

PFL Academy

Teacher Guide: Chapter 14.2 — Scarcity, Opportunity Cost, and Incentives

OVERVIEW

TIME	MATERIALS	PREREQUISITES
45-50 Minutes	Student Activity Packet, Opportunity Cost Calculator	L-48: Economic Systems

LESSON FLOW

5 min THE CHALLENGE

- Read Sarah's college decision story aloud or have students read silently.
- Discussion: "What's the difference between the 'sticker price' of college and the REAL cost?"
- Preview how opportunity cost thinking transforms decisions.

10 min CORE CONCEPTS

- Review the 5 key terms. Emphasize that implicit costs often exceed explicit costs.
- Explain scarcity using relatable examples: Why can't you have EVERYTHING you want?
- Quick check: Ask "What's the opportunity cost of sitting in this class right now?" (Other classes, sleep, work, leisure)

25-30 min APPLY IT

- **Part A (10 min):** College Cost Calculation. Guide students through explicit + implicit costs. The \$200,000 total often surprises them.
- **Part B (10 min):** Time Opportunity Cost. Marcus's example shows that "saving money" can actually cost money when time is valuable.
- **Part C (5-8 min):** Incentive Analysis. Students identify incentives and predict behavioral responses.

10 min CHECK YOUR UNDERSTANDING

- Complete in class or assign as homework.
- Review Q3 (explicit vs. implicit) and Q5 (personal application) for deeper understanding.
- Preview Day 2 Learning Lab: Applying opportunity cost analysis to major life decisions.

DIFFERENTIATION

Support

- Provide a completed example of opportunity cost calculation.
- Use simple examples: "What's the opportunity cost of buying coffee vs. making it?"
- Create a graphic showing explicit vs. implicit costs visually.
- Allow calculator use for all problems.

Extension

- Calculate present value of foregone investment returns on college costs.
- Analyze the opportunity cost of different majors (engineering vs. arts).
- Research how companies use incentives in their pricing strategies.

ANSWER KEY

Part A: College Opportunity Cost Calculation

UNIVERSITY PATH:

Explicit: Tuition \$80,000 + Living \$48,000 = \$128,000

Implicit: Foregone wages \$120,000 - Part-time \$48,000 = \$72,000

TOTAL OPPORTUNITY COST: \$128,000 + \$72,000 = \$200,000

WORK IMMEDIATELY PATH:

Explicit: Living expenses \$48,000

No foregone wages (this IS the comparison baseline)

TOTAL: \$48,000

1. Total opportunity cost of college vs. working: **\$200,000** (explicit \$128,000 + net foregone wages \$72,000)

Part B: Time Opportunity Cost

Cost to hire all services: \$40 + \$10 + \$10 + \$10 = \$70/week

Marcus's time value: 6 hours × \$36/hour = \$216/week

Net loss: \$216 - \$70 = \$146/week lost by doing tasks himself

2. Marcus is **LOSING \$146 weekly** by doing tasks himself. His time is worth more than the service costs.

3. If consulting at \$75/hour: $6 \times \$75 = \450 earned, minus \$70 services = **\$380/week net gain** (vs. \$0 currently)

Part C: Incentive Analysis

4. **Incentive:** Free money (100% return on contribution). **Response:** Contribute at least 6% to capture full match. Opportunity cost of NOT participating = leaving free money on the table.

5. **Incentive:** 2% rebate encourages card use. **Unintended consequence:** May encourage overspending; if carrying balance at 20% interest, the 2% reward is destroyed many times over.

Check Your Understanding

1. B (Unlimited wants exceed limited resources, forcing trade-offs)

2. B (Next-best alternative forgone when making a choice)

3. **Explicit:** Direct payments—tuition, books, fees (easily measured in dollars). **Implicit:** Foregone alternatives—wages from working instead, experience gained, time spent (harder to measure but often larger). College example: Explicit = \$80k tuition; Implicit = \$120k foregone wages.

4. Sunk costs can't be recovered, so they're irrelevant to future decisions. What matters is comparing future benefits to future costs. Letting sunk costs influence decisions leads to irrational choices (like staying in bad investment "to recover losses").

5. *Responses will vary. Look for: identification of both explicit costs (dollar amounts) AND implicit costs (time, foregone alternatives, opportunity costs of money), and reflection on whether total opportunity cost changes the decision.*

COMMON MISCONCEPTIONS

Misconception	Clarification
"Opportunity cost is just the price of something."	Price is only the explicit cost. Opportunity cost includes implicit costs like time, foregone alternatives, and what else you could do with the money. Often implicit costs exceed explicit costs.

"Doing something myself always saves money."	Only if your time has no value. If you earn \$50/hour and spend 3 hours to save \$30, you've lost \$120 in opportunity cost. "Saving money" actually cost you \$90.
"I should consider what I already spent when making decisions."	Sunk costs are irrelevant to future decisions because they can't be recovered. Only compare future benefits to future costs. Past spending shouldn't trap you in bad choices.