



*Paula and Jerome, former Queen and King of the prom, get married and lose control of their finances. When things couldn't get more difficult, Paula gets pregnant. Jerome loses his job and their dream life becomes a nightmare. Their problem is that they are unwilling to face the consequences of scarcity and search for alternative ways to meet their wants.*

**STANDARDS:** 12.1. Students understand common economic terms and concepts and economic reasoning.  
Section 1. Examine the causal relationship between scarcity and choice.

**PRINCIPLE:** 1. People can't have everything they want so they choose.

**CONCEPTS:** Scarcity – the imbalance between wants and limited resources to fulfill wants.  
Alternatives – different ways of satisfying wants.

The purpose of this lesson is to help students recognize scarcity in their lives and to give them some practice in dealing with scarcity, in setting priorities and in searching for alternative methods to satisfy wants.

**Cognitive Objectives:** Students will be able to define scarcity as the imbalance between wants and the limited resources available to fulfill those wants. (People can't have everything they want.)

Students will define alternatives as different ways to fulfill wants.

**Affective Objective:** Students will recognize scarcity in their lives and will look for alternatives when trying to satisfy their wants in order to live with their limited resources.

Students will set priorities to make wiser consumer decisions.

### **“You can't have everything you want.”**

Paula did not know quite what went wrong. A year ago, she had it made. She was engaged to the boy of her dreams, she had a good job, and she was graduating from high school: life was great. In just one year, however, it had all fallen apart. She was the mother of a one-month-old baby, she had no job, her furniture was being repossessed, she had been evicted from her apartment, and she was living with her parents who were none too happy to have her. She didn't know where Jerome was, and she wasn't sure if she cared or not. How had it fallen apart in so short a time?

Her senior year had been great. She and Jerome had been Queen and King of the Prom. They had announced their engagement at the prom, and their friends were almost more excited than they were. They really were the perfect couple. Both of them had

good grades, were star athletes, and had plenty of good friends. People knew that they would live happily ever after. If ever there was a marriage made in heaven, this was it. Grad night was one of the best ever. She and Jerome talked for hours about their life together. They would not go to college right away but would save some money so that they could go without having to starve to death. Jerome had had an opportunity to go to the local community college on a football scholarship, but they figured he should work for a year or two so that they could build up a bank account. Babies would come after college, when they both had good jobs and could afford them.

The wedding had also been wonderful. Since they had trouble limiting the guest list, it cost a couple thousand dollars more than their parents had figured. But because Paula and Jerome

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both had credit cards, they agreed that it was only fair that they pick up the difference. It was well worth it; their wedding reception had been one heck of a party! People talked about it for months afterwards.

The first month of marriage had been better than they could have hoped. Jerome was a sweet, caring husband, and Paula was doing everything she could to be a great wife. They were spending a little more than they had anticipated, but that was to be expected at first.

The apartment was sweet! Paula and Jerome had looked at one-bedroom apartments, which were so small that they decided they really needed a two bedroom, two bath. This way their friends could sleep over when they had parties and Jerome and Paula wouldn't have to fight for the bathroom in the morning (Jerome took forever to "do" his hair). It was only an additional \$400 per month for two bedrooms and two baths. They were both working, so they could afford \$1500 per month.

Since the apartment was unfurnished, they had a good time shopping. Because they saw a lot of junk, they decided that it was worth the investment to get more expensive stuff. They figured it was better to buy something once and pay a little more than to have to buy three sets of furniture. They bought most of the furnishings on credit - after all, they both had jobs, so the monthly payments were easily affordable. Plus, the furniture looked great. When they had their parents over, Jerome's mom commented on how nice the apartment was and then mumbled something about wishing she could afford such good furniture.

Paula and Jerome also noticed that they were spending quite a bit on lunches and dinners. They talked about bringing their lunch to work, but they both agreed that their jobs were not terribly exciting, and going out to lunch was a good break for them. It gave them something to look forward to. Besides, making lunches was a real turn off. Since everyone else at work went out to lunch, they would look like real losers bringing their lunch. When they got home from work, making dinner was the last thing on either of their minds. They had both worked hard all day, and fixing dinner was not something that either of them wanted to do. After all, how much can a couple of hamburgers or a pizza cost? On the weekends, they ate out all the time because there just wasn't any food in the house, and neither of them wanted to make a big grocery-shopping trip; Weekends were meant for relaxing and enjoyment - not household chores and errands.

They had been shocked when they received their first paychecks. They were both making reasonable money but their checks seemed to be wrong. Both of them received much less than they had expected. Paula talked to her boss and she explained each

of the deductions. There were federal and state income taxes, social security, Medicare, and a bunch of other stuff that neither of them really understood. The deductions amounted to a big chunk of their gross income. Paula's boss told her that 70%-75% was a typical "take home average" for people earning what she and Jerome were making (between \$20,000 and \$30,000).

Besides food, they were spending quite a bit of money on gas. Jerome drove about 80 miles round trip to work. He could carpool with Bill, a fellow ball player from high school, but Bill was sort of a jerk. He often left for work about fifteen minutes before Jerome was ready, and he liked to hang out for about a half an hour after work with the guys, so it wasn't convenient. Besides, Bill smoked, and he would smell up Jerome's truck. Jerome's truck was very important to him, and he certainly didn't want it smelling like a cigarette factory. Paula took the bus to work, and she didn't mind, but she sort of thought that Jerome could at least try the carpool idea. His monthly truck payment of \$600 to his parents was stiff, but he and Paula were making pretty good money, and it would be paid off in three years. Besides, they couldn't get along without a car.

They were both pretty shocked when they got their utility bill of \$170 at the end of the first month. They knew that leaving the air conditioner on all day was expensive, but they couldn't let the cat out because he was de-clawed. He would suffocate in a hot apartment all day. Jerome suggested that they might get rid of the cat. Paula put her foot down. She had told him from the beginning, "Marry me, marry my cat!" This was not open to discussion. Paula's parents' 25th wedding anniversary also cost them a bundle. Because both her mom and her dad had been very good to them, they threw them a big party. Her brothers and sisters had promised to chip in, but so far, Jerome and Paula hadn't seen any money. The big screen TV anniversary gift was also a little expensive, but they were able to charge it. Her mom and dad were surprised and delighted. It had been worth it.

The canceling of their insurance policy was a real blow. Jerome had an accident. It was no big deal, a fender bender, but the insurance company said with two tickets, this was the last straw. They shopped around and found that he could go on "assigned risk." They were relieved to find that an insurance company would take them, until they found out how much it was going to cost - \$3160 per year with only limited liability. They just couldn't afford that.

The decision to go without insurance seemed like a good one at the time. Then came his other accident. This one *was* a big deal. He was driving home from work, tired, and he dozed off. He totaled his truck and had a lawsuit against him. Paula didn't blame him; he had been working long hours, and he was tired.

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Without his truck, Jerome was forced to ride with Bill, who charged him \$50 per week. The worst part was that Bill was not too reliable. He often didn't show up. On those days, all Jerome could do was to call work and let them know that he would not be there. They were getting pretty tired of it, but Jerome didn't see many alternatives; he depended on Bill.

Then came the pregnancy. They weren't sure how it happened, but Paula was definitely pregnant. She was always sick, and she knew that she wasn't being very nice to Jerome, who was worried about his job and was not being very nice to her. On days when Jerome didn't go to work, he sat at home and watched TV. When Paula came home, they didn't have much to say to each other. She knew it wasn't his fault, but she resented his being home all day while she was feeling ill and going to work. When Paula bought herself a maternity dress or had her hair done, she explained that she needed to feel at least human. She was bloated, sick and felt ugly. She needed something to keep her sanity. Besides, it was her money – or her credit cards - and Jerome had spent \$85 on new shoes last month.

After six months Paula had to quit work because she couldn't stand all day, which was required by her job. That cut their income a bunch. While it would only be for three months, it was tough to see how they were going to survive on only Jerome's paycheck. It was getting smaller since he was only making it to work two to three days per week.

The final blow came when Jerome lost his job. They had both seen it coming but had decided there was nothing they could do about it. At the beginning of the year, Jerome probably could have found someone else to ride with since a lot of his high school friends were working at the factory, but by now, all of those arrangements had been made. He was stuck with Bill, and Bill just became less and less reliable. Jerome's boss was not mean about it, but she explained that she had to have a reliable employee.

Suddenly, their dream life together had become a nightmare. They didn't talk to each other very much unless it was to argue. They were behind in their rent, furniture payments, and credit card payments. In addition, collection agencies were sending them nasty letters. When the apartment owner explained that she was going to evict them, they both decided that it would be better if they went their separate ways. Jerome was living with a friend, but Paula didn't think that it would last too long. His parents were willing to take him for a while, but Jerome didn't think that it would work out. They hadn't seen or spoken to each other for a couple of weeks. They were not divorced, but it looked like it might end up that way.

### The Economics

How had it all gone wrong? Clearly, Paula and Jerome were good people with brains, talent and opportunity. They loved each other, and they were good to their families. What had they missed?

The first mistake they made was the failure to recognize and accept the basic fact of **scarcity – the imbalance between their wants and the resources to meet those wants**. Paula and Jerome wanted a nice life together, and they were unable to keep their spending (their wants) in line with their limited income (their resources). One of the reasons for this was that they failed to list their wants in order of priority. Everything can't be number one. A de-clawed cat in an air-conditioned apartment may be less important than food and transportation.

As a result of their unwillingness to recognize scarcity, they overspent and misused credit. They failed to recognize that there were **alternatives to their wants, things that they might do instead of what they had planned**. Scarcity is a basic fact of life. Failure to recognize it usually results in problems.

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### Exercises:

1. Here is a non-numerical method to achieve the objectives of the lesson. You will need poster paper and colored pens for this exercise. In groups of four, have students draw pictures of every choice that Jerome and Paula made. After that poster is finished, give students another piece of poster paper and have them draw alternatives for every choice that Paula and Jerome made. After they have completed these posters, give them one more piece of paper and have them write 5 to 10 rules for financial survival. Have the class vote on the ten most important rules and make a poster with these rules for display in the classroom.
2. In groups of four, list every purchasing decision that Paula and Jerome made. Approximate how much money each of these decisions cost.  
(The budget sheets are included at the end of this lesson. You can download the Excel spreadsheet from the Resources section of the MWT website. Go to Lesson 2, and click on the Resources section at the bottom of the page.)
3. Gross wages vs. take home pay:
  - a. Assume that both Paula and Jerome had good jobs that paid \$14 per hour. Assuming an 8-hour day and a 22-day working month, how much money would they gross together per month?
  - b. Assume that taxes and other deductions take 1/4 of their gross. How much money will they take home?
4. Housing: How much were they spending in rent and utilities?
5. Food: How much were they spending per month on coffees, lunches and dinners for the entire month, including weekends? Assume a 30-day month for meals and \$15.50 per day per person. Assume they both purchase coffee lattes or mochas every work day for \$3.50, and that there are 22 work days per month.
6. Transportation (The costs of driving and car ownership):
  - a. How many gallons of gasoline did Jerome use each month just for his commute (i.e. 80 miles for 22 days per month, at 14 miles per gallon)?
  - b. Assume that Jerome buys 132 gallons of gas each month for his commuting and recreational needs, and that gas costs \$3.60 per gallon. How much is he spending each month for gas?
  - c. Assume Jerome's loan payments for his truck were \$600 per month, truck maintenance was \$100 per month and insurance was \$100 per month. Including gasoline, how much did the drive to work cost Jerome per month?
  - d. Compare Jerome's monthly commute cost with Paula's \$60 monthly bus pass and comment on the difference.
7. Other Expenses and Total Spending:
  - a. Assume that they were spending an average of \$75 per month for cell phones, \$70 per month for cable TV and Internet, \$100 per month on clothes, that the utility bill was \$170 per month, and that the minimum payment on their credit cards was \$400 per month. Also, assume miscellaneous additional expenses of \$200 per month. What were their total monthly expenses for this "other" category?
  - b. Now add the monthly expenses for the Housing, Food, Transportation, and Other categories. What was their total spending each month?
  - c. Compare their total spending with their take home pay. How much were they overspending?
8. Now go back and rearrange their lives. Place priorities on their wants. What are the most important things to have? How much do you think these wants will cost if they find acceptable alternatives?
9. This is the treasure hunt for alternatives. List every choice that Jerome and Paula selected concerning spending money. For each choice, list alternatives and save them some money. Your goal is to find a way for them to live together within their limited income, to recognize and accept scarcity as a sad but inescapable fact of life, and to place priorities on their wants. In your initial brainstorming, write down all alternatives that are suggested; don't reject any that you initially think might be out of the question. Remember, Paula and Jerome got in this mess because they thought that some things like carpooling were out of the question.

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10. Based on your answers to #7 and #8, develop a list of “Tips for Economic Survival” that would apply to all young couples. Have your group share your list with the class and develop a class list of “Tips for Economic Survival.” As a class, finalize this list and display it in the classroom as a poster.

The list might include categories.

### Food

- Fast food is fast money spent.
- Frozen dinners are forgone savings.
- Fresh food is fine.

### Clothing

- Brand names cost lots, generics cost less.
- It may be cool to look sharp but it is cooler to pay your bills.
- Discount stores cost less.

### Transportation

- Carpooling and public transportation usually save money.
- Big cars make for big car payments and big gas bills.
- Shop for insurance, ask for discounts.
- Consider liability but not collision if your car is paid for and not worth much.

- Drive safely; the money you save will be your own.

### Entertainment

- Ask friends to bring something to your party.
- An expensive “treat” once in a while may be all right, an expensive treat once a week is not.
- Afternoon movies are cheaper than evening shows, home videos are cheaper than movies (if you have a VCR)
- A top of the line stereo or TV may not be first on the list of priorities.

### Gifts

- Your friends and relatives will understand.
- It is the thought that counts, not the price of the gift.
- In a group gift, don’t be the one that puts the money up front, collect from all before the gift is purchased.

11. Rewrite the story of Paula and Jerome, based on your discovery of alternatives, so that it has a happy ending. Do not change any of the external events such as the ticket, the accident, or the parents’ 25th wedding anniversary. Change only their reactions to these events and their spending decisions.

### Exercise Answers:

3. a. \$4,928 ( $\$14/\text{hr} \times 8 \text{ hrs/day} \times 22 \text{ work days/month} \times 2 \text{ people}$ )  
b. \$3,696 ( $\$4,928 - \$1,232$ : Deductions =  $.25 \times \$4,928 = \$1,232$ )
4. \$1,670 ( $\$1,500 \text{ rent} + \$170 \text{ utilities}$ )
5. \$1084 ( $(\$15.50/\text{day} \times 30 \text{ days}) + (\$3.50/\text{day} \times 22 \text{ days}) \times 2 \text{ people}$ )
6. a. \$125.71 gal ( $80 \text{ miles/day} \times 22 \text{ work days/mo}/14 \text{ mpg}$ )  
b. \$475 ( $132 \text{ gallons} \times \$3.60/\text{gallon}$ )  
c. \$1,240 ( $\$600 \text{ loan} + \$100 \text{ maint.} + \$100 \text{ insurance} + \$475 \text{ gas}$ )  
d. Jerome’s \$1275 transportation costs are over 21 times greater than Paula’s \$60 bus pass. Thier total monthly transportation cost is \$1,335 or nearly \$45/day!
7. a. \$845  
b. \$4,934 ( $\$1,670 \text{ housing} + \$1,084 \text{ food} + \$1,335 \text{ transportation} + \$845 \text{ other}$ )  
c. Overspending by \$1,238 per month. ( $\$3,696 \text{ take home pay less } \$4,912 \text{ expenses} = -\$1,216$ )

### Self Test:

Define scarcity and give examples of scarcity in your life.

Give some personal examples of alternatives you have found when faced with scarcity.

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### PAULA AND JEROME'S FINANCES

Income:							
			Hourly Pay	Hours worked per day	Working days per month	Number of incomes	
Gross			\$ 14.00	8	22	2	\$3,520
Net							\$2,358
Rent							\$1,100
Truck payments							\$600
					Days per month	Dollars spent per day *2	
Lunch and dinners					30	\$ 30.00	\$ 900.00
	Miles	Days per month	MPG	Gallons per month	Price per gallon	Cost of Gasoline	
Gasoline	80	22	16	110	\$ 1.70	\$187	
Maintenance						\$50	
Insurance						\$75	
Jerome's drive to work							\$312
Clothes						\$100	
Utilities						\$170	
Credit card payments						\$400	
Additional expenses						\$200	\$870
Total expenses							\$3,782
Income - expenses							-\$1,424

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	<b>A</b>	<b>B</b>	<b>C</b>
<b>Location:</b>	Multi-family or commercial; heavy traffic. <b>0</b>	Multi- or single-family; moderate traffic. <b>00</b>	Prime location; single-family; light traffic. <b>000</b>
<b>Neighborhood facilities (paved streets, sewer system, street lighting):</b>	Few facilities available. <b>0</b>	Some facilities available. <b>00</b>	All facilities available. <b>000</b>
<b>Lot size:</b>	Houses close together, not much private outdoor space. <b>0</b>	Houses are separated, moderate amount of private outdoor space. <b>00</b>	Houses are far apart, more than enough private outdoor space. <b>000</b>
<b>Amount of landscaping:</b>	A few shrubs and small trees. <b>0</b>	Some shrubs and medium-sized trees. <b>00</b>	Many shrubs and large trees. <b>000</b>
<b>Size of house:</b>	Small size, less than 1,000 square feet. <b>0</b>	Moderate size, about 1,500 square feet. <b>00</b>	Large size, over 2,000 square feet. <b>000</b>
<b>Size of rooms:</b>	Small. <b>0</b>	Medium. <b>00</b>	Large. <b>000</b>
<b>Number of bedrooms:</b>	2 bedrooms. <b>0</b>	3 bedrooms. <b>00</b>	4 or more bedrooms. <b>000</b>
<b>Quality of structure (soundness of foundation and roof; quality of building materials):</b>	Minimum quality. <b>0</b>	Average quality. <b>00</b>	Good quality. <b>000</b>
<b>Quality of mechanical equipment (plumbing, electrical, and heating systems):</b>	Minimum quality. <b>0</b>	Average quality. <b>00</b>	Good quality. <b>000</b>
<b>Energy saving features (insulation, storm windows, caulking, and weather stripping):</b>	Few energy-saving features. <b>0</b>	Some energy saving features. <b>00</b>	Many energy-saving features. <b>000</b>
<b>Quality of interior materials (floor coverings, wall treatment, cabinetry, and lighting):</b>	Minimum quality. <b>0</b>	Average quality. <b>00</b>	Good quality. <b>000</b>
<b>Storage:</b>	Minimum storage. <b>0</b>	Average storage. <b>00</b>	Good storage. <b>000</b>
<b>Bathroom:</b>	1 bathroom. <b>0</b>	1 1/2 to 2 bathrooms. <b>00</b>	2 1/2 to 3 bathrooms. <b>000</b>
<b>Optional:</b>	Attached garage. <b>0</b>	Full basement. <b>00</b>	Family room. <b>000</b>

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### Multiple Choice

1. Which of the following best summarizes the concept of scarcity?
  - a. Life is not fair.
  - b. You can't have everything you want.
  - c. People are selfish.
  - d. Life is hard.
  
2. Scarcity exists because:
  - a. People have wants.
  - b. Resources are limited.
  - c. Resources are insufficient to satisfy people's wants.
  - d. People aren't willing to share their wealth.
  
3. Choose the most correct answer to this question. When does scarcity occur?
  - a. When prices are too high.
  - b. When you can't find a product you want.
  - c. When others have more than you.
  - d. Always.
  
4. Alternatives are always:
  - a. Better ways of accomplishing goals.
  - b. Worse ways of accomplishing goals.
  - c. Different ways of accomplishing goals.
  - d. New ways of accomplishing goals.

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### PAULA AND JEROME'S FINANCES

Income:							
			Hourly Pay	Hours worked per day	Working days per month	Number of incomes	
Gross			\$ 10.00	8	22	2	\$
Net							\$
Rent							\$
Truck payments							\$
					Days per month	Dollars spent per day *2	
Lunch and dinners					30	\$ 30.00	\$
	Miles	Days per month	MPG	Gallons per month	Price per gallon	Cost of Gasoline	
Gasoline	80	22	16	110	\$ 1.70	\$	
Maintenance						\$50	
Insurance						\$75	
Jerome's drive to work							\$
Clothes						\$100	
Utilities						\$170	
Credit card payments						\$400	
Additional expenses						\$200	\$
Total expenses							\$
Income - expenses							\$

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### PAULA AND JEROME'S FINANCES

Income:							
			Hourly Pay	Hours worked per day	Working days per month	Number of incomes	
Gross			\$			2	\$
Net							
Rent							
Truck payments							\$
							\$
					Days per month	Dollars spent per day *2	
Lunch and dinners					30	\$	\$
	Miles	Days per month	MPG	Gallons per month	Price per gallon	Cost of Gasoline	
Gasoline					\$	\$	
Maintenance						\$	
Insurance						\$	
Jerome's drive to work							\$
Clothes						\$	
Utilities						\$	
Credit card payments						\$	
Additional expenses						\$	\$
Total expenses							\$
Income - expenses							\$



## LESSON 2

### BUDGETING AND OPPORTUNITY COST



*Derek and Ginny are married and have done some careful planning. They recognize scarcity and accept the opportunity costs of their decisions*

<b>STANDARDS:</b>	12.1 Students understand common economic terms and concepts and economic reasoning: Section 2 Explain opportunity cost...
<b>PRINCIPLE:</b>	2. Every choice has a cost.
<b>CONCEPTS:</b>	Scarcity – the imbalance between wants and limited resources Opportunity cost – the opportunity foregone in making a decision Budgeting – planning revenues and expenditures

The purpose of this lesson is to point out the value of budgeting and to give students some practice in budgeting. The ultimate goal is to help students understand that they are the decision-makers and that they have the power to control their finances.

**Cognitive Objectives:** Students will define opportunity cost as the best alternative foregone in an allocative decision.

Students will define alternatives as different ways to fulfill wants.

**Affective Objective:** Students will learn to live with their limited income.

**“Nothing is free!”**

**“Opportunity cost is opportunity lost.”**

**“To choose is to refuse.”**

Derek and Ginny had been married for a year, and they were doing quite well. They didn't have a lot of things, but they were happy and still in love. It had not been easy; there were plenty of sacrifices, and they had had some fights, but they knew what they wanted, and they trusted and loved each other, so they usually got over the arguments pretty quickly – usually.

A year ago, before their marriage, they had done some careful planning. One of the things that had helped them was that they both understood the concepts of scarcity, choices, and the search for alternatives. They knew that they had a limited income and that that income could only go so far. They had learned to budget their income and to give up the things that stood in the way of achieving their goals. They were both full

time students in a community college and wanted to complete their two year programs, and then transfer and graduate from a four-year school. That had meant lots of sacrifices. They were both working part time at good jobs averaging twenty hours per week each, which made their combined “take home” incomes about \$2,000 per month after taxes and other deductions. Ginny had a good secretarial job which she had since her senior year in high school, and Derek worked as a construction laborer for a contractor who was a long-time friend of his family. They were doing pretty well, but they both knew that they would not be able to work as much after they transferred to the four-year university and began taking courses in their majors; therefore, it was important not to spend everything they earned now. If they could save 10% of their income each month, they would have

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some money to help them through their last two years. That only left them with \$1,800 for the month. Before they got married, they set up a monthly budget.

They figured that they had to set some priorities. Saving was first, then came rent, utilities, and food. Their parents were willing to give them the money to get into an apartment (first and last month's rent and a cleaning deposit), so all they had to worry about was rent. They figured that they would budget for everything that they wanted and then see what they could afford. A two bedroom apartment would cost about \$1,500. Utilities would be another \$100 per month. They estimated \$300 for groceries, and an occasional dining out would be another \$100 per month. They both had cars with payments totaling \$600. Insurance and license was another \$175. Gasoline was currently costing them \$150, and maintenance was another \$100. Derek had health insurance at work, but Ginny's cost her \$125. They both wore glasses, which had to be replaced every 2 years. They budgeted \$50 for this expense. Ginny had to wear professional clothes at work, and Derek needed boots, a belt and work clothes. They figured about \$100 per month for clothes. Laundry and dry cleaning was another \$110. Their family cell phone plan was \$100, which gave them enough minutes to stay in touch with all their friends and family, including Derek's grandmother in Arkansas who Derek phoned faithfully for a 30 minute chat every week. Their cable TV and Internet service was going to cost them \$150 with all the extras. They figured \$50 each for personal spending money, another \$100 for entertainment, and \$90 for haircuts. The newspaper and magazines cost them about \$40. They spent about \$60 per month on gifts. School expenses averaged \$105 per month for books and fees. When they put it all on paper, it looked like Round 1 (See page 2.6, Round 1).

They took home \$2,355 less than their expenses. It was clear that they were going to have to make some difficult choices. Essentials, including savings, school, rent, utilities, food and the cars, totaled \$3,330 What could they possibly give up?

The answers were actually pretty obvious. If they wanted to go to school and to save money, they were going to have to pay a cost, an opportunity cost. Opportunity cost is what you give up when you choose something. They were not going to be able to live as well as they had when they were living with their parents. The two-bedroom apartment was out. They could save about \$400 in rent and \$25 in utilities with a smaller, one bedroom apartment. That choice was tough, but not impossible.

The next major expense, however, was not something that Derek had ever thought about giving up—his Camaro. It was staring them in the face! Transportation was costing them \$1,025 per month. This was an area where they could save big bucks. It was

clear, at least to Ginny, that it made sense to sell Derek's Camaro and deposit any proceeds in their savings account. The Camaro was considerably more expensive to run, maintain and insure than Ginny's economical Volkswagen, so they could eliminate a car payment and cut down on insurance, gas, and maintenance. They could save about \$675 per month. They both had bikes, so selling one car made sense. But the Camaro! It was a beautiful ride, it was Derek's, and it was clean! This was not an easy decision, and the discussion was not settled smoothly. They had a big fight.

In the end, however, logic and the numbers prevailed, and the Camaro was sold. Unfortunately, after paying off the car loan, there was little left for savings, but everything else worked out as they (well, mostly Ginny) had planned. Fortunately, they found an apartment close enough to work and school that they could ride their bikes most places so that cut down on gas, oil and maintenance. Derek hated the Volkswagen, and he took a lot of flack from his friends about driving it, but there were few better alternatives. Derek paid the opportunity cost of going to school: he had given up his Camaro.

The problem was that they still were not close to making it. Their budget now looked like Round 2 (See page 2.6). They were still \$1,255 per month short. They would have to search for even more alternatives to their original plan. Ginny talked about student loans, but Derek refused. He was not about to come out of school owing bunches of money. The whole purpose of education was to make them independent, not dependent. They wanted children when they got out of school, and building up a huge debt was not the way to get started. There must be other ways to cut. They could give up eating out. That "casual restaurant" and fast food stuff got pretty old after a while anyway. They could stick with their old eye glasses instead of getting new ones every year. It was a bad idea, but their eyes were not that bad; plus they only wore glasses for reading. Derek and Ginny would also have to cut some expenses in half. Their clothes would have to last longer, and laundry and dry cleaning could be cut if they didn't mind wearing things multiple times. Derek would write or e-mail his grandmother instead of phoning her which would let them step down to a less expensive cell phone plan. They could save \$80 per month by downgrading their 300 channel super-premium cable TV package and going with the basic cable TV plan instead. It would be tough, but they would try to get by with only \$25 each for spending money. It looked like entertainment was going to be rented DVD movies, local festivals, and "hanging out" with friends, instead of movie theaters, live concerts and sporting events. There would be fewer haircuts and stylings. Homemade gifts would have to do. This was a tough one: no newspapers or magazines—they could read them online or in the school library. Ginny agreed to reduce their monthly savings to \$100. This education stuff was costing them

# LESSON 2

## BUDGETING AND OPPORTUNITY COST

plenty. Their budget now looked like Round 3 (See page 2.6).

Once again, however, they had not made it. After everything that they had given up, they were still short \$585 per month. It looked hopeless. They talked it over, and Ginny cried and Derek got mad, and they both figured they couldn't do it. Maybe it made sense to work full time for a year, save some money, then start college. However, Derek knew what would happen. They would both get used to having some money, they wouldn't save anything, and they would be right back where they started from at this time next year.

Then Ginny came up with a great idea. They would not get married until the fall. That way they could stay with their parents for the summer, work forty hours per week and save much of their paychecks. That would give them a total of about \$6,000 extra for the summer. Figuring that they would probably spend \$1,000 of that, they could spread remaining \$5,000 over nine school months, giving them an additional \$555 per month. That meant they could only save \$70 per month, which wouldn't be enough for their future college expenses. However, if they took out a student loan for the rest, they could do it. Derek was not happy about the loan, but he knew Ginny was right. After some serious recalculation, the budget looked like Round 4 That would get them through the first year; they would have to redo the budget at the end of the year for the following year. It sure would be easier just not to get married since their parents would support them if they lived at home. But they were in love, and putting marriage off for even three months seemed like an eternity. How could they possibly live without each other for another three months? A year was impossible. The other possibility was to just forget this school thing, but they both knew that the reason things were going to be so tight was because they did not have an education. They were sure that their education was worth the opportunity cost because it would provide them with the income and the lifestyle they both wanted for themselves and their family—just not yet.

Unlike Paula and Jerome, Ginny and Derek recognized that they couldn't have everything that they wanted all at once. They understood that they face scarcity and that they would have to place their wants in some sort of priority and then buy the things on the top of their list and give up other things. They found that there were plenty of alternatives even though many of the alternatives weren't exactly what they wanted. If a college education was something they wanted, they were going to have to give some things up to get it.

Economists call the thing that you give up when you make a

choice the opportunity cost. When they decided to go to college, one of the things that Derek had to give up was his Camaro. Whenever people choose, they choose between two alternatives. They select one and give up the other. The alternative they give up is the opportunity they reject, their opportunity cost. Opportunity cost is the opportunity foregone in making a decision. Assume that Ginny receives a \$100 gift certificate to a clothing store. She sees a dress that she really likes, a pair of shoes, a skirt and blouse, and a necklace. She narrows her alternatives down to two, the dress and the necklace. She chooses the necklace. The opportunity cost of the decision is the dress. That is what she gave up, or paid, to have the necklace.

Any time people spend money, there is some other thing that they could have bought with the money. If you buy a cell phone that costs \$99, the opportunity cost of the decision to buy the cell phone is whatever you would have done with the \$99 if you hadn't purchased the cell phone. Opportunity cost is the opportunity foregone in making a decision. Assuming that you would have bought two weeks' worth of fast food with the \$99, an economist would not say that the cell phone cost \$99, she would say that the decision to buy the cell phone cost two weeks' worth of fast food.

The important lesson here is that nothing is free. After learning about opportunity cost, the word "free" will be eliminated from your vocabulary. If your Aunt Esmeralda invites you to lunch on a Saturday afternoon and you go and have a wonderful time, the lunch is not free because you have allocated yourself to that lunch. The cost of your decision to go to lunch with Aunt Esmeralda is whatever else you would have done if you had not gone to lunch. If you stand in line for an hour to get a "free ticket" to a concert, the decision to get the ticket is not free since you could have done something else rather than stand in line. If you choose to use the ticket to go to the concert, that decision is not "free" because you could have sold the ticket and purchased something else with the money. If you and your girlfriend are sharing an ice cream and you sneak the last of it when she is not looking, you have given up the opportunity to make her happy. Any time you choose between alternative uses of yourself, money, or goods and services, you pay an opportunity cost.

### **An example:**

Derek has \$25 per month spending money. He usually spends it purchasing the daily newspaper. On Ginny's birthday, he decided to spend it all on her present. The opportunity cost of the decision to buy her present is the newspaper, what Derek gave up or "paid" to get Ginny her present.

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## BUDGETING AND OPPORTUNITY COST

### Exercises:

1. Ginny and Derek were paying a considerable opportunity cost in deciding to get married and go to college. What did they give up by deciding to get married in September?
2. If, like Derek and Ginny, you decide to go to college, what is the opportunity cost of that decision?
3. What would be the opportunity cost if Derek and Ginny decided not to go to college?
4. It is Saturday night and you can:
  1. go out with your friends,
  2. go out with your girlfriend/boyfriend,
  3. stay at home and watch a DVD movie,
  4. go out with your parents, or
  5. stay at home and study for a test on Monday.

Assume the above are listed in the order of your preference, and you choose to go out with your friends.

What is the opportunity cost of that choice?

5. Your aunt has given you \$200 for your birthday. You have been considering the following possibilities in this order:
  1. get new speakers for your car,
  2. visit your cousin in San Diego,
  3. take your girlfriend/boyfriend out for her/his birthday to a great restaurant, and then go to a movie, or
  4. save it.

You choose the speakers. What are you giving up to get the speakers?

6. You have \$2.50 for dessert at a fast food place. Your alternatives in order of preference are:
  1. cherry turnover,
  2. apple turnover, or
  3. ice cream.

You choose the cherry turnover. What is the opportunity cost of the cherry turnover? What did you give up when you chose it?

7. Your family has a weeklong vacation to plan. The possibilities are:
  1. the mountains,
  2. the beach,
  3. visit cousin George,
  4. Mount Rushmore and the Dakotas,
  5. Lake Kisseemeemee, or
  6. stay home.

You want to stay home and hang out with your friends, your brother wants to go to the mountains, your parents want to visit cousin George or go to Lake Kisseemeemee, and your sister wants to drive to the Dakotas. You visit cousin George. What is the opportunity cost for:

You?

Your parents?

Your brother?

Your sister?

8. Describe an example of an opportunity cost that you have experienced recently.

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## BUDGETING AND OPPORTUNITY COST

### Exercise Answers:

1. They gave up all of the things that their parents would have paid for had they stayed home. They would not have had to work, which means that they could have studied more, had more things, and been with their friends more.
2. The opportunity cost is the difference between what you are earning and the income you could be earning if you took a full time job instead of going to college. If you work full time and go to college, you are giving up whatever you would be doing with your free time when you are not in college.
3. If Derek and Ginny decided to forego any additional education or training, they would give up the value of that training in terms of money and other opportunities that further education and training bring. People with post-high school education and training have greater alternatives available to them.
4. The opportunity cost is the best alternative foregone, or the best alternative after your choice, going out with your girlfriend/boyfriend.
5. You are giving up the best alternative foregone, the trip to San Diego.
6. The opportunity cost is the apple turnover.
7. You? **Stay home**  
Your parents? **Lake Kiseemeeme**  
Your brother? **The mountains**  
Your sister? **The Dakotas**

### Self Test:

1. Review the concept of scarcity. What did it mean or not mean to Paula and Jerome and what does it mean to Ginny and Derek?
2. Define opportunity cost.
3. Give an example of an opportunity cost that you have encountered in the last few days. Explain how you allocated yourself or some of your limited income or a good or service in one way and gave up an opportunity to have or do something else.

### Culminating Activity:

Take the budget form on this page home with you. Use information from a local newspaper or other sources to determine how much each of the following items would cost in your area.

- a. One bedroom apartment \_\_\_\_\_
- b. Two bedroom apartment \_\_\_\_\_
- c. A four year old, low mileage used car \_\_\_\_\_
- d. Liability insurance for a car \_\_\_\_\_
- e. Collision insurance for a car \_\_\_\_\_
- f. Cable TV \_\_\_\_\_

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## BUDGETING AND OPPORTUNITY COST

		ROUND 1	ROUND 2	ROUND 3	ROUND 4
Income		1200	1200	1200	1825
Expense		3395	2400	1865	1825
Variance		-2195	-1200	-665	0
Housing	Rent	900	550	550	550
	Utilities	80	60	60	60
Food	Groceries	275	275	275	250
	Meals Out	50	50	0	0
Transportation	Car Payment	600	200	200	200
	Parking				
	Gas and Oil	100	25	25	25
	Maintenance	100	25	25	25
	Public bus/train				
	Car insurance/license	175	100	100	100
School	Fees	30	30	30	30
	Books	75	75	75	75
Health Insurance	Health insurance	125	125	125	125
	Uninsured doctor's bills				
	Glasses/contacts	50	50	0	0
Clothing	Clothes (work and other)	100	100	50	50
	Laundry/dry cleaning	110	110	60	60
Household	Phone/long distance	60	60	40	40
	Cable TV	75	75	25	25
Personal Expenses	Ginny	50	50	25	25
	Derek	50	50	25	25
	Entertainment	100	100	50	50
	Pets				
	Beauty care	90	90	45	45
	Gifts	40	40	20	20
Miscellaneous	Charity				
	Alcohol/cigarettes				
	Vacation				
	Newspaper/magazines	40	40	0	0
Saving	Emergency/special fund	120	120	60	45

# LESSON 2

## BUDGETING AND OPPORTUNITY COST

### Summary:

Derek and Ginny recognized and accepted scarcity.

Their goal was a college education. In choosing that goal, they paid an opportunity cost.

Opportunity cost is what you give up when you make a choice between two alternatives.

In using limited resources, including yourself, you make a choice and pay a cost. The cost is what you would have done with your resource.

There is no such choice as a free choice.

Budgeting is a way to identify wants and resources and choose those wants that are most important to you.

### Multiple Choice:

- Which of the following is free?
  - A ticket to a rock concert that a friend gave you
  - A T-shirt that you received for running a 10K race
  - A "Buy one, get one free" box of cereal
  - None of the above are free
- A decision always involves:
  - Money
  - At least two alternatives
  - Goods or services
  - Income
- A decision is free if:
  - There is no money involved
  - There are no products involved
  - There is no exchange with another person
  - A decision is never free
- Whenever you make a choice, you face a(n):
  - High cost
  - Low cost
  - Opportunity cost
  - Sunk cost
- Which of the following is an opportunity cost?
  - You stay out late and your parents ground you.
  - You run a red light and get a ticket.
  - You choose to give up math to study history.
  - In a softball game, you miss the ball and strike out.
- Budgeting only makes sense when:
  - Your wants exceed your resources
  - You are poor
  - You want lots of things
  - You have a family

### Answers to Multiple Choice:

- d. None of the above are free
- b. At least two alternatives
- d. A decision is never free
- c. Opportunity cost
- c. You choose to give up math to study history.
- a. Your wants exceed your resources





## LESSON 3

### CREDIT AND THE MARGIN



*Martin, a first year college student gets into severe financial difficulty. His problems began when he obtained a credit card because he was “burned out” and thought he needed a diversion. Martin simply did not understand how to use marginal analysis in his buying decisions.*

<b>STANDARDS:</b>	12.1 Students understand common economic terms and concepts and economic reasoning: Section 2 Explain ....marginal benefit and marginal cost
<b>PRINCIPLE:</b>	2. Every choice has a cost.
<b>CONCEPTS:</b>	Marginal Benefit – the additional benefit received from one more unit of a product or an activity Marginal Opportunity Cost – the additional opportunity given up when purchasing more of a product or pursuing more of an activity

The purpose of this lesson is to give students a six step decision-making process that they can use in consumer and other decisions. The decision-making process is also a useful tool in examining historical events and political decisions.

**Cognitive Objectives:** Students will identify the term “margin” as meaning additional.

Students will list 10 credit use tips.

**Affective Objective:** Students will use marginal cost/benefit analysis in their purchases.

Students will use credit more wisely.

### “Nothing is free. Compare and decide if it is worth it.”

Martin decided it was time to get some help. He knew by now that he was definitely in over his head. It had all seemed so easy at first, but things had rapidly come to a crashing halt. His first year in college had been rough. He had been a good student in high school: no star, but good. College, however, had been a different story altogether.

He was only taking three classes, which should have been a breeze, but he was on the quarter system, and time just flew by. Before he knew it, it was the tenth week, papers were due, finals were coming, and he was behind. He scraped by with C’s and D’s, but those were not the grades he was used to earning. It was clear something was going to have to change if he was going to make it in college.

During his second quarter, he saw fewer of his high school friends, played less basketball, spent less time partying, cut down on his hours at work, and saw the results. His grades came up. He was still not making the A’s and B’s that he had been used to getting in high school, but he was not making D’s either. He was getting his papers done and actually had some time to prepare for his exams. The only problem was that he was worried about burnout. He had no life! This just was not what he had anticipated. He had to make another change.

Spring quarter, as Martin approached the bookstore, he noticed people outside the store giving out applications for credit cards. Maybe that was the answer. If he could just buy something once in a while, maybe that would take his mind off his

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"burnout." He took an application, completed it, and in two weeks, his very own credit card came in the mail. He had a \$500 limit, so how much trouble could he get in?

He decided to try it out. He had been wanting some new CD's, so he went down to the electronics store and shopped. He was smooth; he only spent \$100. He went home, played his new CDs and started studying. He felt better already. This was the answer. As long as he was reasonable about this, what could happen? Credit cards were great!

The problem, of course, is that he forgot about that "reasonable" thing. After CD's came new speakers, clothes, tires for the car—the list went on and on. It was easy to apply for different credit cards. He ended up with credit card balances over \$8,000! In addition, he had truck payments of \$265 per month for 3 years. Fortunately, he was able to get 12% interest on the truck loan.

Martin was now working 40 hours per week to pay his debts including his car payment and insurance. Grades were down, social life was down, and Martin was down. It turned out that credit cards were not the answer he had hoped they would be. In allocating himself to work, he was paying a high opportunity cost in terms of success in school and a social life. He hadn't realized that he would be paying such a high opportunity cost when he chose to make his purchases and put them on credit. It is almost as if he thought the things he was charging were free.

Martin knew that he was in trouble so he looked in the newspaper. He saw an ad for Clean Credit Co. Inc. This agency promised to get a copy of your credit record, eliminate your credit problems by getting bad news off of the record, and get you a "secured credit card," a card that only lets you borrow what you have in your bank account. Martin thought this sounded pretty good, so he sent in the \$295 application fee.

The day after he sent it in, he talked to Maria, but soon he wished he had talked to her sooner. Maria's cousin had done the same thing and then found out that anyone can get a copy of their credit report and an application for a secured credit card at little or no charge. The bit about cleaning up the credit rating just doesn't happen. In other words, Martin had just blown another \$295 that he didn't have.

A friend of his suggested that he try calling the Consumer Credit Counseling Service (CCCS). This is a non-profit organization whose purpose is to help people who are in credit difficulties. He called and made an appointment to see a counselor. The guy was friendly, knowledgeable, and helpful.

Mr. Lopez was the guy's name and he began by explaining what he could NOT do. Neither CCCS nor anyone else can clean up a credit record or remove items from the record. They cannot force

creditors to forgive debts. Basically, they can't make your debts go away. What CCCS can do is work with the people who owe money and the lenders to set up a payment schedule that the person can meet.

Martin now understood that he was going to have to pay his debts. What he wanted to know was how he had gotten into so much trouble. Mr. Lopez thought that it might be a good idea to look at his purchases over the last year to see what had happened. It was clear that Martin was making two mistakes: he was buying things that he wanted that were pretty extravagant and he was spending more money for "add-ons" than was necessary. Here are some examples:

He bought a stereo system on credit. His old speakers were fairly weak, but worked and were fine for background music. He knew that his old speakers would do, but he really felt a new system would help him study better. The speakers cost \$500 each; they were really top of the line. When he brought them home and set them up, they didn't sound much better to him than the ones he had. They were better, sure, but \$500 apiece better? Was the additional sound quality worth what he could have done with the \$1,000?

He bought his sister a new outfit for her birthday. She knew he didn't have much money, and she would have been happy with a card, but he wanted to buy her something nice. He spent \$200 on the outfit. He saw one for \$70 that was very nice. Was the one he bought worth what he could have purchased with the additional \$130?

He bought a truck for \$20,000 because he had to get back and forth to work and school. He could have bought a reliable car from his Mom for \$2,000. What was the purpose of the truck? Was the additional benefit from the big truck compared to the car he could have purchased from his mom, worth what he could have done with \$18,000 and the interest he was paying?

He rented videos he didn't watch. He usually rented three at a time because the third one was "free." He seldom watched more than one. Was the additional three dollars for the second one worth it?

He flew up to Northern California to visit his brother for \$600. He could have driven for about \$150 in gas. Did he have to visit his brother when he knew that his brother would be home in a month for Mom's birthday? Was the flight worth an additional \$450 of other things that he could have purchased?

He took three friends to a concert, and he bought the most expensive tickets, \$90 each. The cheapest tickets were \$40. Did he have to go to the concert? Did he have to invite three friends? Was the additional benefit for the most expensive seats

# LESSON 3

## CREDIT AND THE MARGIN

worth what he could have purchased with the \$150.

Martin clearly was not recognizing scarcity, looking at his wants and placing priorities on them, and he was not thinking at the margin. Marginal decision-making occurs when we compare the benefits and costs of two different activities or types of products. Often, in buying things, we listen to people who tell us, "For only a few dollars more, you can have..." and we end up paying more than we had intended for things we often don't even want. The problem is compounded when the purchase is easy because it can be put on a credit card.

Using marginal analysis when comparing two types of products involves evaluating the difference in benefits of two alternatives and then deciding what you will have to give up to gain the additional benefits. This is difficult when using credit cards because the "what you will have to give up" part is hidden in the future. Using credit cards often makes it appear that the purchase of a good or service is "free."

If Martin allocates money to go to Northern California, he is giving up what he would have purchased with the funds he uses. In comparing driving to flying, the marginal opportunity cost is what he would have purchased with the \$230 difference between driving and flying. The marginal opportunity cost of renting three videos compared to one is what he would have purchased with the extra \$3. The marginal opportunity cost of the expensive tickets compared to the cheap ones is what he would have purchased with the additional \$150. Marginal analysis compares the benefits and opportunity cost of two alternatives. The key to recognizing marginal analysis is the comparison between two alternatives.

Well, where did Martin end up? He now owed \$8,104 in principal and interest on his unsecured debt. Mr. Lopez suggested that Martin 1) tear up his credit cards and 2) begin paying off his debt. After working on a budget, at 12.4% interest, they figured he would take five years to completely pay off his debt if he paid \$2,438 per year or \$203.16 per month. He would be paying a total of \$4,170 in interest.

Martin had failed to recognize the relationship between his "easy monthly payments" and the total amount he would be paying. Mr. Lopez pointed to the numbers. If his outstanding balance were only \$2,000, with an interest rate of 18.5%, he could pay 2.8% of the balance, but not less than \$20. That all sounded fine except that it would take 11 years to pay off the loan. The worst part was that he would be paying a total of \$1,934 in interest, almost as much as the \$2,000 borrowed. However, Martin owed a lot more than \$2,000. He could be paying off his debt forever and paying his life in interest! He had gotten himself into a mess.

The only way out was to follow Mr. Lopez's advice. What an opportunity cost he would be paying! Because of his debts, he was working 40 hours per week so he was spending less of himself on school. As a result, he would have to take fewer classes per semester, which meant it would take him five or six years to finish college. He hadn't planned on that when he went on his credit card binge! To think that at one time he had \$3,000 in the bank.

He began to ask himself if college was really worth it. Using marginal analysis, he looked at the cost of another four years, and he wasn't sure the benefits would be worth it. When he talked to his mom, she had just run across a newspaper article with the following numbers on it:

EDUCATION COMPLETED	AVERAGE INCOME	MARGINAL INCOME
4-year college degree (or greater)	\$76,101	\$29,932
2-year college degree	\$46,169	\$8,866
High school graduate	\$37,303	\$8,422
High School dropout	\$28,881	\$3,847
Less than 9th Grade	\$25,034	

Source: Bureau of the Census, Current Population Survey, 2007 Annual Social and Economic (ASEC) Supplement (PINC-04. Educational Attainment--People 18 Years Old and Over, by Total Money Earnings in 2006, Table for "Both Sexes, All Races Worked Full Time, Year Round")

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The third column represents the additional income that a student is likely to earn with additional years of schooling. For example, for an additional 2 years of college, a high school graduate is likely to add \$8,866 to his/her annual income. Compared to a high school degree, Martin's college degree was likely to bring him an additional \$38,798 per year for every year he worked, over double! It was too bad he had put himself into this position, but thoughts of not finishing college quickly faded. He would simply have to be a hermit, going to work and school and paying the opportunity cost of his credit misuse by giving up a social life until he was out of college and his debts were paid off.

If Martin had thought about the few basic tips concerning credit that Mr. Lopez showed him, his life would be a lot easier now.

### 14 Tips For Using Credit Wisely

1. Remember that using someone else's money costs money. Know the cost of credit and add it to the purchase price. Remember, the interest could cost almost as much as the product itself. Ask yourself: Is it still worth the money?
2. Shop around for the best price of the product and the best credit terms. Different lenders have different terms. Shop around for the best terms. Never be in a hurry to accept a deal on credit. Shop around for the lowest interest rates and fees on credit cards.
3. Ask lots of questions. There is no "foolish" question when discussing your money. When you are ready to sign, be sure that you have all the lender's promises in writing to look over before you sign. If a promise is made that is not in writing, ask for it in writing.
4. Would you buy the same item if you had to pay cash? Do not buy more than you had originally intended just because you get easy payments. Compare the costs and benefits of each additional dollar spent. Think marginally.
5. If your net income is less than \$20,000 per year, using credit is more risky. Plan your credit spending and your payments and debt load ahead of time. If payments on a purchase don't fit into your overall budget, don't buy the product.
6. Know the danger signs of credit and borrowing:
  - Juggling one credit payment to make another
  - Receiving PAST DUE notices or calls from creditors
  - Not saving part of your income each month
  - Running out of money before the next payday
  - Using credit cards to pay for normal expenses
  - Borrowing from family and friends
  - Using cash advances from one credit card to make other card payments
  - Being asked by the creditor to return the card
7. Taking cash advances on your credit cards is usually more expensive (in both interest and fees) than borrowing for specific purchases.
8. Remember that more time means more money. If you borrow, put down as much as you can and keep the repayment time as short as possible.
9. Pay more than the minimum required payment on credit cards.
10. Use fewer credit cards and set lower limits.
11. Be selective when choosing a credit card. What are the rates compared to other cards and what benefits does the card include?
12. Create a Christmas budget and stick with it.

# LESSON 3

## CREDIT AND THE MARGIN

13. Ask for help right away if you can't meet your monthly payments. Creditors will work with you to avoid sending your accounts to a collection agency if you show good intentions and offer a reasonable payment plan. This is where the Consumer Credit Counseling Service of Los Angeles can help.
14. Beware of debt consolidation loans; they often lead to false security and only extend the debt. The interest on these loans is likely to be very high unless secured by real estate.

Sources: CCCS of Los Angeles and CCCS of the Inland Empire

### Exercises:

1. Evaluate each one of the following purchases and decide whether the people are making wise decisions. If not, what advice can you give them? Which of the fourteen tips concerning credit are they violating and which ones might help them?
  - a. Maria can't pay her utilities bill, so she is taking out a line of credit on her credit card.
  - b. Dexter has reached the limit on one credit card, so he is buying some new fishing equipment on another credit card.
  - c. Fred is in over his head. He has creditors calling all the time and knocking on his door. He decides to take out a debt consolidation loan.
  - d. Greg and Laura are buying a washing machine. They haven't shopped much, but they are in a store where they can walk out of the store with the washing machine and finance it 100%. Their payments won't start for three months. They think that the price is pretty high, but they won't have to spend any more time shopping.
  - e. Linda is buying a car for a good price. It has a warranty, but she didn't bother to read it. (It is long and has lots of small print.) The saleslady seemed nice and said that it is their standard warranty.
  - f. It is December 20th, and Carol hasn't done any of her Christmas shopping. She is going tonight and is going to buy whatever she can find at whatever price. She will put the gifts on her credit cards.
  - g. Sophia is just browsing in a dress store. The saleslady shows her a dress she likes. She hadn't planned to buy it but it is nice and she can put it on credit. She buys the dress.
  - h. Richard wants to buy a car. He doesn't have a job and wants the car to try to find one. One used car lot is willing to give him credit, so he buys the car from them.
2. Discuss the first two of Martin's purchases and see if you think that the extra money spent (the marginal cost) was worth it (was as great as the marginal benefit).
  - a. Comparing his existing speakers to the new speakers, was the marginal benefit (better sound) of the expensive stereo worth the marginal cost (\$500 each)?
  - b. Was the marginal benefit (his sister's greater happiness) of the outfit worth the marginal cost (\$130)?
3. For the truck, videos, trip to Northern California and concert tickets, write questions similar to Exercise 2, a. and b. above.
4. You are browsing through a clothes store when a salesperson comes up to you and starts putting some pretty heavy pressure on you to buy an outfit. You like it but don't have the money for it. Write a short paragraph that explains what you would say to the salesperson.
5. Write an essay explaining when, and under what circumstances, you would apply for a credit card. In your essay, include an explanation of rules you would impose upon yourself in the use of the card.
6. You are planning to buy a used car for \$12,000. Use the credit calculator to answer these questions.
  - a. The down payment is \$4,000, you are going to finance \$8,000 and your payment will be \$210.68 per month. How long will it take you to pay off the loan, how much will you pay in interest, and how much will you pay in total for the car and the loan?
  - b. You put down \$7,000 and finance \$5,000 and your monthly payments will be \$131.67. How long will it take you to pay off the loan, how much will you pay in interest, and how much will you pay in total?

What is the moral of the story?

7. Use the credit calculator to answer these questions.
  - a. You have a \$5000 credit card balance. The interest rate is 18% and you make the minimum monthly payment of \$125. How many months will it take you to pay off the loan, how much interest will you pay, and what will you pay in total?

# LESSON 3

## CREDIT AND THE MARGIN

- b. Answer the same questions, assuming you make a fixed payment each month of \$500.

What is the moral of the story?

8. Refer to the table showing average and marginal incomes for different levels of education completed.
- What conclusion can you draw from the data?
  - Give reasons why the average income shown in the table for HS graduates might be higher than what a typical HS graduate could earn on his or her first year on the job.
  - If the table displayed "Unemployment Rates" (i.e., percentage of adults unable to find a job) instead of "Average Income", do you think you would draw the same conclusion? (i.e., would the table show a pattern for the different education categories?) Explain.

### Exercise Answers:

- 3a. Was the marginal benefit (the additional pleasure from the truck as opposed to his mom's car) of the truck worth the marginal cost (\$18,000)?
- 3b. Was the marginal benefit (the two additional videos) of the videos worth the marginal cost (\$3)?
- 3c. Was the marginal benefit (the time saved) of the flight worth the marginal cost (\$100)?
- 3d. Was the marginal benefit (being closer to the stage ) of the more expensive tickets worth the marginal cost (\$50 each)?
- 6a. 48 months, \$2112.07 interest, total cost of car and loan = \$14,112.07
- 6b. 48 months, \$1320.11 interest, total cost of car and loan = \$13320.11  
Moral of the story, the greater your down payment, the lower the cost of the loan.
- 7a. 62 months, interest = \$2693.11, total paid = \$72693.11
- 7b. 11 months, interest = \$458.11, total paid = \$5458.11  
Moral of the story, the larger your monthly payments, the less you pay for the loan.

- 8a. Education pays! In general, individuals with greater education earn significantly more than those with lesser education.
- 8b. Answers will vary. Some of the most common responses:  
The table reflects all adults in the category, not just "starting salaries". Typically a new high school graduate would enter the work force at a low paying, entry level position. Over time, he or she might become more proficient and valuable on the job, and receive promotions and thus higher wages. In general, more job experience translates to higher income.

The table shows the average earnings of those who worked "full time, year round." Typically new HS graduates might only be able to obtain part time or seasonal jobs, and thus earn less because they work less.

Some particularly talented high school graduates earn high salaries in fields where additional education isn't required. For example, some athletes enter professional sports without going to college. The same is true for some entertainers such as actors, singers, and dancers. Although their numbers are small relative to the total workforce, these gifted individuals often earn exceptionally high salaries which can "skew" the average to be higher than what a typical high school graduate could earn.

- 8c. Yes, studies have shown that the unemployment rate is highest for those with the least education. For example,

EDUCATION COMPLETED	UNEMPLOYMENT RATE
4-year college degree (or greater)	\$76,101
2-year college degree	\$46,169
High school graduate	\$37,303
High School dropout	\$28,881
Less than 9th Grade	\$25,034

Source: Bureau of Labor Statistics, Current Population Survey 2006 annual averages for persons age 25 and over.

# LESSON 3

## CREDIT AND THE MARGIN

### Self Test:

1. What is the marginal benefit in terms of annual income from completing high school compared to dropping out?
2. What is the marginal opportunity cost of completing high school compared to dropping out? While you may not be able to put a dollar figure on it, what do you give up to complete high school?

### Summary:

Martin was asking himself if the “extras” that he was buying were worth their opportunity costs.

Marginal Benefit is the benefit received from one more unit of a product or an activity. If you buy a computer with a bigger hard drive than you had originally planned to buy, you expect that there will be additional benefits from the bigger hard drive.

Marginal Opportunity Cost is the additional opportunity given up when purchasing more of a product or pursuing more of an activity. What would you have done with the money you used to buy the larger hard drive if you hadn't bought it?

Marginal analysis always involves comparing the benefits of two alternatives.

### Culminating Activity:

Make a poster that illustrates a marginal decision that you have made recently.

### Multiple Choice

1. Marginal analysis involves:
  - a. Looking at the benefits of an alternative
  - b. Looking at the cost of an alternative
  - c. Comparing the benefits of two alternatives
  - d. Evaluating the cost of an alternative
2. Which of the following is an example of marginal analysis?
  - a. Comparing the benefits of running an extra mile with the benefits of eating lunch
  - b. Going to a movie
  - c. Buying the dress that you have been wanting for a long time
  - d. Eating a huge ice cream sundae
3. Which of the following is a good consumer rule for expensive items?
  - a. Buy the product that your consumer research says is the best
  - b. Buy the most expensive since price reflects product quality
  - c. Buy the product after comparing the benefits and cost of alternatives
  - d. Buy what you want
4. When deciding how much of something to do or buy, people compare the marginal benefit from different levels of the activity to the:
  - a. Average opportunity cost
  - b. Marginal opportunity cost
  - c. Total opportunity cost
  - d. Sunk opportunity cost





## LESSON 4

### BENEFIT/COST ANALYSIS



*Diana is buying a car and uses a five step decision-making process to help her decide which car to buy.*

<b>STANDARDS:</b>	Historical and Social Sciences Analysis Skills: Section 6: Students conduct cost/benefit analysis....
<b>PRINCIPLE:</b>	3. Benefit/cost analysis is useful.
<b>CONCEPTS:</b>	Benefit/Cost Analysis – <ol style="list-style-type: none"><li>1. Identify the resources to be allocated and the goal towards which those resources are to be allocated.</li><li>2. Identify the available alternatives.</li><li>3. Identify the advantages and disadvantages of each alternative.</li><li>4. Using the advantages and disadvantages, narrow the alternatives to two.</li><li>5. Identify the choice and the opportunity cost of the decision.</li></ol>

The purpose of this lesson is to give students a six step decision-making process that they can use in consumer and other decisions. The decision-making process is also a useful tool in examining historical events and political decisions.

**Cognitive Objectives:** Students will list the six steps of the decision-making process.

**Affective Objective:** Students will use the decision-making process in all important decisions in their lives.

### “Choose carefully.”

Diana had a decision to make. For her graduation, her parents had given her \$3,000 for a car. She had had her eye on her uncle's car, which was pretty nice, but he was asking \$5,000. She figured she could get him down to \$4,500, but she didn't have \$4,500, she had \$3,000. She was going to work this summer, and she would for sure have the money by the end of the summer. Her uncle said that he would wait to sell the car until the fall, but she wasn't too sure that he would really wait. He was sort of a flake. Her parents didn't want her to buy his car because they weren't sure of him or his car.

She could buy a car she had seen in a lot. It was \$3,000, and she could drive it away today. Her parents said that they would pay for the additional tax and license fees. The problem was that it was an old and ugly four door sedan that looked like it had been owned by a senior citizen. It was definitely not the type of car Diana would want her friends to see. However, it did come with a one-year parts and labor warranty, so it would probably be reliable for at least a year. Her parents had said that they would co-sign for a loan if she wanted to use the money for a down

payment on a new car. She went looking and saw a highly rated compact economy car that would do. It got great mileage and would probably last forever and would cost about \$12,000. The one she really wanted was a little, red, high performance sports car that cost \$16,000. She doubted that her folks would go for that one, and she was pretty sure that she wouldn't be able to afford the payments, but it was sure a nice looking car. Diana didn't know what to do. Her boyfriend, Rob, knew what to do—buy the red sports car. Her parents told her that the economy car made sense. Her uncle tried to persuade her that his car was the one for her, and he would wait until she had the money, honestly. The car she could buy right now actually seemed like a pretty good option, if only it weren't so ugly! What to do?

Linda, a friend of hers, claimed that she knew how to solve the problem; she could use benefit/cost analysis. Diana stopped in her tracks. She wanted it clearly understood that she did not have a Ph.D. in finance. Linda assured her that this was very simple stuff. There were five steps to benefit/cost analysis.

# LESSON 4

## BENEFIT/COST ANALYSIS

1. **Identify the decision: what is the goal and what resources are available to achieve the goal?**

Diana has \$3,000 to buy the best car possible to get her back and forth to work.

2. **Identify the available alternatives.**

Her uncle’s car, the used car from the lot, a new economy car, or a new sporty car.

3. **Identify the advantages and disadvantages of each alternative.**

Her uncle’s car is reliable and not ugly but she would have to wait until the end of the summer, she might not get it, and her parents don’t think it is a good idea. The used car from the lot is within her budget and will be reliable for a year. It is old and ugly. The new economy compact car gets great mileage and will last for many years but is not good looking and will put her into debt to the tune of \$9,000. The shiny sports car is beautiful but her parents were not likely to approve and she couldn’t afford it on her own.

4. **Using the advantages and disadvantages, narrow the alternatives to two.**

Diana knew that she really didn’t want to go into debt since she would be starting college soon and the debt would put more pressure on her to work which would take her away from her studies. That ruled out both new cars.

5. **Identify the choice and the opportunity cost of the decision.** She was left with the ugly used car from the lot or her uncle’s car. The ugly used car from the lot might last four years but she couldn’t be sure. Her uncle’s car is more reliable but he is not. She might wait all summer only to discover that he had already sold it or decided not to sell it at all. You just never knew with him. She decided to buy the old ugly car. Her opportunity cost would be her uncle’s car with its extra reliability and durability.

Linda showed Diana a table that helped put things in perspective. After she explained how to complete the table, it looked like this.

What are you trying to decide (allocate)? Why?

Resource, product, or money: \$3,000  
**Goal:** Buy the best car possible.

Identify the advantages and disadvantages of each alternative.

ALTERNATIVE 1		ALTERNATIVE 2		ALTERNATIVE 3		ALTERNATIVE 4	
Uncle’s car		Used car from lot		New small car		New fancy car	
Advantages	Disadvantages	Advantages	Disadvantage	Advantages	Disadvantages	Advantage	Disadvantages
Looks are OK	Have to wait	Within budget	Old and ugly	Great mileage	Not good looking	Beautiful	Probably can’t make payments
Car is reliable	Might not get it because Uncle is a flake.	Reliable for a year		Last for a long time	Debt of \$9,000		Parents don’t approve
	Parents don’t approve						

**Diana’s choice is:** the old ugly car from the lot.

**Diana’s opportunity cost is:** her uncle’s car.

“Any time an allocative decision is made, that decision involves a cost.” Economics involves decisions about allocating money, resources, or goods or services. Economists use benefit/cost analysis in an attempt to make the most efficient use of limited resources.

# LESSON 4

## BENEFIT/COST ANALYSIS

### Exercises:

1. Assume you have \$1,000 to save. Use the table, below, to identify the advantages and disadvantages of alternative forms of saving. Then identify your choice and the opportunity cost. You will have to do some research to discuss this question. In your benefit/cost analysis, use the five step decision-making process outlined above.

#### THE SAVING DECISION

	SAFETY	RATE OF RETURN	LIQUIDITY	EARLY WITHDRAWAL PENALTIES	TAXES
Savings Account, Bank					
Savings Account, Credit Union					
Money Market Account, Bank					
Money Market Account, Credit Union					
Money Market Account, Brokerage Firm					
Certificate of Deposit, 6 Month Maturity					
Treasury Bill, 6 Month Maturity					
Municipal Bond, AAA, 2 Year Maturity					
Common Stock					
Growth Mutual Fund					

2. Use Consumer's Report, manufacturer's brochures, and/or Internet electronics reviews from web sites to research four different MP3 music players (e.g., Apple iPod). Use the table below to discuss the advantages and disadvantages of the alternatives. The criteria that are important to you should be listed in the first row. Price is one, but what other criteria are helpful in choosing an MP3 music player? Write those criteria in the remaining boxes on the first row. Then evaluate each of the four players based on the criteria.

#### MP3 MUSIC PLAYERS

	CRITERIA 1 PRICE	CRITERIA 2 ?	CRITERIA 3 ?	CRITERIA 4 ?	CRITERIA 5 ?
Player 1					
Player 2					
Player 3					
Player 4					

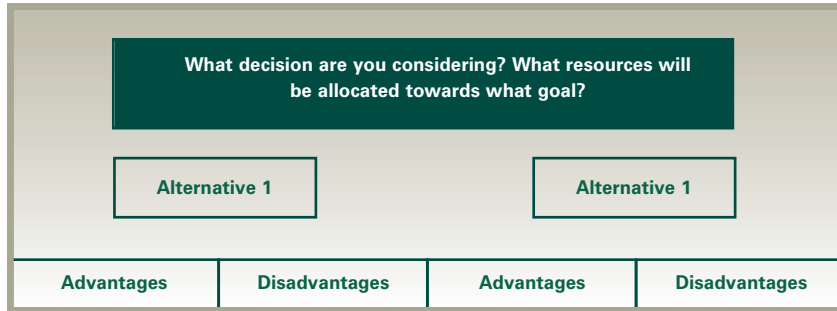
Once you have identified the advantages and disadvantages of each MP3 player, use the five steps of benefit/cost analysis to choose a player.

- A. The goal is to allocate a limited amount of money to buy the best MP3 player possible, given the criteria that are important to you. You would like to minimize the amount you spend but you want to get a good player.
- B. Identify four alternatives.
- C. Discuss the advantages and disadvantages of each player.
- D. Narrow the alternatives to two.
- E. Choose one and identify the opportunity cost of choosing that player. If you choose the lower priced one, what is your marginal opportunity cost, what features are you giving up?

# LESSON 4

## BENEFIT/COST ANALYSIS

3. In pairs, use benefit/cost analysis to decide on a movie to rent, how to spend Saturday night, where to go to dinner, what to do with your life after high school, what job to take. Draw a poster, outlining your decision in terms of benefit/cost analysis. Your poster should look something like this with the boxes filled in with your examples. Recognize that, after narrowing your alternatives to two, the one you select is your choice and the one you give up is your opportunity cost.



### Exercise Answers:

1. Answers will vary. Completed table should be similar to:

### THE SAVING DECISION

	SAFETY	RATE OF RETURN	LIQUIDITY	EARLY WITHDRAWAL PENALTIES	TAXES
Savings Account, Bank	Very safe, (insured to \$100K)				
Savings Account, Credit Union	Very safe, and often insured				
Money Market Account, Bank	Safe, but technically possible to lose value				
Money Market Account, Credit Union	Safe, but technically possible to lose value				
Money Market Account, Brokerage Firm	Safe, but technically possible to lose value				
Certificate of Deposit, 6 Month Maturity	Very safe				
Treasury Bill, 6 Month Maturity	Very safe but may lose value if sold early				
Municipal Bond, AAA, 2 Year Maturity	Safe but may lose value if sold early				
Common Stock	Safe but may lose value if sold early				
Growth Mutual Fund	Less safe. Value depends on market				

### Self test:

List the five steps of benefit/cost analysis.

### Summary:

Martin was asking himself if the “extras” that he was buying were worth their opportunity costs.

Marginal Benefit is the benefit received from one more unit of a product or an activity. If you buy a computer with a bigger hard drive than you had originally planned to buy, you expect that there will be additional benefits from the bigger hard drive.

Marginal Opportunity Cost is the additional opportunity given up when purchasing more of a product or pursuing more of an activity. What would you have done with the money you used to buy the larger hard drive if you hadn’t bought it?

Marginal analysis always involves comparing the benefits of two alternatives.

# LESSON 4

## BENEFIT/COST ANALYSIS

### **Culminating Activity:**

Divide students in groups of three or four. Have each group research one of the following sites and report to the class on the information available at that site.

- (1) <http://autobytel.com/>
- (2) <http://www.consumerguide.com/>
- (3) <http://www.consumerreports.org/>
- (4) <http://www.edmunds.com/>
- (5) <http://autos.msn.com/>
- (6) <http://autos.yahoo.com/>
- (7) <http://caranddriver.com/>
- (8) <http://www.motortrend.com/>
- (9) <http://roadandtrack.com/>
- (10) [http://online.wsj.com/articles/mossberg\\_mailbox](http://online.wsj.com/articles/mossberg_mailbox)
- (11) <http://ptech.wsj.com>

**The list comes from an article by Bart Ziegler in the Wall Street Journal, November 14, 2002, page B1.**

“When Car-Shopping, First Take a Spin Around the Internet”





## LESSON 5

### THE HOW AND WHY OF PRICES



*Ricky Rip-off is a consumer and sees himself as a victim. He learns how prices are determined in a competitive market economy and the role that prices play in allocating scarce goods and services. The message is that he is not a victim if he follows some basic consumer principles and uses the ultimate power of the consumer—not buying.*

<b>STANDARDS:</b>	12.2 Students understand the elements of America’s market economy in a global setting Section 2. Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
<b>PRINCIPLE:</b>	6. Markets work with competition, information, incentives, and property rights.
<b>CONCEPTS:</b>	Relative Scarcity Law of Demand Law of Supply

The purpose of this lesson is to give students the idea that, in a world of scarcity, goods and services have to be allocated. In a market economy it is done through prices. The lesson attempts to empower students by helping them to recognize that the buyer has the ultimate power by simply not buying, and letting them know about warranties. The term “rip-off” is used to explain that buyers do not have to be victims if they are careful shoppers.

**Cognitive Objectives:** Students will recognize the purpose of a price as the allocative mechanism in a market economy.

Students will identify the effect of a change in supply or demand on a price.

Students will list the things to look for in a warranty.

**Affective Objective:** Students will recognize the power that they have as buyers in a market economy.

**“There are no rip-offs if you don’t let yourself be ripped off.”**

**“It’s all a matter of supply and demand.”**

Ricky was always getting ripped off. It wasn’t that he was stupid; he just wasn’t very careful about how he spent his money. The home theater sound system was a good example. He planned on spending about \$1,200 for a new system. He had saved his money, pretty much knew what he wanted, and was ready to buy it when he saw an ad in the paper.

“Going out of business. All merchandise must go. Prices slashed! Name brand merchandise. Easy credit.” This was incredible timing. He wanted a new system, and Joe’s Stereo

was going out of business, sacrificing their merchandise. It was almost too good to be true.

Ricky hustled down to Joe’s. A guy met him at the door and asked if he could be of service. Ricky wanted to know if they had the system he had been planning to buy. They didn’t, but they had something much better for only slightly more money. By the time Ricky left the store, he had paid an additional \$700. The “easy credit terms” featured in the ad really meant only that the

# LESSON 5

## THE HOW AND WHY OF PRICES

store accepted credit cards. There were no special interest rates or payment plans. It looked like good equipment though, and he had a three-year warranty. The only problem with the warranty, Ricky later discovered, was that it wasn't a "manufacturer's warranty" but instead a "store warranty". That meant that if something went wrong during the 3 year guarantee period, Ricky couldn't have the system replaced or repaired by the factory. Instead he would have to deal with the store. But, of course the store was going out of business, and was not there when he went back three months later because the CD was skipping, the speakers were crackling, and one channel on his receiver went out from time to time. He had spent more than he wanted, he hadn't read the warranty, and the equipment was not much good. Ricky had been ripped off!

He was also always complaining about prices. The movies were a rip-off, gasoline was a rip-off, clothes were a rip-off, the concert was a rip-off, haircuts were a rip-off—anytime he bought anything it was a rip-off. The problem was that Ricky failed to distinguish between rip-offs and prices that reflect the relative scarcity of goods and services, determined by the forces of supply and demand. All goods and services that have positive money price, whether that price is one penny or one million dollars are scarce. If they were not scarce, people could have all that they want of the product by simply picking it up from the ground or off the trees. Sand at the beach is usually not scarce; leaves at the end of fall in a heavily wooded area are not scarce. In fact, they are "so not scarce" that people pay to have them raked up and hauled away.

So the fact that a product only costs one penny doesn't mean that it isn't scarce, it just means that it is not very scarce. In a competitive market, the price of the product reflects how scarce a product is compared to all other products. We know that a truck is scarcer than a dress or a pair of pants. We know that a four-bedroom house with a pool in the San Francisco area is scarcer than a truck. We can tell by looking at the price. Price, as measured in dollars and cents, or pesos, or pounds, is the measure of relative scarcity of a product. In a competitive market, a high price is not a rip-off, it is simply an indicator that the product is relatively scarcer than some other products.

Ricky has the idea that groups of all-powerful and evil people sit up in offices somewhere and simply decide how much they want to charge, making sure that the price is high enough to be "unfair" to Ricky.

The only problem with this theory is that it implies that suppliers can charge any price that they want. If this were true, gasoline would be a billion dollars a gallon. What is it that determines the price of a product? In fact, the forces of supply and demand determine prices in most markets, and the prices indicate how

scarce one product is in relation to all others. Let's begin by making two assumptions: 1) Suppliers would like to charge as high a price as possible and still sell their product. 2) Demanders would like to pay as low a price as possible and still buy the product. The only thing that the two groups have in common is that they would both like to make an exchange.

From the suppliers' perspective, there are many things that determine how much of the product they are willing and able to supply at different prices. These supply factors are often referred to as "WAGTIPS" for short:

- W**eather
- A**ctions of **G**overnment
- T**echnology
- I**nput **P**rices
- S**ellers in the market

From the demander's side of the market, there are many things that determine the quantity that they are willing and able to buy at different prices. These demand factors are often referred to as "PRINTE" for short:

- P**rice of **R**elated products
- I**ncome
- N**umber and type of people in the population
- T**astes and Preferences
- E**xpectations of future price and availability of this and other products

Once these things have been considered, suppliers compete against each other to attract demanders. The law of demand states that, once all other things have been considered, buyers will buy more of a product at lower prices and less of the product at higher prices. Suppliers who want to charge the highest price possible but understand the law of demand are forced by competition to lower their price to attract prospective buyers. Demanders who want to pay a zero price compete against each other to gain the scarce goods by bidding the price up. This competition of suppliers against suppliers and demanders against demanders is the price determination process.

The law of supply explains the action of sellers. Once all other things have been considered, sellers will supply more of the product at higher prices and less of the product at lower prices.

A market is a lot like an auction. A bunch of sellers want to sell their products, and a bunch of buyers want to buy them. The only question is, "What price will clear the market?" What price will work so that all of those who are willing and able to buy at that price can buy, and all of those who are willing and able to sell at that price can sell?

Once a price is determined, changes in supply or demand will

# LESSON 5

## THE HOW AND WHY OF PRICES

cause changes in price. The price of gasoline, when adjusted for inflation has fluctuated up and down dramatically over the years. Prices of computers have fallen spectacularly with advancements in hardware technology and manufacturing processes. In 2008, housing prices fell considerably in many areas due to the “mortgage crisis” and numerous foreclosures. These price declines are the result of increases in supply and decreases in demand. Even the most powerful company is limited by demand conditions.

As the degree of competition lessens, there is more control by suppliers over the supply of a product. In fact, members of the Organization of Petroleum Exporting Countries do gather in a room to attempt to determine the total quantity that they will produce to maximize profits for the group. Nevertheless, oil is not \$500 per barrel because OPEC members know that price is not sustainable. What that means is that even a powerful cartel such as OPEC can’t charge any price they would like because they face a demand for oil that is similar to demand for other goods and services – a higher price means a lower quantity demanded and, perhaps, lower profits.

The main message here is that Ricky is wrong: no group of all-powerful and evil people sit up in an office somewhere and simply decide how much they want to charge, making sure that the price is high enough to be “unfair” to Ricky. In a competitive market, the forces of supply and demand determine prices. Whether the suppliers are evil or good is irrelevant. All sellers would like as high a price as possible, but they can’t simply set the price because the law of demand and the forces of competition discipline them.

The thing that Ricky failed to realize was that he could avoid both

types of “rip-offs,” the first by careful shopping, questioning and reading, and the second by simply not buying.

In the first case, the stereo, Ricky had truly been ripped off because he was not careful in his shopping. He made two mistakes:

1. he had failed to understand the terms of the warranty and
2. he had allowed himself to be talked into spending more than he had intended.

Following two simple rules when buying will help you avoid the first type of “rip-off.” Read everything in a written warranty. Promises by a salesperson mean nothing if they are not written. It is important not to listen to assurances that the contract or warranty is “just the standard contract.” Be sure to read the written documentation and be sure that you understand it. Don’t be afraid to ask questions. It is your money that you are spending, and you have a right to know what you are getting into and what your assurances are.

The second rule is even simpler. If the price is “too high,” don’t buy! In a market economy, prices are indicators of relative scarcity. As long as scarcity exists, scarce goods must be allocated. Prices allow demanders to decide whether they wish to spend their income on the goods or not. (There is, of course, the problem of poverty, where demanders have insufficient income to buy basic goods and services.) And the final message to Ricky is simple: If you don’t like the price of something, don’t buy it. Very few things are absolute essentials; substitutes for most products abound. If the price of a product is too high, look for a substitute.

### Exercises:

In questions 1 – 4, state whether the following events will affect demand or supply. (Note: for the purposes of this exercise, each event will affect only one, supply or demand.) Which way will the price go in each of the instances below? Explain your answer.

1. An earthquake hits Los Angeles. People want to buy chainsaws to cut and clear away the fallen trees. Is this a change in the supply or demand of chainsaws? Is it an increase or a decrease? What will happen to the price of chainsaws? Why? Is this a rip-off?
2. Improved technology lowers the costs of producing computers. Is this a change in the supply or demand of computers? Is it an increase or a decrease? What will happen to the price of computers? Why? Is this a rip-off?
3. It is the first day back to school. Students are all going to school and no longer going to the beach. Is this a change in the supply or demand of swimsuits? Is it an increase or a decrease? What will happen to the price of swimsuits? Why? Is this a rip-off?
4. A frost hits Redlands and Riverside, California, wiping out much of the orange crop. Is this a change in the supply or demand of oranges? Is it an increase or a decrease? What will happen to the price of oranges? Why? Is this a rip-off?

# LESSON 5

## THE HOW AND WHY OF PRICES

5. It is the end of summer and the price of strawberries has gone up dramatically. Your friend claims that strawberry growers are ripping us off. How do you respond?
6. It is Valentine's Day and you want to buy a dozen roses for your very special friend....until you discover that the price of a dozen roses is \$100. Why do you think that the price is so high? Is it a rip-off? What are your alternatives? What do you do?
7. Look in your local newspapers or other news sources and find four price changes that have occurred recently. Explain whether each price change was caused by an increase or a decrease in supply or demand.
8. Using the Internet, research the price of oil over time for the past 50 years. Use "inflation adjusted" or "constant dollar" data (hint: search for "inflation adjusted oil prices") Identify key price changes and associate them with probably causes and/or world events. Was the price change due to supply or demand changes? Explain.
9. Put the letter "R" in the space if you think that the situation is a rip-off. Place the letter "S" in the space if you think that the price change is a result of a change in supply, and the letter "D" in the space if you think the price change is a result of a change in demand, and the letter "N" if you think the situation is none of these.
  - a. \_\_\_\_\_ Oil prices increase because of a strike by oil workers in Venezuela.
  - b. \_\_\_\_\_ Ricky's new watch quits working. He got it wet and it is not waterproof. No one said it was but he assumed it was.
  - c. \_\_\_\_\_ The price of ski and snowboard equipment falls at the end of the winter.
  - d. \_\_\_\_\_ Gasoline prices increase in the summer.
  - e. \_\_\_\_\_ Prices of a sports team's jerseys, hats, etc. increase after they win the national championship.
  - f. \_\_\_\_\_ Mrs. McGillicuddy loses her life savings because her financial planner lied to her about the risks involved.

### Exercise Answers:

1. The earthquake causes an increase in the demand for chainsaws. The supply of chainsaws in the Jacksonville area is fixed, at least in the short term. The price of chainsaws will rise because people demand more of them. This is not a rip-off.
2. This is an increase in the supply of computers because improved technology results lower input prices for producers. Lower input prices makes computers less costly to produce, which means that producers are more willing to supply them at every price. The price of computers will fall; to induce consumers to buy the greater supply, the price will have to fall. This is not a rip-off.
3. This will cause a decrease in the demand for swimsuits. Since students don't have time to go to the beach, they don't want new swimsuits. Since people don't want as many swimsuits as before, sellers will have to lower the price to get rid of swimsuits. This is not a rip-off.
4. This is a decrease in supply. There are fewer oranges available at every price. Since there are fewer available, buyers will bid against each other for the limited supply, raising the price. This is not a rip-off.
5. Answers will vary, but typically will mention that at end of season, few strawberries are left, so supply is decreased significantly. However, demand for strawberries remains the same. Therefore the price will rise. This is not a rip-off.
6. Answers will vary, but typically will mention that demand for roses on Valentines day is much greater than for other times of the year. And, because roses are a perishable commodity, they must be grown fresh (i.e., they cannot be grown months in advance and stored in warehouses) and therefore, the supply is fixed. Increased demand with a fixed supply causes higher prices. Alternatives might be purchasing less expensive flowers, or less perishable items such as candy, cosmetics, or jewelry.
7. Answers will vary. Some product and commodities likely to show price volatility include oil, gasoline, diesel fuel, corn, milk,

# LESSON 5

## THE HOW AND WHY OF PRICES

oranges, beef, gold, and consumer electronics (e.g., flat screen television sets, computers, cell phones, and cell phone plans.)

8. Answers will vary, but typically mention many of following:
  - a. large price increases in late 1970's caused by Iran/Iraq war which decreased supply (war damaged oil fields and production facilities)
  - b. large price decreases in early 1980's when Iran/Iraq war ended and oil supply restored.
  - c. price spike (increase) in 1990-1991 caused by Persian Gulf War which decreased supply from Iraq and Kuwait (war damaged oil fields and production facilities)
  - d. Steady price increase following 9/11/2001 terrorist attacks and continuing through 2003 Iraq war (political uncertainties cause prices to increase, oil embargo on Iraq reduces supplies, etc.)
  - e. Rise of "world economy" and reduction of trade barriers causing rapid industrial growth especially in lesser developed countries like China, India, Brazil, caused large increase in energy demand (i.e., oil.) Steadily increasing demand with fixed supply causes increasing prices
  - f. Production quota changes by OPEC which caused increases/decreases in supply. E.g., 10% production increase in 1997 (Asian Financial Crisis) to lower prices, and series of production decreases in late 1990's to increase prices.
  
9. Supply, Demand, Rip-off, or None Questions
  - a. S - Oil prices increase because of a change in supply. The supply of oil is reduced because of the workers' strike (oil can not be produced until the workers return to their jobs.).
  - b. N - Ricky's new watch quits working because of his own actions (e.g., he should not have gotten the watch wet, or else should have purchased a waterproof model.) The market conditions of supply and demand had nothing to do with his situation and he was not ripped off.
  - c. D - The price of winter sports equipment falls at the end of the winter because the demand decreases significantly when the snow melts. (Folks are surfboards for the beach instead.) A decreased demand coupled with an unchanged supply means lower prices.
  - d. D - Gasoline prices increase in the summer because people drive more in the summer time (e.g., more daylight hours for working; children are out of school and often driven to activities; summer vacations.) More driving in the summer translates to increased demand for gasoline. With fixed supply and increased demand, prices rise.
  - e. D - Prices of a sports team's apparel increase after they win the national championship because demand increases (e.g., publicity of championship causes more people to jump on the bandwagon; supporting the team becomes more "in" and prestigious. Increased demand with fixed supply causes prices to rise.
  - f. R - Mrs. McGillicuddy loses her life savings because her financial planner lied to her about the risks involved. Her loss was not caused by the market forces of supply and demand, nor her own negligence., but by unethical (and probably illegal) actions by her financial planner. She was "ripped-off".

### Self test:

1. Rank these products in terms of relative scarcity with 4 being the most scarce and 1 being the least scarce.

\_\_\_\_\_ A CD

\_\_\_\_\_ A Child's Tricycle

\_\_\_\_\_ A New Car

\_\_\_\_\_ A Candy Bar

2. State the law of demand

3. State the law of supply

# LESSON 5

## THE HOW AND WHY OF PRICES

### Summary:

In a market with buyers competing against buyers to get the products and sellers competing against each other to sell their products, price is the measure of how scarce one product is compared to others. A \$25,000 truck is more scarce than a \$4 hamburger.

Price is determined by buyers and sellers — by demand and supply.

If demand increases or supply decreases, price will go up.

If demand decreases or supply increases, price will go down.

### Culminating Activity:

Have the students bring in examples of price changes that they have seen in the news throughout the semester. (You can give them extra credit for the examples or you can make it part of their grade.) For each example, have them go through the steps of market analysis to explain the price change.

### Multiple Choice Questions:

1. In a competitive market, which of the following is NOT true about the price of a product? The price
  - a. provides information to demanders and suppliers.
  - b. reflects the relative scarcity of the product.
  - c. reflects the moral value of the product.
  - d. is determined by demand and supply.
2. In a competitive market, prices are determined by:
  - a. corporations
  - b. government
  - c. supply and demand
  - d. wants and needs
3. The number that indicates the relative scarcity of a product is the:
  - a. price
  - b. supply
  - c. demand
  - d. quantity
4. Which of the following occurs in the market for flashlights when a power outage occurs that is likely to last for several days?
  - a. demand for flashlights decreases
  - b. price of flashlights rises
  - c. flashlights becomes relatively less scarce
  - d. supply decreases



## LESSON 6

### BENEFIT/COST ANALYSIS



*Veronica and Ryan, two high school students, talk about getting married and having a baby until Ryan weighs the benefits and costs of such a decision at this time in their lives.*

**STANDARDS:**

Historical and Social Sciences Analysis Skills:

Section 6: Students conduct cost/benefit analysis....

**PRINCIPLE:**

3. Benefit/Cost Analysis is useful.

**CONCEPTS:**

Benefit/Cost Analysis –

1. Identify the resources to be allocated and the goal towards which those resources are to be allocated.
2. Identify the available alternatives.
3. Identify the advantages and disadvantages of each alternative.
4. Using the advantages and disadvantages, narrow the alternatives to two.
5. Identify the choice and the opportunity cost of the decision.

The purpose of this lesson is to introduce the method of benefit/cost analysis to students, and give them practice in applying benefit/cost analysis to situations they do face and situations they are likely to face the future.

**Cognitive Objectives:** Students will learn to identify costs of proposed actions and to weigh the benefits and costs of decisions before making their choices.

**Affective Objective:** Students will make wiser decisions once they research the benefits and costs of proposed actions.

### **“Having a baby is very costly.”**

Veronica really hated her mom. Her mom was unreasonable and just didn't understand her. Although, it wasn't always this way. Veronica's dad left when she was five. Since then, Veronica and her mom had gotten along really well. Veronica had helped with her two younger brothers and had helped around the house. They were a team, Veronica and her mom, and they had done pretty well together. Her mom worked different hours at the grocery store and Veronica took responsibility when her mom was not home. It had worked well until recently when her mom seemed to be constantly on her case.

She and Ryan had been dating for about a year now, and they were truly in love. They were juniors in high school and pretty good students. Ryan worked part time in a mechanics shop. He was in a regional occupational training program and figured he

would go to mechanics school, and they would get married and live happily ever after. Veronica couldn't wait.

It wasn't that her mom was evil; she was just old fashioned. She thought that Veronica shouldn't go out on school nights and that she should be in by midnight on the weekend. That was too much. And her mom didn't like Ryan: he didn't have ambition, he was lazy, he wasn't going to college, he had a tattoo and an earring, and he was white! She came up with a million reasons why she didn't like him, but the simple fact was she didn't like him.

The final blow came the night Veronica got her tattoo. It was no big deal, a little star on her ankle. She didn't think her mom would even see it, but did she ever! Her mom was waiting up for her, as usual, when Veronica walked in. She had fallen asleep on the couch. Veronica came in as quietly as possible, turned

# LESSON 6

## BENEFIT/COST ANALYSIS

off the lights, pulled the afghan over her mom, and had almost made it out of the room when Ryan yelled from his car, "Veronica, I love you!" He probably woke up half the neighborhood, but he certainly woke up her mom. Maybe her mom was right: he wasn't so smart!

Her mom bolted up and looked around the dark room. Seeing Veronica walking away, she turned on the light and called to her. Veronica came back in and sat down beside her mom. Veronica's mom checked her watch and thanked her daughter for being five minutes early. She reached out and held Veronica's hand and told her that she knew things hadn't been going very well between them but that she felt the situation was improving. She had been working a lot of hours and was a little edgy, and Jose, Veronica's youngest brother, had been getting into some trouble at school, so she was worried about him, too.

Veronica said that she understood, that it was all right, and then she made a major tactical error: she pulled her feet up onto the couch. The minute she did it, she realized her mistake as she watched her mom's eyes follow her feet. The look on her mom's face was indescribable: shock, terror, shame, anger, hurt. She had seen that look only once before and that was when Veronica's father had told them he was leaving. Her mom did the worst thing she could have done, she started crying. That lasted about five minutes, and Veronica could do nothing but sit there and watch it happen. Then her mom gained control and said the eight words Veronica most dreaded, "We will talk about this in the morning." All of the emotions Veronica had read in her mom's expression were gone now; only cold anger remained. Veronica knew this was a big one.

Veronica's bed was the sleeper couch in the living room. The next morning, she pretended to be asleep as long as possible, but when Juan and Jose turned on the TV and started punching each other and arguing and laughing, it was clear that she was awake. She got up and showered and dressed and went into the kitchen. Her mom was giving her the silent treatment, which was always a very bad sign. After a very quiet breakfast, her mom sat down at the table beside her and said in a voice empty of all emotion, "Veronica, I have thought this over, and I have decided that you are grounded for a month, and you are not to see Ryan anymore."

The shock hit Veronica in the stomach first, then went up through her chest and ended up in her throat. This was too much. She was 16 years old, a junior in high school, and she was not about to be grounded. As far as not seeing Ryan anymore, he was in three of her classes. What was she supposed to do, cut class? She was in love; she and Ryan were going to get married someday, and her mother was not about to make that decision for her. She got up quietly from the table, walked out-

side, and stood on the porch. Her mother yelled at her to come back in and clean up her dishes, but she ignored the call. This was it. She was getting out of this house. If she was not going to be treated as an adult, she would live somewhere else where she would be!

The rest of the weekend, she sulked around the house. When Ryan called, she gave him the news. He just sort of laughed, asked which planet her mom was from, and discussed plans for Monday afternoon. They would go to the donut shop and spend a couple of hours there. Veronica's mom was working, so there would be no threat that she could break this up. Veronica agreed.

Monday after school, however, didn't work out quite as they had planned. Aunt Grace met Veronica as she walked out of her last class and escorted her to the car. Veronica was mortified; this was too much, not only was she to be in prison, but her jailers were to escort her around. She called Ryan when she got home and discussed the situation. She had a plan. She and Ryan would both leave their homes and get a place of their own. It wouldn't have to be a big place at first; that would come later. They would get married, have a baby (Veronica knew that she would be a great mom, not like her mother, "Cruella") and collect welfare at first. After they both finished high school, she would go to computer school while someone watched the baby. Ryan would go to mechanics school, and they would have a wonderful life. Then, after a while, if her mom wanted to speak to her again, she would consider it.

She explained her plan to Ryan. He was excited, but he thought the way to go was to have Veronica move in with his family. His folks were cool, and he had his own bedroom. She could simply move in with him. They didn't have to get married right away; they could wait a while and see how it went.

Veronica disagreed. She was tired of rules, and she knew that Ryan's parents would have rules. Besides, she wasn't at all convinced that Ryan's parents would love the idea. They were really nice, but not that nice. No, if they were going to do this thing, they were going to have to be on their own. And marriage was essential. She wouldn't even think of this thing unless they were going to get married. Ryan said, OK, but he sounded less enthusiastic than at the beginning of the conversation.

At the grocery store the next day, Veronica bumped into Paula. Now here was someone who could relate to Veronica's situation. Her baby was eight months old, and she had done just fine. Veronica asked her how she was doing.

"OK, I guess," she answered and walked on. Veronica hadn't noticed before, but Paula seemed sort of defeated. Her hair was a mess and her clothes looked like she had slept in them -- for lots of nights.

# LESSON 6

## BENEFIT/COST ANALYSIS

She caught up with Paula and asked, "No, really, how are you doing?"

"Why do you want to know?"

"I am just interested."

Paula saw through it immediately. She and Veronica had never been friends, and this sudden interest in her welfare obviously had something behind it.

"I told you, I'm OK."

Veronica decided to go for broke. She explained her plan to Paula and said that she thought Paula might be able to give her some advice.

Paula just smiled and said two words, "Forget it." Veronica was surprised. She explained that she knew Paula had done this, and it seemed to have worked out all right.

"All right? You don't have a clue what you're talking about. First Jerome splits, then I move in with my parents. At first they are ticked, then they get excited about the baby. Sabrina arrives, and they are very excited, and things go OK for a while, but then they get tired of 'raising another baby.' I was raising her, but they were doing a lot of baby-sitting. Things get tense, and they finally tell me that I have to get a place of my own."

"I find a dump in a part of town you don't even know about that costs \$600 per month. I get welfare payments of \$800 and \$200 worth of food stamps. I tried to go to school, but that didn't last very long. I depended on other people for rides and babysitting and found out I couldn't depend on them. I now have four unauthorized withdrawals from my four classes. My finances are a mess. I've got three credit cards, and I'm maxed out on all three of them. The collection agencies threatened to take me to court. Big deal. What would they get? If I were to get a job, I'd lose my welfare, and daycare would cost me about \$600 per month. Minimum wage jobs don't pay enough to cover all of that, and most of them are part-time anyway. No boy will come near me with a baby, and even if one would, it wouldn't make any difference because I can't afford a baby-sitter, so we couldn't go anywhere, and I wouldn't invite a dog to my place. I have enough to eat, sort of, but if Sabrina gets sick, I can't afford medicine."

"I thought I was going to get a really neat live doll, someone who would love me because I am her mom - and I would love her back, and it would be wonderful. Sometimes I don't even like her. Most nights I'm up half the night with her. I resent the way she ties me down and runs my life. So don't ask me how I am, OK. I'm lousy, and you don't care." She turned and walked away, but

Veronica didn't follow her.

At lunch, Ryan seemed to be having second thoughts. His older sister didn't have medical insurance and just had a baby. She had given him a breakdown on paper with some hard, cold facts on it:

The cost of having a baby includes prenatal care and delivery by a medical doctor or a midwife; medication during pregnancy; charges for the labor room, supplies, lab work, nursery services, and the mother's room. Normal prenatal and childbirth expenses average \$7,600 and in recent years have been increasing faster than the overall inflation rate. A complicated pregnancy can cost two to five times as much as a normal one. Not included are maternity clothes for the mom.

Once the baby arrives, you have to buy clothes, pay medical expenses, and buy nursery equipment. Maintenance costs include four to six packs of disposable diapers per month (unless you are prepared to wash cloth diapers), and formula (unless the mom breast feeds). As the baby grows, there are clothes (\$50 per month), bibs, a highchair, baby wipes or paper towels. Formula is a decision. Concentrate and ready-made are very expensive, so powdered is usually the choice. Babies will usually go through two or three cans a week before they get on food. Daycare can cost \$100 - \$200 a week. Relying on relatives for baby-sitting is not usually very successful.

Depending on the geographical area and other considerations, the cost of raising a child to age 18 is over \$200,000.

Veronica looked it over and gave it back to Ryan.

"I know it will be tough, but I know we can make it. We're not like Paula and Jerome; we love each other, and our love will make it work," Veronica insisted.

"But Veronica, if we are married, we can't collect welfare," Ryan replied. "We would be on our own. I want to go to mechanics school. If we have this baby, I will have to quit high school and get a job, and you will have to quit once the baby comes. I did some calculating. Remember that chart that showed incomes of people who finish high school compared with those who don't? That will cost us \$8,400 per year for the rest of our lives. For both of us, figuring a 40-year working life, that's \$336,000 apiece or \$672,000 for both of us. If we go to college or a trade school, the additional income can be over \$17,000 per year for one of us. The total for that figure is way over a million dollars for our lifetimes. I want my baby to have a good life, and we won't be able to provide that if we do this now. We will also be throwing away our future. Veronica, it just doesn't make sense."

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## BENEFIT/COST ANALYSIS

Ryan went on, "I know you are ticked at your mom, and I do love you, but this is not the way to solve the problem. I think you'd better go back and see if you can work something out with your mom. I am not convinced that a star on your ankle is a good reason to have a baby."

Veronica was pretty disappointed. She had this whole thing planned, and now Ryan was backing out just because of some silly numbers that his sister had given him. What did she know anyway? Over the next few weeks she did see less of him, not because her mom told her she couldn't see him, but because he seemed to have a lot of reasons why they couldn't have lunch together or meet after school before her aunt arrived. Maybe he

didn't love her after all, maybe he wasn't any different than Jerome, maybe her mom was right about him, maybe all men are pigs. In the meantime, she and her mom had come to a sort of understanding. Her mom still hated the tattoo and would probably never get over it, but they had talked. Her mom recognized that Veronica was growing up and that grounding was not a punishment to be used lightly. She had even lightened the sentence to three weeks, two of which were already over. They were not best friends as they had been in the past, but they were getting along better. And her mom agreed that Veronica could have a puppy.

### Benefit/Cost Analysis

Veronica was mad at her mom and jumped at the first solution to her problem. She was not thinking as an economist.

An economist would address the issue as follows:

1. What is the goal?
2. What are some alternative approaches to achieving the goal?
3. What are the criteria that are important in discussing the alternatives?
4. How does each of the alternatives align with the criteria?
5. Which of the alternatives best meets the criteria?
6. Is the choice you make, based on #5, a good one?

Ryan had actually done a financial benefit/cost analysis. If money was a consideration, there were some serious costs to having a baby including the opportunity cost of earnings missed for lack of a high school diploma. Veronica seemed willing to pay those costs for the psychological benefits of having someone who loved her alone, although Paula gave her some things to think about in terms of the psychological and physical costs of having the baby.

When addressing problems, benefit/cost analysis is often helpful in focusing on the problem, on the alternative solutions to the problem, and on the benefits and costs of those alternatives.

### Exercises:

1. Use a decision-making grid such as the one explained in Module 4 to address Veronica's decision.
  - a. What is the decision to be made? What is the goal? You may not all agree on what the goal is. Brainstorm the problem to see if you can agree.
  - b. What are some alternatives to achieve the goal? Veronica decided that she was going to move out of the house, marry Ryan, get a place together and have a baby. That way she wouldn't have to deal with her mom, and her mom's old-fashioned ideas and lame punishments. What are some alternative ways to address that decision?
  - c. What criterias were important to Veronica? Obviously, some independence was important, being treated with respect as an adult was another, love from Ryan and the baby was a third. For Ryan, financial considerations were a fourth, and practicality was a fifth.
  - d. How do each of the alternative solutions fit the criteria?
  - e. Which alternative do you choose? After some time in reflection, was your choice a good one?
2. Assume for a moment that the story's ending is changed to be closer to Veronica's original plan. Ryan and Veronica get married and have a baby. Somehow, they manage to pay for the baby's prenatal and delivery costs (perhaps her mother gets a loan?) And Ryan's parents graciously allow them to live with them rent free, and without charging for living expenses. In exchange, Ryan and Veronica agree to stay in school and work part time to pay for the baby's expenses.

# LESSON 6

## BENEFIT/COST ANALYSIS

- a. Identify the costs of feeding, clothing, and caring for a new baby during its first year. Your answers should include formula, diapers, clothing, supplies, day care (5 days per week), as well as a “well baby checkup” with the doctor every two months. Total the costs and divide by twelve to determine your average monthly cost.  
To determine costs of each item, consult with parents or friends, use your “best guess”, or do your own research using Internet “baby cost calculator” tools.
  - b. Veronica and Ryan’s job skills and part time availability qualify them only for low wage jobs. Assume they earn \$10/hour but 25% of their pay is withheld in taxes and other payroll deductions. How many hours per month must they work to “take home” enough money to pay for their baby costs calculated in (a)?
  - c. Using hours per month calculated in (b), after school, work, sleep, and personal time (for bathing, eating, shopping chores, etc), how many “free hours” would they have remaining in a typical week? After caring for their baby, would they still have a social life?
2. Research what a single mother with a baby might receive from welfare and food stamps in your state.
  3. Remember Ryan’s claim that dropping out of high school would considerably reduce his future earnings? How much would Ryan “lose” if he dropped out instead of graduating from high school? How much would failure to attend a 2 year college (or trade school) cost one him versus dropping out of high school?  
Assume a 40 year working life and use the following table:

EDUCATION COMPLETED	AVERAGE INCOME	MARGINAL INCOME
4-year college degree (or greater)	\$76,101	\$29,932
2-year college degree	\$46,169	\$8,866
High school graduate	\$37,303	\$8,422
High School dropout	\$28,881	\$3,847
Less than 9th Grade	\$25,034	

Source: Bureau of the Census, Current Population Survey, 2007 Annual Social and Economic (ASEC) Supplement (PINC-04. Educational Attainment--People 18 Years Old and Over, by Total Money Earnings in 2006, Table for “Both Sexes, All Races Worked Full Time, Year Round”)

4. Invite a single parent with a young baby to come to your class and discuss the emotional costs of raising a newborn.
5. The concept of benefit/cost analysis is not unique to having a baby. In what other areas of your life could you use benefit/cost analysis? (Answers will vary but could include choosing a girlfriend/boyfriend, what to do after high school, what kind of job/career to choose, what to do about the prom, etc.)

# LESSON 6

## BENEFIT/COST ANALYSIS

### Exercise Answers:

1. Answers will vary. Following is a typical grid:

ALTERNATIVE 1		ALTERNATIVE 2		ALTERNATIVE 3	
Marry Ryan, Move out, Have a baby		Postpone Marriage, Finish School. Get Puppy		???, ???, ???	
Advantages	Disadvantages	Advantages	Disadvantages	Advantages	Disadvantages
Marriage & baby will make me happy immediately	Careers --Unlikely to finish school/ job training	Attain education goals & pursue careers	Must wait for marriage (and Ryan may not want me in a few years)		
Love -- Baby's love for mother is wonderful	Need to go to work (entry level jobs) right away	Maintain good relationship w/ mother	Must continue to live at home & deal with mother (emotionally challenging)		
Independence & Respect -- No longer need to deal w/Mother	Mother will be unhappy --family relationships may be hurt	Enjoy full HS social experience	Puppy isn't the same as a baby		
	No social life – will miss out on many high school experiences	More positive environment for family & children (Have family once we can afford it.)			
	Many economic & emotional challenges. Marriage & child's welfare will be difficult	Will probably be "happier" in the long run			

2. Answers will vary. The following are typical but there can be many variations and differing assumptions (e.g., breast feed, use "hand me down" clothing from relatives, use unlicensed day care, etc).

a. Baby Costs:

Formula and baby food	\$1,400
Diapers & wipes	\$ 450
Clothing	\$ 600
Supplies (e.g., car seat)	\$ 600
Day care (40 hrs/week)	\$6,000
Doctor visits	\$ 800

-----  
Total \$9,850

Divide by 12 = = = =

Average Monthly Cost → \$821

b. Part Time Work – Hours needed per month:

\$10/hour wage less 25% deductions	= \$7.50/hour "take home"
Hours per month	= Average Monthly Cost divided by \$7.50 per hr
	= \$821 / \$7.50
	= 109 hours per month

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## BENEFIT/COST ANALYSIS

- c. Hours left after school, work, and sleep.

Note: 109 hours per month from (b) above is approx 25 hours/week

Hours in a week (24 x 7)	160
Less sleep (8 hrs/day x 7)	-56
Less school & homework (9 hrs/day x 5)	-45
Less work (25 hrs/week)	-25
Less personal (3 hrs/day x 7)	-21
	-----

Total 21 hours per week "free"

Their free time averages only 3 hours per day.

Baby care would likely consume much of their free time.

An outside social life would be very limited (if they could even afford it).

3. Income Advantage of Education

- 40 year cost of dropping out of HS vs. graduating from HS  
Marginal Annual Income = \$8,422  
\$8,422 x 40 years → \$336,880
- 40 year cost of dropping out of HS vs. completing 2 year college or trade school  
Marginal Annual Income = Drop out vs. HS grad Marginal Income  
+ HS grad vs. 2 Yr College Marginal Income  
= \$8,422 + \$8,866  
= \$17,288  
\$17,288 x 40 years → \$490,760

### Self test:

Use information from these websites to calculate the cost of having and caring for a baby through age 18.

### Web Sites

<http://www.cnpp.usda.gov/ExpendituresonChildrenbyFamilies.htm>

<http://www.babycenter.com/cost-of-raising-child-calculator>

<http://www.womenshealth.gov/>

<http://www.ahrq.gov/> search for "baby costs"

<http://www.revolutionhealth.com/healthy-living/pregnancy/planning-pregnancy/financial-planning/cost-prenatal-care-delivery>

<http://www.i-am-pregnant.com/> click on "Baby cost calculator", also, search for "Home daycare: How much does it cost?"

### Summary:

The decision-making process includes five steps:

1. Identify the goal and the resources available to achieve the goal.
2. Identify the available alternatives.
3. Consider the advantages and disadvantages of each alternative.
4. Using the advantages and disadvantages, narrow the alternatives to two.
5. Identify the choice and the opportunity cost of the choice.

# LESSON 6

## BENEFIT/COST ANALYSIS

### Culminating Activity:

Have your class act out the baby play below.

#### The Baby Play

##### Scene I.

Ryan: "Veronica, I love you."

**Mom:** Checks her watch. Thanks Veronica for being on time. Asks her to sit down. Explains why she has been cranky. Working a lot of hours, Jose had been getting into trouble.

**Veronica:** That's OK. Pulls her feet up on couch.

**Mom:** Sees tattoo. Shock, horror, dismay. Begins to cry. Shows anger: "We will talk about this in the morning."

Next morning. Veronica pretends to be asleep. Juan and Jose make noise, turn on TV, roughhouse. Drags herself out of bed. Goes to kitchen to find Mom.

**Mom:**(cold and emotionless): "Veronica, I have thought this over and I have decided that you are grounded for a month and you are not to see Ryan anymore."

**Veronica:** (shocked): Gets up and walks out.

**Mom:** "Young lady, you get back in here and clean up your dishes."

Veronica ignores her.

Ryan calls.

He laughs, asks which planet her mom is from, and talks about Monday afternoon. They would go to the donut shop and spend a couple of hours there. Veronica's mom was working so there would be no threat that she could break this up.

Veronica agrees.

##### Scene II.

(Monday after) Aunt Grace meets Veronica as she walks out of her last class. She escorts her to the car. Veronica is mortified. When she gets home, she calls Ryan.

**Veronica:** Ryan, I have a plan. We will get a place of our own. It doesn't have to be a big place at first, that will come later. We will get married and have a baby. I'll be a great mom, not my mom, Cruella. We'll collect welfare at first. After we both finished high school, I'll go to computer school while someone watches the baby. You can go to mechanics school, and we'll have a wonderful life.

**Ryan:**(showing some concern) "Great Veronica, but why don't you move in with me and my parents? My folks are cool and I have my own bedroom. You can just move in with me and we will see how it goes. We don't have to get married right away."

**Veronica:** (a little exasperated) "Ryan, your mom and dad would never let us move in together in their house. Besides, I don't want any parents telling us what to do. Don't you love me? Don't you want to get married and have a baby?"

**Ryan:**(Slowly and with some hesitation) "Well, sure, I guess, but we better give this some thought. I'll talk to you tomorrow."

**Scene III.** The grocery store. Veronica sees Paula.

**Veronica:** Paula, how are you?

# LESSON 6

## BENEFIT/COST ANALYSIS

**Paula:** "OK, I guess." She walks by.

**Veronica:** (catching up with Paula) "No, really, how are you doing?"

**Paula:** "Why do you want to know?"

**Veronica:** "I am just interested."

**Paula:** (skeptically) "I told you, I'm OK."

Veronica explains her plan to Paula and asks for advice.

**Paula:** "Forget it."

**Veronica:** (surprised) "But you have done it and you seem to be doing OK."

**Paula:** "Alright? Alright? You don't have a clue what you're talking about. First Jerome splits then I move in with my parents. At first they are ticked, then they get excited about the baby. Sabrina arrives and they are very excited and things go OK for a while but then they get tired of "raising another baby." I was raising her, but they were doing a lot of babysitting. Things get tense and they finally tell me that I have to get a place of my own.

I find a dump in a part of town you don't even know about that costs \$600 per month. I get welfare payments of \$800 and \$200 worth of food stamps. I tried to go to school but that didn't last very long. I depended on other people for rides and babysitting and found out I couldn't depend on them. I now have four unauthorized withdrawals from my four classes. My finances are a mess. I got three credit cards and I'm up to my ears in debt on all three of them. The collection agencies threatened to take me to court. Big deal. What would they get? If I were to get a job, I'd lose my welfare and daycare would cost me about \$600 per month. Minimum wage jobs don't pay enough to cover all of that and most of them are part-time anyway. No boy will come near me with a baby, and even if one would, it wouldn't make any difference because I can't afford a babysitter, so we couldn't go anywhere and I wouldn't invite a dog to my place. I have enough to eat, sort of, but if Sabrina gets sick, I can't afford medicine. I thought I was going to get a really neat live doll. Someone who would love me because I am her mom.... and I would love her back and it would be wonderful. Sometimes I don't even like her. Most nights I'm up half the night with her. I resent the way she ties me down and runs my life. So don't ask me how I am, OK. I'm lousy, and you don't care."

She turned and walked away and Veronica didn't follow her.

### **Scene IV.** Lunch at school

**Ryan:** "Veronica, I talked to my older sister. She and her husband have just had a baby and she gave me some figures. Look."

Veronica looks at the paper and reads:

"The cost of having a baby includes prenatal care and delivery by a medical doctor or a midwife; medication during pregnancy; charges for the labor room, supplies, lab work, nursery services, and the mother's room. Normal childbirth expenses average \$7,600 and in recent years have been increasing faster than the overall inflation rate. A complicated pregnancy can cost two to five times as much. Not included are maternity clothes for the mom.

Once the baby arrives, you have to buy clothes, pay medical expenses, and buy nursery equipment. Maintenance costs include, four to six packs of paper diapers per month (unless you are prepared to wash cloth diapers), formula unless the mom breast feeds. As the baby grows, there are clothes (\$50 per month), bibs, a highchair, baby wipes or paper towels. Formula is a decision. Concentrate and ready made are very expensive so powdered is usually the choice. A baby will usually go through two or three cans a week before they get on food. Daycare can cost \$100 - \$200 a week. Relying on relatives is not usually very successful.

# LESSON 6

## BENEFIT/COST ANALYSIS

Depending on the geographical area, and other considerations, the cost of raising a child to age 18 is over \$200,000."

**Veronica:** (gives the paper back to Ryan) "I know it will be tough, but I know we can make it. We're not like Paula and Jerome, we love each other and our love will make it work."

**Ryan:** "And Veronica, if we are married, we can't collect welfare. We would be on our own. I want to go to mechanics school. If we have this baby, I will have to quit high school and get a job, and you will have to quit once the baby comes. I did some calculating. Remember that chart that showed incomes of people who finish high school compared with those who don't? That will cost us over \$8,400 per year for the rest of our lives. For both of us, figuring a 40 year working life, that's over \$336,000 a piece or \$672,000 for both of us. If we go to college or a trade school, the additional income can be over \$17,000 per year for one of us. The total for that figure is way over \$1 million for our lifetimes. I want my baby to have a good life and we won't be able to provide that if we do this now. We will also be throwing away our future. Veronica, it just doesn't make sense. I know you are ticked at your mom, and I do love you, but this is not the way to solve the problem. I think you better go back and see if you can work something out with your mom. I am not convinced that a star on your ankle is a good reason to have a baby."

**The End.**

### Multiple Choice Questions:

Summary: Having a baby is very costly.

1. The average cost of prenatal care and having a baby (with a normal delivery) is:
  - a. \$10,000 - \$15,000
  - b. \$5,000 - \$10,000
  - c. \$50 - \$5,000
  - d. There is no cost of having a baby
2. The cost of raising a child to age 18 is approximately:
  - a. \$500,000
  - b. \$200,000
  - c. \$75,000
  - d. \$50,000
3. Every decision, including having a baby, involves:
  - a. Opportunity cost
  - b. Alternatives
  - c. Advantages
  - d. All of the above



## LESSON 7



### PREPARING FOR THE WORLD OF WORK

*CT and Andre are taking a high school economics class. CT is into music and dresses the part. Andre is a nerd. He has very good grades and has used his time in school to develop the skills necessary for the labor market. Andre, CT, and their classmates learn that employers are interested in a worker's human capital, what he or she can contribute to the bottom line.*

#### **STANDARDS:**

12.4 Students analyze the elements of the U.S. labor market in a global setting  
Section 2: Describe the current economy and labor market, including the types of goods and services produced, the types of skills workers need, the effects of rapid technological change, and the impact of international competition.  
Section 3: Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity

#### **PRINCIPLE:**

7. People's skills influence their income.

#### **CONCEPTS:**

Skills – things people can do  
Knowledge – things people know  
Human capital – a person's combined skills and knowledge

The purpose of this lesson is to alert students to the fact that they will have to have marketable skills to survive and prosper in the labor market of the 21st century.

**Cognitive Objectives:** Students will define human capital as the combination of skills possessed by a worker.

Students will identify skills that are likely to be in demand in their labor market.

Students will recognize that their wages will reflect their relative scarcity, which is determined by the interaction of supply and demand.

**Affective Objective:** Students will use the information in this lesson to write a plan to develop the human capital that will help them survive and prosper in their labor market.

#### **“We are incredible bundles of human capital!”**

It wasn't that Andre disliked CT; he actually sort of considered him a friend. Andre was a nerd; there was no other way to say it. He knew it and he lived with it. He didn't play sports, he didn't have a lot of friends, he didn't listen to “their” music and his love of classical music didn't endear him to many of his classmates. In short, he had few redeeming qualities in the eyes of his fellow students. Andre wasn't sure if CT was cool either. He was a

music freak. He DJ'd in a hip-hop group and spent most of his time practicing at his friend's house.

CT was a pretty big guy and had stood up for Andre more than once when some of the big guys were picking on him. They had a weird relationship; Andre was grateful to CT and CT seemed to respect Andre's accomplishments. And Andre had some. He had the highest GPA in school, which meant he would be the valedic-

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

torian. He had some kind of science prize that gave him a full scholarship to any school he wanted to go to if he majored in the physical sciences. He had a perfect math score for his entire high school career. He and his partner were the state debate champions. He spent his junior year in Germany and spoke fluent German and French.

And CT was smarter than he was! That's what frustrated Andre. In grammar school, CT had great grades without ever opening a book. He had a photographic memory; he never forgot a fact he had seen or heard. But he had his music. Andre had heard him a couple of times and didn't have any idea whether he was good, mediocre, bad, or horrible. He was betting on "horrible" but admitted he had no way to judge. The one thing he knew for certain was that it was loud, very loud.

Since he had become involved with music, CT had lost all interest in school. He was actually getting C's, but learning nothing and not caring at all. His parents were seriously upset and had talked and threatened, but they had no effect. CT just kept spinning and scratching and ignoring and probably smoking too! Andre hated smokers.

Andre decided there wasn't anything he could do about it. CT was his friend, but people make their own decisions and then live with them. He went about his business. He saw CT less and less. After Christmas break, people came back to school talking about plans for life after high school. Andre had mixed feelings when he walked into his economics class and saw CT there. It was good to see him after so long, but he dreaded watching him mess around and alienate the teacher and generally just screw up. He had no idea what economics was or what relevance it was going to have, but it was required so he was taking it. It should have come as no surprise that CT was in the class also.

The teacher was the varsity basketball coach, so Andre expected a rough time. He didn't know Coach Brown at all, but his experience with adult jocks hadn't been good. He was actually pleasantly surprised. Coach seemed to know him and had given him a big smile and, "Hello Andre," as he walked in. Coach started the class by stating that this was the most important class any of them would ever take and that it was going to be fun, exciting, important, and life changing. The students turned to each other with that, "Yea, right!" look.

Coach stopped and looked at them for a minute.

"Alright, wise guys and girls, you can smirk and laugh if you like, but we're going to be talking about you and your future in here. And like it or not Michael, the fact that you were the varsity football captain in high school is not, I repeat, not, going to buy your ticket to wealth and fame in the future. You see the world out there is looking for people who can contribute. Let me explain a

phrase that is essential to success in the business world; it's called the "bottom line." In business, that means profit. This may come as a great surprise to many of you, but employers aren't going to hire you for your good looks, amazing wit, or dazzling personality. No sir, that's not the way it works."

"I wish that you had to take this class in your first year of high school or even your first year of middle school, so that you would have plenty of years to pay attention to its lessons. Rhonda, what is your job in high school?"

"Well, Coach, I worked in the school office last year, and I was on the soccer team."

"Exactly, that's exactly what I mean. Rhonda, I don't mean to pick on you, but that attitude is what should have been checked at the door when you entered this school. Your job here is to develop skills that will prepare you for life after school."

At this point, CT raised his hand. Andre sunk down in his seat, waiting for the worst.

"Dude, like I know just what you mean. That's why I'm so into my music Dude. That's how I'm goin' ta make it, ya' know....famous musician."

Coach thought a minute.

"CT, I do know what you mean. But have you studied the market for musicians? Do you know how many musicians make a living at it? Do you know what kind of music will be in demand over the next 40 years of your working life? Do you have any indicator of how good you are compared to others who have the same goals?"

"Yea, Dude, my friends all say I'm great."

Coach moved on.

"Michael, let's go back to you. You had a great high school football career. Do you plan to play in college?"

"Ya know Coach, my folks really don't want me to. They talk about the odds of my making it to the pros, and the things I would have to give up in college. They really don't think it's practical."

"But you were voted all league, all Northern California, all everything."

"So were a lot of guys. Mom says that she doesn't want this to be the best thing that ever happened to me. I should be looking forward to bigger challenges."

"What do you think you want to do?"

"Well Coach, I don't know, maybe something really easy like teaching high school economics and coaching football. You

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## PREPARING FOR THE WORLD OF WORK

know, something that doesn't take much preparation or skill."

"Michael, your irony is surpassed only by your amazing but misplaced courage."

"Luisa, describe the life you would like to have ten years from now, what kind of house, job, etc."

"Coach, I want it all. Big house, fancy sports car, career, kids, husband, great vacations, toys."

"I appreciate your honesty. Ten years from now?"

"Oh maybe a bit longer. I'm thinking about being an M.D."

"What kind of grades will you need to get into medical school?"

"Very good!"

"Well, you have them so far. Keep it up."

"Ian, how about you?" Coach was looking directly at a white boy in the back of the room who hadn't been paying much attention."

"Coach, I'll tell you, I don't care much. I'm not going to live for ten years so it don't make no difference. Either I'm going to knife someone and end up in prison and get killed there, or I'm going

to get killed before I go to prison. You know, life just ain't worth much and it don't make no difference, so why don't you just cut the crap and let us sit in here and mind our own business and put in our seat time and then get out of here?"

The class was used to Ian and his attitude but they had never heard the response that they were about to hear.

"Well, Ian, I'll tell you why, because my job is to help every one of you see the light and that's exactly what I intend to do whether it suits you or not. Now sit your sorry self up straight, lose the attitude and let's get on with the business of saving your sorry life. What I want to let you know right now is that, in all of your astounding seventeen years, you haven't seen anything and you don't know anything. Let me say this one more time, a seventeen year old knows nothing! Son, I want you to see me after class and we will discuss this further. In the meantime, turn around and face me and let's get on with this class. And by the way, I want you to pretend that you're somewhat interested."

Ian turned around and sat up. The class was astonished.

"OK, let's get on with the business at hand. Here's the assignment." Coach distributed a sheet of paper to every student that looked like this.

### Handout 7-1 SELF ASSESSMENT

1. Describe the material things you want to have fifteen years from high school graduation. Describe your house, your family, your toys, your vacation, all of the things that you want.
2. Research the cost of each of these things at today's prices. List the monthly cost of:
  - Your mortgage payment
  - Utilities
  - Car payments
  - Toy payments
  - Cost of supporting your children
3. How much will you have to earn to support #2?
4. What job will you have to earn this income?
5. What skills will you have to get the job?
6. Describe your plan to acquire the skills you mentioned in #5.

Coach looked at his class and smiled.

"Are you beginning to get the message? The point is this. There are plenty of folks out there who want great lives and lots of stuff. And, by the way, we haven't even begun to touch on the question of quality of life. Is it just money you want? Or maybe you will decide to go for a job where you make less money, but work your tail off because you love what you're doing, like teaching high school economics and coaching football, Michael.

"Your job in school is to acquire the skills necessary to achieve your desired life whether that means a big fancy job, or a great job that doesn't pay much, or a life at home with a family. Your goals are your goals, and no one else's, but regardless of your desired life, you are going to need skills to achieve those goals."

Let's take a look at the world you are going to face when you leave here.

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### Handout 7-2

#### THAT WAS THEN, THIS IS NOW

	<b>THE INDUSTRIAL AGE (1900-1960)</b>	<b>THE INFORMATION AGE THE KNOWLEDGE AGE (2000+)</b>
<b>RATE OF TECHNOLOGICAL CHANGE</b>	YEARS	MONTHS, WEEKS
<b>SOURCE OF COMPETITION</b>	LOCAL, STATE, NATIONAL	GLOBAL
<b>ROLE OF WORKERS</b>	MANUAL LABOR	DESIGN, ENGINEER, TROUBLE SHOOT, TEACH, PROBLEM SOLVE, LEAD
<b>DOMINANT INDUSTRIES (TYPE OF PRODUCTION)</b>	MANUFACTURING	SERVICE, INFORMATION, KNOWLEDGE
<b>SKILL REQUIREMENTS</b>	STRENGTH, DEXTERITY, STAMINA	SCANS
<b>LONGEVITY OF EMPLOYMENT</b>	LIFETIME	CHANGE JOBS SIX TIMES, CAREERS THREE TIMES
<b>LEARNING SPAN</b>	KINDERGARTEN - 12th GRADE	LIFETIME

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### Handout 7- 2

#### That was then, this is now. (See page 7.4)

"To survive and prosper in this global labor market of the 21st century, to reach your goals, you have to build your human capital. Human capital is the bundle of skills and knowledge that each individual possesses; it is what you know and what you can do. The most important resource you have is your human capital; it is what you stare at in the mirror every morning, and, for some of you, about fifty times a day. The important thing for you to realize is that human capital is the only thing that an employer is interested in. The employer wants to know what you know and what you can do in order to help her get the job done, which is to provide a good or service to earn a profit. What skills and knowledge do you possess that makes you valuable in the market?"

"If you are going to enter the labor market, and most of you will, the question is how you are going to make yourself stand out from the crowd. If a company has three positions open, and there are two hundred applicants, what would make them hire you? Folks, that is the question you should be asking yourself. What do you have that will contribute to the "bottom line?"

"This next handout lists some of the skills that will help people survive and prosper in the global economy of the 21st century."

### Handout 7-3

#### The SCANS Report

The U.S Department of Labor's Employment and Training Administration is responsible for analyzing our nation's job requirements and determining the skills needed to sustain and grow a high-performance, high wage economy. Their findings are published in a set of documents known as SCAN – the Secretary's Commission on Achieving Necessary Skills. The following is a brief summary of their findings. (See <http://wdr.doleta.gov/SCANS> for the complete report.)

Basic Skills - These are the minimum skills necessary for anyone who wishes to hold even a low skilled job. They include reading, writing, arithmetic and mathematics, **listening**, and speaking.

Thinking Skills - These are skills that allow workers to analyze situations. They include creative thinking, decision making, problem solving, visualizing, **knowing how to learn**, and reasoning.

Personal qualities - Perhaps more important than the skills the worker brings to the job are his or her personal characteristics. Employers are as concerned with "Who you are," as they are with "What you can do." Characteristics important to the workplace are individual **responsibility**, self-esteem, sociability, self-management, and **integrity**.

Resources - We allocate resources in many of our daily activities, such as when we develop a monthly household budget or schedule the diverse activities of family members. Allocating resources -our labor, time, materials, income - is equally important on the job. The task includes planning, organizing, monitoring, assessing, evaluating, and adjusting.

Interpersonal - Interpersonal skills are becoming increasingly important as teamwork becomes more common in the workplace. The skills included in this category include participating as a member of a team, teaching others, serving clients/customers, exercising leadership, negotiating to arrive at a decision, and working with **people of different cultural backgrounds**.

Systems - Effective workers understand social, organizational, and technological systems, they monitor and correct performance, and they monitor and correct systems. They can answer questions such as, "How is it supposed to work, how does it work, how can we improve it?"

Information - Workers of today find, **use, evaluate, and communicate information**. The skills included in this category are acquiring and evaluating, organizing and maintaining, interpreting and communicating, and using computers to process and analyze information.

Technology - Effective workers select equipment and tools, they apply technology to specific tasks, and they maintain and trouble shoot technologies. Given current and future technological advances, workers must be up to date on the latest technology and continually learning new ones (i.e., must be willing, able, and proactive in learning).

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

"In economics, a thing that carries a high price is said to be relatively scarcer than things that carry a low price. What that means is that the supply is low relative to the demand. It's not simply that there isn't much of it, there has to be a strong demand. When this concept of relative scarcity is translated to the labor market, it means that someone who wants to earn a good living must have skills that others don't have and those skills must be in great demand.

"For example, CT, there is no doubt in my mind that your music is unique. No one can make music the way that you do. The only question is whether your music is in great enough demand to enable you to make a living at it. In the sports market, those of you who think that you are going to be professional athletes have to ask yourself if your skills are great enough to distinguish you from all the other great athletes and how great the demand is for your skills. Whether you like it or not, it's all a matter of supply and demand."

"Andre, I want to put you on the spot."

People began to snicker and roll their eyes. Andre was used to it but it always upset him anyway.

"Andre, I want to name some skills and then you tell me if you think that you possess them; don't be bashful or humble. Let's get the facts out."

Coach began to go down a list.

"Basic skills – reading, writing, math, speaking, listening?"

Yes, I'm pretty good at those."

"Creative thinking, decision making, problem solving, visualizing, knowing how to learn, and reasoning."

"Andre, are you responsible, have pretty good self-esteem, are you sociable, do you manage your self without much direction from adults, do you have integrity?"

"Coach!"

"All right, I'll answer that one for you. Yes on most counts, may want to work on the sociable part, but, and let's be fair, people don't give you much of a chance here. It could be something they might want to work on.

"Andre, are you pretty good at planning and organizing?"

"Yes."

"We could go on, but I don't want to make you more uncomfortable than necessary Andre. The point is, class, that Andre has consciously developed a fairly scarce bundle of human capital, is that right?"

Andre couldn't help it; he was embarrassed.

"Yes, I guess so."

"And Andre, they call you a nerd, don't they?"

"I've heard the term from time to time."

Andre could hardly get the words out. He had trusted Coach Brown, went along with him, and now he was going to get slammed.

"CT, tell me, do you know what they call the high school nerd ten years later?"

CT had been paying careful attention and was pretty proud of Andre up to the nerd point."

"No I don't."

Coach's smile widened, and he said, with a satisfying shrug, CT, Andre, class, ten years after high school, the high school nerd is often addressed as "BOSS." See you tomorrow.

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### Exercises:

Rank yourself in each of the Scans Categories – That skill area where you are best will receive a “1”, that skill area in which you are weakest will receive an “8”.

\_\_\_\_\_ Basic Skills, \_\_\_\_\_ Thinking Skills, \_\_\_\_\_ Personal Qualities, \_\_\_\_\_ Resource Allocation \_\_\_\_\_  
\_\_\_\_\_ Interpersonal Skills \_\_\_\_\_ Understanding Systems, \_\_\_\_\_ Information \_\_\_\_\_ Technology

### Plan for Improvement:

In the space below, write specific ways in which you are going to improve in those areas where you are weakest.

Category \_\_\_\_\_ Plan:

Beginning date:

Category \_\_\_\_\_ Plan:

Beginning date:

Category \_\_\_\_\_ Plan:

Beginning date:

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### Exercise Answers:

What will each of the following events do to the relative scarcity and the wage in the market for accounting?

1. The number of people passing the CPA exam increases dramatically.  
(Less scarce, wages will fall.)
2. Computer software makes many accounting tasks easier to do at home.  
(Less scarce, wages will fall.)

What will each of the following events do to the relative scarcity and the wage in the market for auto mechanics?

1. Fewer people become auto mechanics. (More scarce, wages will rise.)
2. Automobiles become simpler to maintain. (Less scarce, wages will fall.)

What will each of the following events do to the relative scarcity and the wage in the market for teachers?

1. Many more students enter school. (More scarce, wages will rise.)
2. Class size is reduced to 20 students for all classes Kindergarten through 12th grade. (More scarce, wages will rise.)

### Culminating Activity:

Distribute the Handout "Developing Your Human Capital." Have the students complete the skills activity and discuss them in general terms in class.

You may also have the students stage mock job interviews based on the following two scenarios. In the first, an individual with no concept of the job market interviews for a job. This is called, "The Interview, Dude." In the second, called, "The Job Interview," an individual who has prepared for the job market is interviewed. Questions and answers are provided.

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### Developing Your Human Capital

Use the table below to evaluate your human capital. In column 2, rank your mastery of the SCANS skills. Give your strongest skill a 1, your next strongest a 2, etc, finishing with an 8 for your weakest skill. In column 3, sketch a plan for developing your weaker skills.

SKILL	RANK	YOUR PLAN
Basic - reading, writing, arithmetic and mathematics, listening, and speaking		
Thinking -creative thinking, decision making, problem solving, visualizing, knowing how to learn, and reasoning		
Personal - individual responsibility, self-esteem, sociability, self-management, and integrity		
Resource Management - planning, organizing, monitoring, assessing, evaluating, and adjusting		
Interpersonal - participating as a member of a team, teaching others, serving clients/customers, exercising leadership, negotiating to arrive at a decision, and working with people of different cultural backgrounds		
Systems -understanding social, organizational, and technological systems, "How is it supposed to work, how does it work, how can we improve it?"		
Information - acquiring and evaluating, organizing and maintaining, interpreting and communicating		
Technology -being up to date on the latest technologies and continually learning new ones. Apply technology to specific tasks, and maintain and trouble shoot technologies.		

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### INTERVIEW QUESTIONS

1. What do you know about our company?
2. What do you feel you can contribute to our company?
3. On our placement test, your English score was very high. Can you tell me about that?
4. Your math scores were also very high. How did you acquire this skill?
5. Are you pretty good at processing information?
6. What technological skills do you have?
7. How quickly do you adapt to new systems?
8. How do you get along with people of diverse cultural backgrounds? Do you speak a second language?
9. Tell me about your personal characteristics such as responsibility and integrity.
10. What are your strengths and weaknesses?

Well, thanks very much for taking time out of your obviously busy schedule. I'm sure my boss will be getting back to you very soon. If you are about to take another job, please be sure to call us first.

### INTERVIEW, DUDE QUESTIONS

1. What do you know about our company?
2. What do you feel you can contribute to our company?
3. On our placement test, your English score was pretty low. Can you tell me about that?
4. Your math scores were very low, Why?
5. Are you pretty good at processing information?
6. What technological skills do you have?
7. How quickly do you adapt to new systems?
8. How do you get along with people of diverse cultural backgrounds? Do you speak a second language?
9. Tell me about your personal characteristics such as responsibility and integrity.
10. Your resume doesn't mention any education after high school. Have you done any internships, have you attended a trade school or college?
11. What are your strengths and weaknesses?

Well, thanks very much for taking time out of your obviously busy schedule and, uh, thanks very much.

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### INTERVIEW ANSWERS

1. I understand that you have been fairly aggressive on the international market. I also know that you have long term stability and a good record of labor relations.
2. A company like yours is going to need a new group of young employees. I have good analytical skills. I can usually see to the core of a problem and find ways to solve it. I have decent technical skills and am always ready to learn.
3. I had a great English teacher in high school. She showed me the excitement of reading and literature. I think you learn to write by reading and she had us do plenty of that.
4. I may have some natural abilities in math. But then my Mom worked with all of us to be sure that we had the basics down. After that, it was just work. I've worked pretty hard to do well.
5. I'm not what you would call a quick study. If I'm listening to someone, I won't be the first one to pick up what is being said; I need time to think it through. Once I do that, however, I process very well.
6. I'm comfortable with a computer and most of the major software. I have had to change software quite a bit since I've been in school and I always seem to come out OK. It is frustrating that technological change comes so fast, but it is a fact of life, and one that we have to accept.
7. Not as quickly as I would like. I guess I sort of resist change. But once I accept it, I learn pretty quickly.
8. It is hard to see how you could live in California and not get along with different people. We had nine different nationalities represented in my high school. I got along fine. I spent a summer in Germany two years ago. My German is pretty good. I also spent three weeks in Mexico, trying to practice the Spanish that I didn't learn in high school.
9. You should probably ask others about that. I like to think that I am responsible – I get jobs done and am willing to be held accountable. Integrity is something that I strive for.
10. On the plus side, I am a hard worker and intelligent with good skills. Probably my main weakness is that I tend to become impatient in teams and want to do the job myself.

Well, thanks very much for taking time out of your obviously busy schedule. I'm sure my boss will be getting back to you very soon. If you are about to take another job, please be sure to call us first.

**I certainly will. Thanks very much for the interview.**

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### THE INTERVIEW, DUDE ANSWERS

1. Well, I heard that you were lookin' to hire someone.
2. Dude, I can, like work for you.
3. Oh, dude, my english teacher was such a loser. She like wanted us to write all this stuff and read garbage like Shakespeare and just a bunch of crap. She didn't teach me nutthin'.
4. I got this thing about math, you know, it's just not my thing. I'm sort of like a big thinker. I'm not really into the detail stuff. Dude. Math is like not happening for me.
5. Huh?
6. I can wail on an electric guitar and I'm pretty stoked about synthesizers. Dude, my friend? She is like awesome on the drums.
7. Oh, I'm pretty quick. I run the 40 in 4.7.
8. Hell no, I figure like they ought to learn english like I did dude. Ya know what I mean? America for America is my thing. Who needs 'em anyway? All they do is take jobs from Americans.
9. Dude, that's what my mom always asks. Sure, I got plenty of it.
10. No dude, it's like I told you, school is not my thing. I'm sort of a big thinker. When stuff comes to me, it's like so weird. Ya know what I mean?
11. Dude, I can press about 240 but my curls aren't too good.

Well, thanks very much for taking time out of your obviously busy schedule and, uh, thanks very much.

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### **Self Test:**

Define human capital

### **Summary:**

Skills are things people can do

Knowledge is what people know

Human Capital is a person's combined skills and knowledge

In a competitive market, where workers compete against other workers for jobs, and businesses compete against other businesses for workers, wages are determined by supply and demand for the particular labor. If there are lots of you with low skills, your wage will be low. If there are few of you with high skills that businesses want, your wage will be high.

School is your investment in your human capital.

# LESSON 7

## PREPARING FOR THE WORLD OF WORK

### Multiple Choice Questions:

School is your investment in your human capital.

- Human capital is a person's
  - skills and knowledge
  - money
  - land
  - time
- In a competitive labor market, your wage is determined by:
  - the government
  - supply of your particular labor
  - demand for your particular labor
  - supply of and demand for your particular labor
- Of the following aspects that you control, which of the following is likely to have the greatest influence over your lifetime earnings?
  - the government
  - your boss
  - your knowledge and skills
  - the local Wage Board
- Your job in school is to develop your:
  - physical capital
  - athletic capital
  - musical capital
  - human capital
- People's lifetime incomes depend primarily on their:
  - popularity in school
  - athletic ability
  - human capital
  - luck
- In terms of human capital, school and other forms of training are:
  - opportunities to make friends
  - opportunities to play sports
  - investment
  - consumption
- Which of the following sectors is likely to have the highest paying jobs in the in the 21st century U.S. economy?
  - information and knowledge
  - agriculture
  - manufacturing
  - retail



## LESSON 8

### WHY SAVE? THE POWER OF COMPOUND INTEREST



*Tara has a part-time job and spends every penny on clothes and movies and manicures and other things she needs. She is happy until she talks to her grandmother who is very wealthy. She doesn't really understand how her grandma became so rich since she was a cleaning lady all her life. Her grandmother explains the concept of "Pay yourself first," and the power of compound interest. Tara becomes a convert.*

#### STANDARDS:

12.2 Students analyze the elements of America's market economy in a global setting  
Section 9. Describe the functions of financial markets

12.5 Students analyze the aggregate economic behavior of the U.S. economy  
Section 3. Distinguish between short-term and long-term interest rates and explain their relative significance

#### PRINCIPLE:

3. Benefit/cost analysis is useful.

#### CONCEPTS:

Saving – that part of income that is not consumed

Rule of 72 – Determine how fast a sum will double by dividing 72 by the interest rate

The purpose of this lesson is to demonstrate the power that saving and compound interest can have for people who are willing to save early and save often in an attempt to persuade students to begin saving.

**Cognitive Objectives:** Students will use the rule of 72 to calculate how long it will take to double a sum, given a particular interest rate. Students will recognize the power of compound interest.

**Affective Objective:** Students will recognize scarcity in their lives and will look for alternatives when trying to satisfy their wants in order to live with their limited resources.

#### **"Pay yourself first; save early and often."**

It was the first day of school and Tara was excited. As a junior, she pretty much had school down. Freshman year had been a serious trial as she adjusted to a new school, new system, and new people. But now, she knew the system. School was fun. She couldn't wait to get back and show off her new clothes. She had been working all summer and had saved enough to buy some very nice things at the best stores. She knew that the shoes had been expensive and her mom couldn't figure out why she had to have eight pairs, but it was her money and Tara knew that her mom wouldn't tell her how to use it. She wanted to, but she was very cool about it.

School went exactly as she had hoped. It was fun to see friends that she hadn't seen for three months and fun to hear about everyone's summer. Just as she had hoped, she looked great and everyone who was important commented that she looked great. The whole day was a trip. Classes were OK—pretty much the same old stuff — Math and English and Science and a couple of other classes that she couldn't remember. It was all pretty boring but she could hang with it because it was a way to be with her friends. That was how she felt about school—not much point to it except that it was a great social event. She hated it when some of her teachers got all worked up about learning stuff. What was the point? Once she got out of school, she would

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

work full time at the dress shop and live life large. She surely didn't need school.

She stopped by her grandma's after school to tell her about her day. Her grandmother had moved to Tara's hometown about ten years ago after her grandpa died. Tara had great respect for her. She seemed to have a pretty easy life—nice car, great house, nice clothes, and she traveled with her friends to Europe. Sometimes Tara wondered where she got her money but she assumed she had always been rich.

As she entered the house, Grandma was sitting in her chair reading "Teen Magazine." She looked up and smiled. "I like to keep up," she said and grinned sheepishly. "I just think some of those kids are so cute!"

"Why Grandma, what are you thinking? But you're right some of the guys are very cute."

"Rich too I imagine."

"Oh yes, most of those kids are very rich."

"Hm! Wonder how much they will have ten years from now. Do most of them last for very long in the big time?"

"No, not many."

"You are looking very nice, new clothes?"

"Yes, I spent my summer money on them. I have a completely new outfit for each of the first ten days of school. Then, of course, I can mix and match. I think I'm pretty good until Christmas. Then I will have extra money from work for new ones. I should be OK for the year."

"I see. It's good to see you are planning ahead. I made some cookies. Want some?"

"Yes please. Thanks."

The rest of the visit went the same as most. Tara told her about her friends' summer experiences, how they had all commented on how nice she looked, about her boring classes, and how much she was looking forward to tryouts for the school play. She was hoping for the lead, but would be happy to play any major role. This school year was going to be so much fun. She had to go because she had to be at work by 5. She promised to stop by tomorrow.

The next day, Grandma was sitting at her desk with a bunch of tables and charts scattered all around. She had that self-assured look that Tara had seen so often. She was doing something she enjoyed and normally that look meant that she was winning at something. She wondered what it was so she asked.

"Taxes, I'm doing my taxes. I used to have some fancy pants accountants do them, but it's so much fun, I just do them myself now."

"Taxes, you have to do taxes? Why?"

"Well, my dear, when you make money, the government tends to take some of it away so that you can go to school, and we can have roads, and police, and those types of things."

"Yeh, but Grandma, you don't have a job. You don't make any money.... do you? Aren't you retired or something?"

"Yes, I am retired or something. But I do odd jobs here and there, like a little babysitting, and some housecleaning, and a few other things."

"Why, you don't need the money. You're rich."

"Well, I am comfortable, but I like to keep busy and I like to think that I'm helping a few folks by taking care of their children once in a while and cleaning their homes. Why, I even cook dinner for a few families from time to time. No sense sitting around watching TV."

"But why should you have to pay taxes on that? It doesn't seem fair!"

"Why of course it's fair. If we want government to pay for those things they do, then someone has to pay for them and that's what our taxes do. Remember, Tara, the government is us!"

"All right, I guess I see your point, but Grandma, have you always worked? I thought you just stayed home and raised Mom and everybody else."

"Now listen young lady, don't you ever say just stay home and take care of the kids. Believe me, that is work! But, in answer to your somewhat poorly phrased question, I always had a paid job. I worked in the school cafeteria for thirty years."

"Cafeteria! I figured Grandpa had some high paying job and you were home and you have always had lots of money. You worked in a cafeteria? What did Grandpa do?"

"He was a school custodian until he went back to school and got his college degree. After that, he was actually a fancy pants accountant. But that was much later. We just didn't have much money most of the time. Scrimped and saved and made do."

"Well then how come you have so much money now. You and Grandpa never earned much?"

"No, we didn't, but we had one rule that I imposed. Your Grandpa liked to spend money. Oh, my, he would spend it. Especially when we were dating. He had that old Ford and he would pick me up and take me to fancy places 'til we started getting serious, then I put a stop to all of that."

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

"You used to date?"

"My goodness girl, what do you think? You think you young kids are the only ones that ever had any fun? I wasn't always old you know."

"Grandma!"

"So how are your savings plans coming Tara?"

"Saving, I just don't make enough to save anything. I just barely get by."

"No, I guess not. It's just that your grandpa and I ended up "rich" because we planned ahead. I've always looked at my money as a game. It's not just making the money that's important; it's what you do with it after you earn it. It's sort of like chess. You have to think a bunch of moves ahead. Earn it, spend some, save some, invest, plan, think, think, think. It is the thinking and planning that is as important as anything else including earning. Why, just look at some of these young kids in that Teen magazine, and those professional athletes, and other big time rich folk. Some of them are only rich as long as they're earning the money because they never save or invest any of it. They spend all that money on fancy clothes, and fancy cars, and big parties, and they think they have lots of friends and they do because they have lots of money. Soon as that money is gone though, they have no friends at all. I'll tell you honey, true friends don't hang around you because you have stuff. You find out who your friends are when the chips are down."

"OK, Grandma, how did you end up with so much money?"

"Well, sweetie, it's like I told you, your grandpa and I had a rule. I told him that we would always save 10% of our income before we spent a dime. Now, I gotta' tell you, he wasn't happy about that. He did like to spend money. But before I married him, I made him agree to it. So it didn't make any difference how much money we were making, and even with both of us bringing home some money we didn't make much, we put 10% away. Then we looked around at some ways that we might make the money work for us, and that's why I'm able to live like I do today. Mind you, I'm still pretty careful with my money."

"But if you weren't making much, you couldn't have been saving much."

"Well, this is probably about to begin to start to sound like one of your boring classes, but it is called the "power of compound interest." The key is to save early and often. There is a story that people often tell called the "Tale of Two Savers." Two people start saving money, and they both save the same amount of money each month. The difference is that the first saver (Isabel) begins at age 22 and stops at age 33. She never saves another dime but also never withdraws a dime. The second saver (Tom) starts saving at age 34 and saves until age 65. Who do you think ends up with more money at age 65?"

"Well, I know that it is the person who starts at age 20 and stops at age 30, only because that's the way you always set up these "easy" questions. But it doesn't make sense to me. How could one person save for so much longer and end up with less?"

"Remember, I told you about the power of compound interest. Take a look at the table on the following page."

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

### The Tale of Two Savers

					Amount Invested	\$2,000		
					Interest rate	10.0%		
ISABEL					TOM			
AGE	Amount Invested	Total Investment	Interest Earned	Total Saved	Amount Invested	Total Investment	Interest Earned	Total Saved
21	0		0	0				
22	\$2,000.00	\$2,000.00	\$200.00	\$2,200.00				
23	\$2,000.00	\$4,200.00	\$420.00	\$4,620.00				
24	\$2,000.00	\$6,620.00	\$662.00	\$7,282.00				
25	\$2,000.00	\$9,282.00	\$928.20	\$10,210.20				
26	\$2,000.00	\$12,210.20	\$1,221.02	\$13,431.22				
27	\$2,000.00	\$15,431.22	\$1,543.12	\$16,974.34				
28	\$2,000.00	\$18,974.34	\$1,897.43	\$20,871.78				
29	\$2,000.00	\$22,871.78	\$2,287.18	\$25,158.95				
30	\$2,000.00	\$27,158.95	\$2,715.90	\$29,874.85				
31	\$2,000.00	\$31,874.85	\$3,187.48	\$35,062.33				
32	\$2,000.00	\$37,062.33	\$3,706.23	\$40,768.57				
33	\$2,000.00	\$42,768.57	\$4,276.86	\$47,045.42				
34		\$47,045.42	\$4,704.54	\$51,749.97	\$2,000.00	\$2,000.00	\$200.00	\$2,200.00
35		\$51,749.97	\$5,175.00	\$56,924.96	\$2,000.00	\$4,200.00	\$420.00	\$4,620.00
36		\$56,924.96	\$5,692.50	\$62,617.46	\$2,000.00	\$6,620.00	\$662.00	\$7,282.00
37		\$62,617.46	\$6,261.75	\$68,879.21	\$2,000.00	\$9,282.00	\$928.20	\$10,210.20
38		\$68,879.21	\$6,887.92	\$75,767.13	\$2,000.00	\$12,210.20	\$1,221.02	\$13,431.22
39		\$75,767.13	\$7,576.71	\$83,343.84	\$2,000.00	\$15,431.22	\$1,543.12	\$16,974.34
40		\$83,343.84	\$8,334.38	\$91,678.22	\$2,000.00	\$18,974.34	\$1,897.43	\$20,871.78
41		\$91,678.22	\$9,167.82	\$100,846.05	\$2,000.00	\$22,871.78	\$2,287.18	\$25,158.95
42		\$100,846.05	\$10,084.60	\$110,930.65	\$2,000.00	\$27,158.95	\$2,715.90	\$29,874.85
43		\$110,930.65	\$11,093.06	\$122,023.71	\$2,000.00	\$31,874.85	\$3,187.48	\$35,062.33
44		\$122,023.71	\$12,202.37	\$134,226.09	\$2,000.00	\$37,062.33	\$3,706.23	\$40,768.57
45		\$134,226.09	\$13,422.61	\$147,648.69	\$2,000.00	\$42,768.57	\$4,276.86	\$47,045.42
46		\$147,648.69	\$14,764.87	\$162,413.56	\$2,000.00	\$49,045.42	\$4,904.54	\$53,949.97
47		\$162,413.56	\$16,241.36	\$178,654.92	\$2,000.00	\$55,949.97	\$5,595.00	\$61,544.96
48		\$178,654.92	\$17,865.49	\$196,520.41	\$2,000.00	\$63,544.96	\$6,354.50	\$69,899.46
49		\$196,520.41	\$19,652.04	\$216,172.45	\$2,000.00	\$71,899.46	\$7,189.95	\$79,089.41
50		\$216,172.45	\$21,617.25	\$237,789.70	\$2,000.00	\$81,089.41	\$8,108.94	\$89,198.35
51		\$237,789.70	\$23,778.97	\$261,568.67	\$2,000.00	\$91,198.35	\$9,119.83	\$100,318.18
52		\$261,568.67	\$26,156.87	\$287,725.54	\$2,000.00	\$102,318.18	\$10,231.82	\$112,550.00
53		\$287,725.54	\$28,772.55	\$316,498.09	\$2,000.00	\$114,550.00	\$11,455.00	\$126,005.00
54		\$316,498.09	\$31,649.81	\$348,147.90	\$2,000.00	\$128,005.00	\$12,800.50	\$140,805.50
55		\$348,147.90	\$34,814.79	\$382,962.69	\$2,000.00	\$142,805.50	\$14,280.55	\$157,086.05
56		\$382,962.69	\$38,296.27	\$421,258.96	\$2,000.00	\$159,086.05	\$15,908.60	\$174,994.65
57		\$421,258.96	\$42,125.90	\$463,384.85	\$2,000.00	\$176,994.65	\$17,699.47	\$194,694.12
58		\$463,384.85	\$46,338.49	\$509,723.34	\$2,000.00	\$196,694.12	\$19,669.41	\$216,363.53
59		\$509,723.34	\$50,972.33	\$560,695.67	\$2,000.00	\$218,363.53	\$21,836.35	\$240,199.88
60		\$560,695.67	\$56,069.57	\$616,765.24	\$2,000.00	\$242,199.88	\$24,219.99	\$266,419.87
61		\$616,765.24	\$61,676.52	\$678,441.76	\$2,000.00	\$268,419.87	\$26,841.99	\$295,261.86
62		\$678,441.76	\$67,844.18	\$746,285.94	\$2,000.00	\$297,261.86	\$29,726.19	\$326,988.05
63		\$746,285.94	\$74,628.59	\$820,914.53	\$2,000.00	\$328,988.05	\$32,898.80	\$361,886.85
64		\$820,914.53	\$82,091.45	\$903,005.99	\$2,000.00	\$363,886.85	\$36,388.68	\$400,275.53
65		\$903,005.99	\$90,300.60	<b>\$993,306.59</b>	\$2,000.00	\$402,275.53	\$40,227.55	<b>\$442,503.09</b>

Total Salary Deduction

**\$24,000.00**

**\$62,000.00**

Ending Balance

**\$993,306.59**

**\$442,503.09**

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

The amazing thing is that Isabel only takes \$24,000 out of her income, but then she lets that money go to work for her, and it works for a long time, so she ends up with close to a million dollars by age 65. That's pretty powerful stuff. But the key is that she begins saving early. Then she let's compound interest take over. Interest earns interest, which earns interest. So the sooner you start saving, the more money you will have at the end.

"I can see that, but Grandma, how did you manage to save when you had no money?"

"Never even felt it. If you pay yourself first, you don't even miss it. Once we agreed to do it, it was pretty easy. Oh, sure, there

were times when we wanted to pull it out, and there were times when we did take some out, like the time your mother needed that operation and our insurance didn't cover the whole thing. But there weren't many of those situations. Mostly, we just put it away and let it grow. If Isabel keeps saving up to age 65 she would have \$1.3 million.

"The Rule of 72 tells you how long it takes to double your money. If you were to save \$5000 and earn 6% interest, you would have over \$10,000 at the end of 12 years. You just take 72 and divide it by your interest rate and you will find the number of years that it takes to double your money. Take a look, this table tells it all."

RULE OF 72	
How many years to double money?	
Interest rate	Years to Double
2.00%	36.00
2.50%	28.80
3.00%	24.00
3.50%	20.57
4.00%	18.00
4.50%	16.00
5.00%	14.40
5.50%	13.09
6.00%	12.00
6.50%	11.08
7.00%	10.29
7.50%	9.60
8.00%	9.00
8.50%	8.47
9.00%	8.00
9.50%	7.58
10.00%	7.20
10.50%	6.86
11.00%	6.55
11.50%	6.26
12.00%	6.00

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

"There is an even more amazing way to look at this. Suppose I offered you two alternatives: 1) a penny today, which would double in value every day for the next 30 days or 2) \$300,000 at the end of 30 days. Which would you choose?"

"This is another one of your trick questions, Grandma. Only because it's you, I would take the penny. But it doesn't make any sense to me. How can a penny be worth more than \$300,000?"

"Well, I just happen to have a table here that shows you the answer to that question."

THE LITTLE PENNY THAT COULD	
1	\$0.01
2	\$0.02
3	\$0.04
4	\$0.08
5	\$0.16
6	\$0.32
7	\$0.64
8	\$1.28
9	\$2.56
10	\$5.12
11	\$10.24
12	\$20.48
13	\$40.96
14	\$81.92
15	\$163.84
16	\$327.68
17	\$655.36
18	\$1,310.72
19	\$2,621.44
20	\$5,242.88
21	\$10,485.76
22	\$20,971.52
23	\$41,943.04
24	\$83,886.08
25	\$167,772.16
26	\$335,544.32
27	\$671,088.64
28	\$1,342,177.28
29	\$2,684,354.56
30	\$5,368,709.12
31	\$10,737,418.24

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

"Take a look. A penny becomes 2 cents, which becomes 4 cents. Don't be looking away, I haven't got to the good part yet. By the 12th day we have over \$20. By the 20th day we're up to \$5,000.

"Oh, got your attention do I? Honey, this is not going to happen because this assumes one hundred percent interest per day but the point is that compound interest works for you. The sooner you save, and the more you save and the greater the rate of interest that you can earn, the richer you will be. That is how your Grandpa and I did it!"

"So you just save and become a millionaire. Sounds pretty easy."

"There are a couple of catches; it's not quite as easy as it seems. That interest rate of 10% looks great, but that may not tell the whole story. If inflation rears its ugly head (and we had it pretty bad in the 70's) then that interest rate isn't real. Inflation erodes some of what you save. Let's say that I put away \$100 and earn 10% interest. I will have \$110 at the end of one year. But if prices have gone up by 6%, my \$110 won't buy as much as it would have at the beginning of the year. Inflation has eroded the power of that \$110. So, as exciting as the table looks, inflation can make the job much harder. This table shows you what I mean. If you are earning 10% but the inflation rate is 6%, you are only increasing your purchasing power by 4%. You may have more dollars, but they are not as "powerful" as you might think since, with inflation, prices have gone up and a dollar can't buy what it did before the inflation. My dad used to talk about how cheap things were when he was growing up. He would always say, "Why in my day, a man didn't have to make a million dollars to live well." Of course what he neglected to tell us was that bread may have cost a nickel a loaf, but he was only earning a buck and a half a day. It's not what's in your paycheck that counts, it's what your paycheck will buy."

"Then, of course, there's Uncle Sam's take. Now you know I'm not one to complain, and I've told you I don't mind paying my fair share of taxes, but I have to tell you, it sort of bothers me. Your grandpa and I worked hard and paid our taxes on our income. Then we saved from what was left. Then Uncle Sam comes along and taxes the interest on our saving. Hardly seems right to me."

"So let me get this straight. You save all of your money. Then you have to worry about the government taking some of the interest you earn, and your interest isn't even real interest if there's inflation. Grandma, it seems to me that you ought to just forget about it and spend all your money. Between inflation and taxes, you end up with nothing anyway!"

"Well now hold on just a minute Miss Spend It All. I admit, it's not easy, but look at the results. Your Grandpa and I saved quite a bit and I'm pretty comfortable now. If I hadn't saved as much, why, I might be living at your house and you and your Mom and Dad would be supporting me. Or I might be living in some old folks home depending on strangers to take care of me. No, I don't think that's the way to go. And there are plenty of ways to make more money. You can avoid paying taxes for a while with 'tax free' savings plans, and "tax deferred" savings plans. There are plenty of ways to win the game, but you can't win if you don't play and you can't play if you don't know the rules."

"So what you're telling me is that I should start saving my money instead of spending it all."

"Honey, I'm not telling you anything about what you should do. All I'm saying is that it worked for your Grandpa and me.

When Tara got home, she explained her discussion to her parents. Her mom looked at her dad in a knowing way.

"So mom was doing her taxes?"

"Yes she was. Seemed to be enjoying it too."

"Now you know that this is September and taxes aren't due until April? And she had lots of charts and information on the table, right?"

"Right."

"And did those charts have anything to do with Mom's taxes?"

"Uh, no, I guess not."

"Sweetie, you've been set up!"

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

### Exercises:

**Cognitive objectives:** Students will use the rule of 72 to calculate how long it will take to double a sum, given a particular interest rate. Students will recognize the power of compound interest.

**Affective objective:** Students will value the opportunity to save early and often.

1. Go back through the story and identify different ways in which Sara's grandmother was "setting her up."
2. A rule that many people use is to "Pay yourself first." How does that relate to Tara's grandmother?
3. Using the rule of 72, how long would it take to double your money if the tax rate were 0 and the interest rate were:

INTEREST RATE	NUMBER OF YEARS
12	
10	
8	
6	

4. If the "after-tax" interest rate over the period of saving is 7%, how much will the savers' purchasing power have increased if the rate of inflation is:  
  
5%  
6%  
7%  
8%
5. Go to <http://www.calcbuilder.com/cgi-bin/calcs/SAV1.cgi/cunanational> to see what you would need to do to double your purchasing power under different assumptions.
6. What does it mean to have a negative real rate of interest?
7. Why is the penny not likely to turn into \$10 million dollars in 31 days?

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

### Exercises Answers:

1. Go back through the story and identify different ways in which Sara's grandmother was "setting her up."  
**(She probably was using "Teen Magazine" to get the topic going.  
It's good to see you are planning ahead.  
Taxes, I'm doing my taxes.  
She had all of the tables ready for Tara.  
So how are your savings plans coming Tara?)**
2. A rule that many people use it to "Pay yourself first." How does that relate to Tara's grandmother?  
**(She took her saving out of her paycheck before she even saw it. She "paid herself" before paying anyone else.)**
3. Using the rule of 72, how long would it take to double your money if the tax rate were 0 and the interest rate were:

INTEREST RATE	NUMBER OF YEARS
12	6
10	7.2
8	9
6	12

4. If the "after-tax" interest rate over the period of saving is 7%, how much will the savers' purchasing power have increased if the rate of inflation is:  

5%	2%
6%	1%
7%	0%
8%	-1%
5. Go to <http://www.calcbuilder.com/cgi-bin/calcs/SAV1.cgi?cunational> to see what you would need to do to double your purchasing power under different assumptions.
6. What does it mean to have a negative real rate of interest?  
**(The inflation rate is greater than the interest rate. The saver is losing purchasing power by saving.)**
7. Why is the penny not likely to turn into \$10 million dollars in 31 days?  
**(Doubling your money every day assumes a 100% daily rate of return.)**

# LESSON 8

## WHY SAVE? THE POWER OF COMPOUND INTEREST

### Self Test:

For each of the following, explain whether the effect of the variable will increase (I) or decrease (D) the value of your saving.

VARIABLE	EFFECT
You save more from your paycheck	
You begin saving early	
A higher interest rate	
A higher tax rate	
A higher inflation rate	

### Summary:

Saving is that part of income that is not consumed.

The Rule of 72: to determine how many years it will take for an invested sum to double, divide 72 by the interest rate.

### Culminating Activity:

Ask a banker to come into your class with the necessary forms to open a savings account. You might also want to ask a financial planner to come to class to explain, in more detail, different types of saving instruments such as stocks, bonds, mutual funds and the tradeoffs between safety and risk.

### Multiple Choice Questions:

1. Assume that you earn \$25,000 per year. What percentage of your income is likely to be subtracted for taxes, social security and other deductions, and how much "take home pay" will that leave you?
  - a. 1% deducted, \$24,750 take home pay
  - b. 10% deducted, \$22,500 take home pay
  - c. 30% deducted, \$17,500 take home pay
  - d. 50% deducted, \$12,500 take home pay
2. Which of the following will increase the value of your saving over time?
  - a. higher interest rates
  - b. higher interest tax rates
  - c. lower amount of saving
  - d. higher inflation rates
3. Which of the following will decrease the value of your saving over time?
  - a. higher amount of saving
  - b. higher inflation rates
  - c. lower interest tax rates
  - d. lower inflation rates



*Miguel is unhappy because he feels that he does all of the work in his house. He and his parents are immigrants from Mexico and his parents do not speak English. He does all of the translating for them and many of the mundane tasks. His father often gets upset with him when things go wrong. Miguel thinks that most of the time, things go wrong because his parents don't listen to him or make decisions based on incomplete or false claims.*

<b>STANDARDS:</b>	12.1, 12.2, 12.4, 12.6
<b>PRINCIPLE:</b>	1, 2, 3, 6, 7
<b>CONCEPTS:</b>	Scarcity Alternatives Decision-making Opportunity Cost Saving and interest Human Capital

The purpose of this lesson is to summarize everything that has come before and to give students an insight into the challenges of immigrants to the U.S.

**Cognitive Objectives:** Students will apply economic reasoning and information about the economy to the situation of a Mexican immigrant. Students will use the story of a Mexican immigrant to apply the lessons learned in earlier lessons.

**Affective Objective:** Students will recognize that economic reasoning applies to all aspects of their lives and those of others.

It sounded so easy when Miguel's father had explained that they were going to the United States. There was just no hope in Las Marias, his small village in Michoacan, Mexico. They weren't the poorest of the poor, but hot and cold running water was a dream they could never realize. The streets turned to ugly mud when it rained. They ate, but not well and not often. Hope resided in El Norte and so would they. Miguel's father would get a job, Miguel and his sister and brother would go to school, and his mom would stay at home and take care of the baby. When they had earned enough money they would return home, build a fine house and live like human beings. With the education that the boys would get, they could get good jobs, and the family would join the Mexican middle class. In Michoacan, it sounded so easy.

His neighbors were always crossing the border, mostly boys much older than Miguel, but sometimes families. The young

men would cross to earn a living, and usually send money home to their parents or wives. Sometimes, though, no one ever heard from them again. Sometimes the man from the farmacia would come to a neighbor's house and tell them that they would be getting a phone call in 30 minutes. That was never a good thing. The family would go down and wait for the call. If the man didn't tell them who was calling it was usually someone calling to say that their son had died from heat or cold or thirst crossing the desert, or in a car trying to avoid the migra. His village had lost too many to the dream of El Norte.

Nevertheless, his father was determined. They could make it if they found the right coyote, the person who would make all of the arrangements for the trip. Finding a coyote was not a problem, but finding the right one was. Actually, finding the right one was not even the problem, paying him was. The fee for Miguel,

# LESSON 9

## A SUMMARY

his brother and sister, and his mom and dad would be \$5,000. His uncle was in the states and had been sending money home and they had \$3,500. After some negotiations, his father got the coyote down to \$4,500. But it meant waiting another six months. And that meant crossing in the middle of the summer when the dangers of the desert were greatest.

The crossing had been difficult, stuffed into the trunk of a creaky old sedan without food or water for hours on end. But they had chosen the right coyote. Miguel had heard stories of people who just dumped their passengers off in the middle of the desert and returned to Michoacan, leaving the people to make it on their own. They seldom did. Once they made it to Tijuana, three weeks after leaving Las Marias, they took a great detour to reach the crossing areas of greatest safety. They tried three times before they succeeded.

Life in the states was terrifying from the beginning and had remained that way. Their uncle had arranged to meet them in San Diego, but didn't show up for two days. In the meantime, they had no place to sleep and nothing to eat except the trash from restaurants in the area. If they were caught, it was back to Mexico. When his uncle did arrive, the news was not great. He had lost his job and would be going back to the village. He had had enough of the United States. He was tired of running and being afraid. He knew a man in Salinas who could get them all jobs in the fields, but they would have to get there on their own. And Salinas was over 400 miles away.

Ten years and an amnesty later, they were legal residents of the United States. Those ten years had been horrible. They were poor in Las Marias, but nothing like they were poor here. The problem was that they saw so much that they could not have here. People had televisions, cars, fancy clothes, fancy food, fancy, fancy, fancy. He knew he didn't have to have fancy, but more than jeans and T-shirts to wear to school would be nice once in a while. And an outfit for his mother to wear to church on Sunday would be very good. Even in Las Marias, she had a Sunday outfit. Beans and tortillas were fine, but everyday for every meal? It didn't help that he was laughed at by his friends for his beans and tortillas, even though many of them often ate the same things.... just not every day.

But sometimes it was more serious. Medicine for Pablo when he had mononucleosis. The trip home that his father could not take when his brother died. The field trips that his class took that he could not attend. Some of his friends actually had computers. How much easier his schoolwork would be if he had a computer! Gas and insurance for the car was expensive but they couldn't keep their jobs if they couldn't get to them and that meant a car. Before the amnesty, they couldn't get a driver's license or insurance so they lived in constant fear of tickets or accidents, which would have meant instant deportation. The list went on and on.

They had no extras. When he outgrew his clothes, even though they were pretty worn, his mom would patch them as best she could and pass them on to Pablo, who was smaller than he was, even though they were twins. They actually did have a television, but it was an old one that someone had given them when they moved out of Salinas. It worked pretty well if you hit it when it started to get fuzzy, but cable was not a possibility for them. For Rosalba's first Communion, they borrowed a dress from a neighbor. Miguel and Pablo walked to school or rode their bikes. The bikes were bad because they were in high school and kids in high school were not supposed to ride bikes! Walking was better, but when Miguel got home from helping his dad clean the offices, he was sometimes late and so he and Pablo rode the bikes. Their car insurance only protected them from getting sued if they damaged someone else's car or hurt someone. If their car was smashed, they would not be able to get it fixed. The list went on and on. They lived on the edge and they never spent money for "extras." Miguel wondered what it would be like to go into Baskin Robbins and order the biggest sundae they had...or even the smallest.

His mom and dad learned only a bit of English so he was their guide and when things went wrong, he got the blame. When he was only 13, he was the one who had to explain the contract that his parents signed to lease a car. Of course the dealer didn't explain that they would have to pay more if they drove beyond a certain number of miles so Miguel didn't explain that to his parents. His dad was furious. He ranted and raved, and called Miguel estúpido and plenty of other names. Miguel wanted to say that his dad was estúpido because he hadn't learned English, but he thought that might not be such a good idea.

The goal was to return to Mexico but every year they stayed, that goal seemed farther and farther away. His father wanted his children to have an education and he realized that they could not return until Rosalba, now eight years old, graduated high school. His father spoke of Las Marias as if it were heaven. He listened to Spanish radio, watched Spanish TV, spoke in Spanish, yelled at Miguel and Pablo and Rosalba in Spanish, drank in Spanish, and dreamed in Spanish. Pictures of the village and friends and relatives hung from the walls of their tiny apartment. Miguel wondered why he came north if everything in Michoacan was so wonderful. But he didn't ask that question!

One of his father's greatest complaints was how expensive everything was in the States. They were living in Salinas and their one bedroom apartment was costing them \$1,000 a month. They had heard how much money people made in the states compared to the money they could earn in Mexico, but they hadn't heard how much it cost to live in the states. They were doing all right. His father had a job as a custodian for a real estate office. Miguel helped clean the place in the morning and went to his job

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## A SUMMARY

as a dishwasher after school. Pablo took whatever work he could find. They all (including Miguel's mother) picked lettuce when the crop was in and they weren't working at other jobs. So they were making progress. His mother and father had two rules – 10 percent of everything they made went back to the village, and 10 percent went in the coffee can in the kitchen. The coffee can was his father's obsession.

"When this coffee can is full of \$1,000 bills, we can go home," he would say. It drove Miguel nuts. The coffee can had money in it, but they were never going to fill it with \$1,000 bills, especially if they left it in the stinking can. Miguel tried to explain to his father about the interest they could earn if they put the money into some kind of account, but his father would not discuss it.

"These people up here, they steal from you. I don't trust any of them. Why would I give them our money and let them take it away from us? You remember the "We will make you all citizens," hombre? No banks! We earn our money, we keep our money, we use our money. You go learn from your books so we can leave this place and let me make the money decisions!"

So the money sat in the coffee can, making his dad feel good and him feel bad. He wasn't at all sure that he wanted to go to Mexico anyway. He was thinking of a different plan, where he and Pablo would stay in the states, go to college here, and his mother and father and Rosalba could return home. He hadn't mentioned it to his father yet, but Pablo thought it was a great idea.

Sending money home was also difficult. Both his parents sent money home to their parents. Even earning the little money that they made in the states, they could send money home that made a tremendous difference to their relatives. The problem was getting it there. When they began, the best Miguel could do was to send it through Western Union, which charges 10%. Then, his abuelo and abuela have to pay to receive it. Later on, he discovered cheaper ways to do it and his dad was mad that "they had wasted all of their money for so long." He found that the cheapest way to do it was through the Internet, but he didn't have access to the Internet except for school projects and he knew that his relatives wouldn't have access either. It seemed like the land of opportunity was the land of opportunity for people with computers! Of course, a computer wouldn't do them much good since it is hard to send money from a coffee can through a computer.

The other problem was that it seemed like people up here were just out to cheat people. Every time he turned around, there were people who promised things they weren't going to do. He had to argue with his dad for days about the lawyer who said he could get citizenship for the entire family for only \$8,000. He

knew it couldn't be true but his dad wouldn't listen. The deal was that they would have to pay \$1,000 for eight months until the entire fee was paid. His dad made him pay the guy who disappeared after three payments. His father was so upset and so ashamed that Miguel didn't say anything. He wanted to, but he just had to hold his tongue.

Last year, his mother got sick. At first it was just a cough, then she started feeling poorly, and things went from bad to worse. They went to a bruja, who explained that this was a bad sickness, not one of the good ones that brujas could fix. His mom resisted going to a medico because she knew it would be expensive and she didn't really trust doctors. She was sure, with the language problems that she wouldn't be able to explain how she was feeling and she would just feel worse. Besides, it was just a cough and a little over work. She would be fine.

Well, she wasn't fine and she just kept getting less fine. She reached the point where she couldn't get out of bed. They all took turns taking care of her, but nothing worked. When they finally did take her to a doctor, she explained that she would need to take some tests. The results were as he had expected. Miguel's mother had breast cancer and it was very advanced. The doctor didn't hold out much hope. And she was right. Three months later, the family was burying his mother. It had all happened so quickly, that Miguel didn't know how to feel. She had been the stable one, she had been the one who refereed the fights between his dad and him, she had been the one who made meals from nothing, clothes from nothing, jokes from nothing, songs from nothing. And now, she was nothing. How would they survive?

School had been a problem for Miguel. At first it was the language. He went in cold. After a while he began to pick up a few words, and his friends who had been here a while would help, but then his family would move and he would have to start all over again. When he was younger, it was a huge problem. He didn't learn to read until he was in fifth grade. Once he felt comfortable with that, everything sort of fell into place. But many of his teachers who were gringos just sort of assumed that he was stupid because of his accent. He decided he was going to lose the accent, and he did. Now, he spoke English like a native, phrases like dude, "no way", and "I am so not into that," rolled off his tongue like butter. For some reason though, some of his teachers still thought he was not too bright. His friend thought it had something to do with his dark skin. Many of the Purepechans from Las Marias exhibited typical mestizo characteristics, which made them look very foreign to many Americans. Even though he earned A's, some people just couldn't get beyond the fact that he was Mexican. His counselors tried to steer him away from the college prep classes because "those aren't really what you want." He had learned the value of an edu-

# LESSON 9

## A SUMMARY

cation as he tried to act like an adult in a foreign country. Those classes really were what he wanted!

It was one of the few times that he saw his dad take charge. The next morning, he put Miguel in the car and took him to the school. As far as Miguel knew, it was the first time his father had been to a school in the U.S. Miguel was a little embarrassed as his father marched through the school yard in his shabby clothes, big sombrero, and sandals. His image was exactly the one Miguel was trying to escape. Miguel thought he looked like a dumb Mexican. It was hard enough trying to fit in without having his father remind everyone of their background.

They walked into the principal's office without waiting for permission and sat down with Miguel in front of the principal's desk. The assistant explained that the principal was at a meeting and that she didn't know when he would be back. His father had Miguel explain that it was all right; they were in no hurry; they would just wait. The assistant looked pretty unhappy with that but didn't know how to handle it so she just left them there.

When the principal finally arrived, he was looking a little unhappy also. He explained that he had another meeting in a few minutes and couldn't stay long. He began to shuffle papers, read notes, and listen to his messages as his father politely waited. When it appeared that he finally was ready for his father, the conversation began. It was a less than cordial discussion with Miguel acting as

the unhappy translator. The question was why Miguel was not being put in college prep classes. The principal maintained that Miguel simply was not college material. Miguel's dad asked to see his grades. The principal asked his assistant to bring in Miguel's records. As they waited, the principal continued shuffling papers and Miguel's father waited in silence. When Miguel's records did come in, the principal glanced at them quickly and then began to look more carefully. He appeared to be surprised and his very pale face began to turn red.

"Why they are all As and Bs," he said, with a look of confusion.

"So why, I wonder, do your counselors think that my son is not good enough to go to your colleges?" his dad asked.

"Well, I don't know. It is obvious that Miguel is doing fine work."

"Well, maybe I know. Maybe it's that no Mexican kid, especially a very dark Mexican kid, could be smart enough. Do you think that might be it?"

It wasn't a real question because his dad was just making a point, and everyone knew that. It was agreed that Miguel would be enrolled immediately in college prep courses and that he would take AP math because he had received all A's in his math classes so far. As they walked out of the principal's office, his father put his arm around Miguel's shoulders. They had won this battle as a team. Maybe things would work out after all.

# LESSON 9

## A SUMMARY

### Exercises:

1. Use benefit/cost analysis to explain Miguel's family's decision to come to the United States.
  - a. What resources were they allocating?
  - b. What did they see as their alternatives?
  - c. What were the advantages and disadvantages of their alternatives?
  - d. Towards what alternative did they allocate their resources?
  - e. What was their opportunity cost? "His father spoke of Michoacan as if it were heaven. He listened to Spanish radio, watched Spanish TV, spoke in Spanish, yelled at Miguel and Pablito and Rosalba in Spanish, drank in Spanish, and dreamed in Spanish. Pictures of the village and friends and relatives hung from the walls of their tiny apartment."
2. In what ways did Miguel's family experience scarcity?
3. What marginal decisions did they make?
4. Using the concept of relative scarcity and the function of prices, explain to Miguel's dad why things are "so expensive" in Salinas.
5. By going to school and taking college prep classes, Miguel was attempting to develop his \_\_\_\_\_.
6. Using information from Lesson 8, write a letter to Miguel's father explaining why he might want to put his money into an interest-earning account. Be sure to take into account his concerns about the trustworthiness of Americans.

### Exercise Answers:

1.
  - a. Money and human capital.
  - b. Stay in Michoacan or come to the United States.
  - c. Answers will vary, but the entire story is a saga of the advantages and disadvantages of living in the States. The advantage of staying in Mexico is safety, being with family and friends, knowing the language and the system. The major disadvantage is living in poverty.
  - d. They came to the U.S.
2. Clothes, different foods, medicine, field trips, computer.
3. When he outgrew his clothes, even though they were pretty worn, his mom would patch them as best she could and pass them on to Pablo. They actually did have a television, but it was an old one that someone had given them when they moved out of Salinas. It worked pretty well if you hit it when it started to get fuzzy, but cable was not a possibility for them. For Rosalba's first Communion, they borrowed a dress from a neighbor. Miguel and Pablito walked to school or rode their bikes. The bikes were bad because they were in high school and kids in high school were not supposed to ride bikes! Walking was better, but when Miguel got home from helping his dad clean the offices, he was sometimes late and so he and Pablito rode the bikes. Their car insurance only protected them from getting sued if they damaged someone else's car or hurt someone. If their car was smashed, they would not be able to get it fixed. The list went on and on. They lived on the edge and they never spent money for "extras." Miguel wondered what it would be like to go into Baskin Robbins and order the biggest sundae they had....or the smallest).
4. Prices reflect the relative scarcity of different products. Relative scarcity is determined by supply and demand.
5. Human capital.

# LESSON 9

## A SUMMARY

### Summary:

Alternatives  
Decision-making  
Opportunity Cost  
Saving and Interest  
Human Capital

Miguel and his family experienced scarcity.

They were always looking for less expensive alternatives.

Miguel was frustrated with his Papa because he made decisions based on incomplete or false information.

When Miguel's dad put 10% of their income in the coffee can and sent 10% home, Miguel's family paid an opportunity cost.

Miguel was upset that his dad put the money in the coffee can, giving up the interest that they could have been earning in a bank.

Miguel wanted to go to college to improve his human capital.

### Culminating Activity:

Have your students write an essay explaining how Manuel's situation exemplifies the economic concepts that they have learned throughout the *Credit Wise Teen*. In their essay, have them explain the factors that Manuel shares with all teenagers and the factors that are unique to his situation as a Mexican immigrant. Use the essays as the basis for discussion in class.

### Multiple Choice Questions:

- Scarcity means that:
  - people are out to cheat you.
  - you can't have everything you want.
  - you shouldn't put your money in banks.
  - your school is hard.
- Which of the following are alternatives.
  - wearing your brother's old clothes instead of buying new ones
  - going to a trade school instead of college
  - sending money home instead of spending it
  - all are alternatives
- The opportunity cost of saving money and sending money home is:
  - 10%
  - 20%
  - what the family would have done with the money
  - the money cost of sending the money home
- Which of the following will increase the value of saving?
  - lower interest rates
  - higher taxes
  - greater amount saved
  - shorter time period for saving
- Which of the following is a way to improve your human capital?
  - apprenticeship
  - college
  - trade school
  - all of the above



## LESSON 10

### PAYING FOR COLLEGE



*Miguel has been thinking about college since the beginning of his junior year and has been planning ways to afford a private school in Northern California. The problem is that his family is dependent upon his income and he knows that there is no way that he would be able to afford the \$40,000 to attend a private university. His father wants him to attend the local community college. As usual, they clash.*

**STANDARDS:** 12.2 Students analyze the elements of America's market economy in a global setting

**PRINCIPLE:** 4. People respond to incentives in a predictable manner.

**CONCEPTS:** Demand  
Price elasticity of demand  
Price discrimination

The purpose of this lesson is to help students see that financial difficulties do not have to be a hindrance to college attendance.

**Cognitive Objectives:** Students will explain different types of loans and grants available for students attending college.

Students will use the concept of price elasticity of demand to explain pricing decisions.

**Affective Objective:** Students will look for financial aid for college and other post-secondary training.

So Miguel and Pablo were on their way to college....maybe. The question was how they were going to afford it. Where would they go and how would they pay for wherever they went? And how would their father and sister survive if they both left and couldn't send money home?

Miguel's grades were good...very good, but good enough? Good enough to get into a UC or a private college? Pablo's grades were good also, but not like Miguel's. Pablo had spent more time playing baseball and chasing girls. Miguel had pretty much stuck to the books, and work, and helping at home.

Were his grades good enough to get a scholarship? Even if he could get a completely free ride, how would his dad and Pablo and Rosalba get by without his income? Could he work while he was in college? His dream would be to go away to school but he knew that wouldn't work. How could he ever afford to live somewhere else? No, he would be stuck at home listening to his dad's constant complaining and Pablo's stupid Tejano music.

He did know one thing though, if he finished college, he was not going back to El Paraiso, sometimes called Las Marias.

As with everything else, his father had an opinion on the subject and it was different from Miguel's.

"You go to a community college right here with your brother. There is no reason to go far. Why do you want to go so far? You think maybe you're too good for this family. You with your big shot attitude. You and Pablo go to school here and live at home. How are you gonna' afford anything else?"

His twin brother Pablo seemed to be on him to stay at home too. "Come on Miguel, let's be straight with each other. We can't afford to have you go away. We hardly get by now. With you gone and not working, Dad and I would have a very tough time supporting the three of us. Rosalba is getting older and she doesn't understand why she can't have everything, like her friends. You know I want you to be whatever you can be, but we have to remember who and what we are."

# LESSON 10

## PAYING FOR COLLEGE

That really got to Miguel. Who and what were they? That was exactly why he wanted to go away, to become more than everyone thought he was. But he didn't want a fight with Pablo so he just let it drop.

To be honest, he didn't know where he wanted to go, but he did know he wanted to go as far away as possible. In fact, there was a private school in Northern California that he had been thinking about, but he knew that it was out of the question. The tuition was over \$25,000 per year. He probably wasn't going to be able to pay for that on his office cleaning money.

"Don't be so sure," his counselor Mrs. Anderson said. "Miguel, honey, with your situation and your background, and your grades, you are a natural for a scholarship. The tuition that colleges advertise is seldom the tuition that students pay. You just have to let them know about you and what your finances are, and you will often find that you pay very little or nothing."

The subject came up in Miguel's economics class. Mr. Gomez, his teacher, was delighted to explain in great detail, as he usually did...in great detail.

"The point is that businesses charge different prices to different groups. Movie theaters charge different prices to young kids, senior citizens, and students, and higher prices to people who attend at night. Grocery stores charge different prices with their coupons. Airlines charge different prices to people who make their reservations early. Hotels charge lower rates for weekends. All of these are forms of *"price discrimination."* No, it's not illegal and it has nothing to do with race. It has to do with price elasticity of demand."

The entire class leaned back and waited. They knew a "note taking, get ready for this one on the test" moment was upon them and they had no idea what any of this had to do with college tuition.

"You see, some of you, for different reasons, feel more strongly about certain price changes than do others. If the price of CD's doubled, some of you would be very upset and would buy a lot fewer CD's. But others don't buy many CD's anyway, so you wouldn't care much. Airlines and hotels are trying to separate business travelers from others since business travelers usually don't pay those expenses, their companies do. Since business opportunities may arise and the business person must "hop on a plane and fly to Chicago" at a moment's notice, they are not likely to pay much attention to the price of the ticket. If the value of the "deal" is pretty high, the price of the airline ticket is insignificant. So they pay a higher price.

If you and your family plan to fly to Minnesota to visit Aunt Tilly, you plan pretty far ahead because those tickets are a significant

part of your budget. You will shop around for a good deal. So you pay a lower price.

The strength of your response to a price change is greater than the strength of the business traveler's response to a price change. Your price elasticity of demand is the strength of your response to a price change.

The hotel management knows that most business travelers stay during the week, so they charge a higher price for week day stays than weekend stays, trying to attract pleasure travelers who have a higher price elasticity of demand for hotel rooms.

So how do the airlines separate you who care a lot about the price from the business traveler who doesn't care so much about the price? They lower the fares on tickets that have been purchased well in advance (the pleasure traveler) and charge higher prices to people who make their reservations at the last minute (the business traveler).

What they would like to do is charge a different price to every traveler, based on their price elasticity of demand. But that would require much more information than they can obtain.

Colleges, however, do exactly that. When you apply for a scholarship from the college or university, they ask you and/or your parents to complete a detailed financial status form. That gives them plenty of information to estimate the price that you are likely to tolerate. If, for example, a year's tuition at a private university is \$30,000, they will look at your financial status and make an estimate of the price you can/will pay. If they want you, they are likely to give you a scholarship of, say \$10,000, which means the actual price of your one year of college will be \$20,000. To someone in a better financial situation, they may charge full price and to someone in a tougher financial situation, they will give a larger scholarship (charge a lower price). It is the same as the airline which charges different prices to people with different price elasticities of demand.

Joey raised his hand and blurted out, "Well, that's all fine, Mr. Gomez, but how do we get one of those scholarships?"

Mr. Gomez grinned and said, "Great question Mr. Schmidt. That's what Mrs. Anderson is here for. Talk to her."

Miguel did just that. He explained what he would like to do but knew he wouldn't be able to go to some fancy school far away.

"Now hold on Sweetie, you never know what you can do until you try to do it. I'm going to give you a website that you need to check out. After looking it over, let's talk."

She wrote the website for the College Board.

[http://apps.collegeboard.com/cbsearch\\_ss/welcome.jsp](http://apps.collegeboard.com/cbsearch_ss/welcome.jsp)

# LESSON 10

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Miguel went to the school library and used one of the computers. He found lots of information, took lots of notes, and went back to Mrs. Anderson.

“Well, Miguel, what did you find out?”

“Well, I pretty much found out that I can’t go to the school I think I want to go to. They have an estimated Cost of Attendance of about \$40,000 per year. If I go to the community college, my cost will be less than \$4,000. Obviously, a CSU or a UC is more, but still much less than private schools. So, I guess it’s the community college for me.”

“Well, hold on just a minute here darlin’. Let’s not be too hasty. First of all, let’s admit that the community college system is pretty darn good and that it is a great way to begin a college education. But let’s take a look at some of the ways that you might come up with that \$40,000. The first thing you want to do is look at their scholarships. What did you find out about their scholarships?”

“Well, there’s lots of money for scholarships, but those aren’t for poor Mexican kids.”

“Oh, a little of the self-pity routine here, huh? No, no, no, no, no. You are precisely the kind of kid they want to support. Miguel, you win on two counts. First, your grades are excellent so you qualify for competitive scholarships. Second, you are poor. Sorry kid but facts are facts. In this case, it helps because it means that you qualify for “needs based” scholarships. My guess is that between Cal Grant Awards, University scholarships, some student loans, and a work study program, you could just about put this thing together.

Your first step is to complete a Free Application for Federal Student Aid (FAFSA). This is the beginning of the process. There are grants from the Federal government called Pell Grants and Supplemental Education Opportunity Grants, both of which are needs based. California has Cal Grants. A Cal Grant A is for any California students with at least a 3.0 GPA. You are way above that. Then Cal Grant B is needs based. In addition, of course, there are lots of private grants.

So I’m guessing you could put together a pretty package of scholarships and grants, even for poor Mexican kids!

Miguel was feeling a little overwhelmed. So now he had to get to work if he really wanted to go North. He also had to ask himself why he wanted to go to all this trouble. He could go to a UC, a CSU, or a community college and avoid most of the hassle. But there was a lot about his “dream” university that just attracted him. So he decided to go for it.

He investigated the loan programs. He found out that there are three characteristics of student loans.

- They have low interest rates.
- Some have delayed repayment so that the borrower makes no payment while in school.
- Some have in-school interest subsidies so that the borrower accrues no interest while in school.

Perkins loans are federal funds that have been sent to the University and are awarded to the student as a credit against charges. Subsidized Stafford loans are loans from private lenders. The lender sends the money to the college or university where the funds are credited to the student’s account. Finally, a subsidized direct loan is similar to a Stafford loan except that the lender is the Federal government.

All three of these types of loans are needs-based, but there are also loan programs for students who don’t qualify on the basis of need.

Then there is the “Work Study Program,” where needy students can work in an office on the college or university campus. The money is credited to their account.

Ms. Anderson was emphatic about one thing.

“Miguel, you have what it takes to get into just about any college you want and there is plenty of aid available to you. You are smart talking to me about this at the beginning of your junior year. You have plenty of time and you know the steps you have to take. Now it is just a matter of doing it.

And listen honey, don’t just apply to that college you’re thinking about. I want you to apply to a couple of UC’s and a couple of CSU’s. You want to cover your bases.”

Well, that was quite a while ago. Now, it was May of his senior year. He had done it. He was accepted to his “dream college.” And, between grants and loans and work study, he figured he was \$5000 away from getting there. But he was \$5000 away from getting there. He had been accepted at the local CSU and a UC that was within driving distance and he had figured out how he could get rides to both the CSU and the UC. His father drove home the point that he was very fortunate to have the opportunity to go to these schools and he should forget about the school for rich white kids. Pablo sat at the kitchen table and grinned that stupid grin that he grinned when Miguel was getting it from his Dad. Miguel knew what he was thinking, the jerk!

After dinner, Pablo and Miguel went up to their room. Pablo closed the door.

“Miguel, I know how you can go to that fancy school. I figured it out. We both graduate this June. You and I can both work full time this summer and still do the office cleaning job and that will get you close.”

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"No, I already figured what I can make during the summer into the thing. Even with that, I'm still \$5,000 short."

"You're not listening to me *Estupido*. As usual. I said WE can both work full time this summer. If I work full time during the summer and next year when I'm going to the community college, WE will have enough. I can help you. You will have the \$5000."

Miguel was stunned. He felt like he'd been kicked in the stomach by a 400 pound gorilla.

"Pops would never let you do that. How will the three of you survive? And what about your college?"

"I will take care of Pops. He won't like it but he knows that you have dreams and, believe it or not, he's actually is on your side. It's just hard for him to admit it.

It will be tight around here, but what's new? You know what; I don't want to go to one of those fancy schools. It would scare the heck out of me. So *vamanos*...you up North and me to the community college and I will still be twice the man you will ever be and make three times the money and have four times the women.

Miguel just grinned.

"Pablo, you are probably right."

### Exercises:

1. The text explains how airlines and hotels use information about price elasticity of demand to distinguish those who are willing to pay higher prices from those who are not. How do grocery coupons distinguish high price customers from lower price customers?
2. How do movie theaters make the distinction between those with higher and lower price elasticities of demand?

### Exercise Answers:

1. Many people with high paying jobs spend a great deal of time at work and little at home. They feel like they "don't have the time" to clip coupons and they pay little attention to price differences between various grocery products. (Their price elasticity of demand for different groceries is low.) Retired people on fixed income and other low income people may feel like they can spend more of their time clipping coupons. Small price differences are likely to be very important to them. (Their price elasticity of demand is high.)
2. The situation is similar for movie goers. Retired people and people who aren't working can go to the movies during the day. They are also likely to be more responsive to price changes. (Their price elasticity of demand is higher than others.) So the movie theater operators change a lower price for people who attend at those times.

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### Culminating Activity:

Have all of the students complete a FAFSA form. Have those who are planning on attending college research the grants and loans available to them. Have those who are not going to college research grants and loans available to students who are pursuing post secondary training.

### Summary:

Price Elasticity of Demand – the strength of the buyers' response to price changes. If price elasticity of demand is high, a price increase will send many buyers away and a decrease in price will bring in many new buyers. If it is low, the price changes will cause changes in the number of buyers, but not by much.

FAFSA – Free Application for Federal Student Aid, the first step in the college financial aid process

Pell Grants and Supplemental Education Opportunity Grants - Federal Government Grants, needs based

Cal Grant A – For California students with at least a 3.0 GPA

Cal Grant B – For California students, needs based

Three characteristics of student loans – low interest, some have delayed repayment, and some have in-school interest subsidies (borrower pays no interest while in school).

### Multiple Choice Questions:

Price Discrimination

- Which of the following statements is true if price elasticity of demand for a particular product is low?
  - A price decrease will not cause an increase in the quantity demanded.
  - A price decrease will not cause much of an increase in the quantity demanded.
  - A price change will cause no change in the quantity demanded.
  - A price increase will cause an increase in the quantity demanded.
- Which of the following grants is NOT needs based?
  - Pell Grant
  - Supplemental Education Opportunity Grant
  - Cal Grant A
  - Cal Grant B
- Which of the following is NOT a characteristic of student loans?
  - High interest
  - Delayed repayment
  - In – school subsidies
  - Available to students of all races

