Lesson 8: I’m in Business, Now what Do I Charge?

Overview: When entrepreneurs start their own business they do so with the intention of earning a profit. They will realize a profit when total revenue is greater than total out-of-pocket (explicit) costs. Entrepreneurs must set the price of their goods or services high enough to allow total revenue to exceed total costs so they can receive a profit from the resources they put into the business. The question then becomes how much profit is enough to encourage the entrepreneur to shift their productive resources into a new business venture. In this lesson students will determine what price must be charged in order for an entrepreneur to breakeven and then determine what price must be charged in order to make an adequate profit. The purpose of this lesson is to help students understand that profit is the payment for entrepreneurship and this payment along with other factors should be taken into consideration when setting prices.

Economic Concepts:
Incentives
Opportunity cost
Price
Productive resources
Profit

Objectives: The students will be able to:
1) Calculate the breakeven price for a business venture
2) Identify opportunity costs involved in starting a business
3) Calculate price needed to cover all costs including opportunity cost of operating a business
4) Explain the importance of basing price on all costs including opportunity costs

Nebraska Standards:
SS/H—8.3.5, 12.4.17, 12.4.19, 12.4.26
R/W—005.01D, 005.02A, 005.02D, 005.03A, 006.01B, 006.02A, 006.02D, 006.02E, 006.03A
Mathematics—005.01A, 005.02B,006.02A
**Materials:**
1) Activity 8-1 (one copy per student)
2) Activity 8-2 (one copy per student)

**Time Required:** One class period

**Procedure:**

1) Introduce the lesson by telling students that an entrepreneur is in business to make a profit. Profit is the payment they receive for the productive resources they put into their business. These productive resources are usually their labor and any capital investments in their business. In order to realize a profit the price they set for their products or services must be high enough to cover their costs. This price is known as the breakeven price.

2) Distribute copies of Activity 8-1 and allow the students 5 to 10 minutes to read and complete the worksheet. Discuss the answers to the questions with the class as a large group discussion. Answers and suggested answers to the questions are as follows. 

   - **Depr.** – 500.00; **Ad.** – 20.00; **Main./Repair** – 100.00; **Gas/Oil** – 600.00; **Total Ex.** – 1,220.00; **Breakeven price** – 6.10; 1 – yes; 2 – $0.00; 3 – no, she will not make any money. She will work all summer and only cover her costs.; 4 – answers will vary but should include charging enough so she make a profit, pay herself for her time, make more than she would be paid if she worked for someone else.

3) Follow up the discussion of the answers to questions on 8-1 by asking the students how do entrepreneurs determine how much profit is enough. Allow the students to discuss as a large group and make sure that they are aware of the fact that the price cannot be set so high that no one will buy their products or services. Therefore, even if they would like to have unlimited profit there will be limits so they should consider other ways their resources could be used to help them establish an adequate profit.

4) Distribute copies of Handout 8-2 and allow the students 10 to 15 minutes to read and complete the worksheet. After all the students have completed the worksheet, discuss the answers to the questions with the class as a large group discussion. Answers and suggested answers to the questions are as follows. 

   - **Explicit Exp.** – 1,220.00; **Forgone Wages** – $1,000.00; **Forgone Interest** – $135.00; **Total OC** – $1,135.00; **Total Exp. And OC** – $2,355.00; **Breakeven price** – $11.78; 1 –
yes; 2--$1,135.00; 3—answers will vary and are based on the opinions of the students.

5) Say the following Suppose an entrepreneur determines the price that they must have in order to cover their explicit and opportunity costs and realize that they cannot charge that price and have enough sales to meet their necessary sales projections. Based on this information they still decide to start the business and charge a lower price that will still cover all their expenses and allow them to make a reasonable profit but not a large enough profit to cover their opportunity costs. Why would they do this? Answers will vary to this but should point out that the satisfaction of running their own business is incentive enough to start the business even if they could have made more money by choosing a different option.

6) Conclude the lesson by reminding students that entrepreneurs should consider both explicit and opportunity costs when setting prices along with what they feel their customers will be willing and able to pay.

Assessment:
1) The breakeven price is the price where...

   A. unit price is equal to total costs.
   B. unit price is equal to total explicit and opportunity costs.
   C. unit price is equal to explicit cost per unit.*
   D. unit price is equal to explicit and opportunity cost per unit.

2) Which of the following would be an example of an opportunity cost?

   A. Utilities necessary to operate the business
   B. Money used for capital expenditures necessary for business start up
   C. Wages paid to employees
   D. Lost interest on money taken from savings to purchase equipment *

3) Using standard writing conventions compose a short paragraph explaining what costs should be used when determining the price that should be charged for a good or service. Also explain why it is important for an entrepreneur to consider all of these costs.
Extension Activities:

Have the students do a profit analysis for a school operated business or fund raising activity. This analysis will not include the opportunity costs but should only include the explicit costs versus revenue. (If your school has more than one school operated business or fund raising function, make sure that at least one student chooses to research each activity) Have the students present their profit analysis to the rest of the class. After the presentations are completed, discuss the opportunity costs that are involved for both the students and sponsors who work in these ventures.
When Do I Start Making Money?

With a busy summer schedule filled with camps and softball games, Awanna decided that she would start her own lawn mowing business instead of trying to find a summer job. After all, she thought, who would hire someone that would be gone for half of the summer. She already had a truck and found a trailer and lawn mower that she could buy for $3,000. Based on information that she gathered from other students these would last five years at which time she would be able to sell them for $500. Ms. Berich also determines that she will be able to mow a total of 200 lawns (10 per week for 20 weeks) during the mowing season. She also estimates the following total expenses for the summer: gas and oil--$600; maintenance and repair--$100; advertising on local cable access channel--$20. Based on this information, determine the price per lawn Awanna Berich must charge to break even. After completing the break even price analysis below, answer the questions that follow it.

Yearly expenses:
- Depreciation of mower and trailer: 
  \[
  \frac{(\text{original cost} - \text{salvage value})}{\text{useful life}}
  \]
- Advertising
- Maintenance/Repair
- Gasoline/Oil

Total Expenses

Breakeven Price per lawn
\[
\frac{(\text{total expenses}}{\text{total lawns})}
\]

1) Is the break even price a price that Ms. Berich could reasonably charge for mowing a lawn? _____________

2) If Ms. Berich decides to charge the breakeven price for each lawn, what will her net profit from her summer business be? ______________

3) Based on the answer to Question 2, would the breakeven price be the price Awanna should charge for mowing? __________ Why or why not?

4) What are some other factors Awanna should consider when establishing the price she will charge for mowing a lawn?
Awanna tells her basketball coach about her plans to start her own lawn mowing business. This will allow her to attend camps and still make money during the summer because she can set up her own schedule. She also tells him how she has decided to charge $8.00 per lawn because she has calculated her cost per lawn and this will allow her to make almost $2.00 profit per lawn. Since her coach is also the business and economics teacher she points out that her expenses also include her depreciation costs. Her coach tells her that he is very pleased with the calculations she has done but asks her if she feels like $2.00 per lawn will be enough profit to cover her opportunity costs. Seeing that she is confused by the concept of opportunity costs her coach explains that her opportunity costs are what she would be doing if she didn’t start her mowing business and what she would be doing with the money she is using to buy the mower and trailer.

Awanna determined that if she didn’t mow lawns that she would work as a lifeguard at the local swimming pool. Between her salary and money from private lessons she felt she could reasonably expect to earn $1,000.00 for the summer. In order to purchase the mower and trailer she had to cash in her $3,000.00 CD that was earning 4.5% interest per year. Using this information and the information from activity determine the breakeven price that Awanna must charge to cover both her explicit and opportunity costs. After completing the breakeven price analysis below, answer the questions that follow.

Yearly Expenses:
Total explicit expenses (from 8-1) ................................................... _____________
Forgone wages .............................................................. ______________
Forgone interest .............................................................. ______________
Total Opportunity Cost .............................................................. ______________
Total expenses and opportunity cost .............................................. ______________

Breakeven Price per lawn .............................................................. ______________
(total expenses and OC / total lawns)

1) Is the breakeven price a price that Ms. Berich could reasonably charge for mowing a lawn? ____________
2) If Ms. Berich decides to charge this price for each lawn, what will her net profit from her summer business be? ______________
3) What if she could charge a price higher than the price found above, should she charge the higher price or be satisfied with her profits at the lower price. Explain your answer.