you were able to use your understanding of the relationship between total, average and marginal costs to calculate the missing information.

Wrap up:

Start with a question, " Do you think you can memorize all the cost formulas for the next exam? The resounding answer will be no!

This reaction gives you the opening to say that you agree, "I don't want you to memorize formulas – that is what spreadsheets are for! How did I solve the puzzle? I understood how average and marginal values relate to the totals. I understood that total fixed costs always remain the same in the short-run. When you understand how something works you don't memorize anything, you simply get how it works – that is goal in this course."