

Unit 3: Theory of Consumer Choice & Production and Cost
AP Microeconomics
6 Class Meetings

Rev. June 2019

Essential Questions

- How do consumers make decisions on the margin?
- How does time impact a firm's efficiency?

Enduring Understanding with Unit Goals

EU 1: Utility of a good diminishes over time.

- Consumers make decisions based on the marginal utility they receive from consuming each additional unit of a product.
- Explain the law of diminishing marginal utility.

EU 2: There are several differences between the long and short run cost and profit.

- Calculate fixed and variable costs.
- Explain economies of scale, constant returns to scale, and diseconomies of scale.

EU 3: Graphing can show the efficiency of the market.

- Draw and label the ATC, AVC, and MC on a graph.
- Adapt graphs to show market changes and the impact of those changes on the firm.

Standards

College Career and Civic Life - C3 Framework for Social Studies State Standards

- **D2.Eco.1.9-12.** Analyze how incentives influence choices that may result in policies with a range of costs and benefits for different groups.
- **D2.Eco.2.9-12.** Use marginal benefits and marginal costs to construct an argument for or against an approach or solution to an economic issue.
- **D3.4.9-12.** Refine claims and counterclaims attending to precision, significance, and knowledge conveyed through the claim while pointing out the strengths and limitations of both.

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- **D4.2.9-12.** Construct explanations using sound reasoning, correct sequence (linear or non-linear), examples, and details with significant and pertinent information and data, while acknowledging the strengths and weaknesses of the explanation given its purpose (e.g., cause and effect, chronological, procedural, technical)
- **D4.6.9-12.** Use disciplinary and interdisciplinary lenses to understand the characteristics and causes of local, regional, and global problems; instances of such problems in multiple contexts; and challenges and opportunities faced by those trying to address these problems over time and place.

Common Core State Standards

- **CCSS.ELA-LITERACY.RH.11-12.2** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- **CCSS.ELA-LITERACY.RH.11-12.7** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
- **CCSS.ELA-LITERACY.WHST.11-12.1.A** Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence..
- **CCSS.ELA-LITERACY.WHST.11-12.1.D** Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- **CCSS.ELA-LITERACY.WHST.11-12.1.E** Provide a concluding statement or section that follows from or supports the argument presented.
- **CCSS.ELA-LITERACY.WHST.11-12.2.B** Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
- **CCSS.ELA-LITERACY.WHST.11-12.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- **CCSS.ELA-LITERACY.WHST.11-12.9** Draw evidence from informational texts to support analysis, reflection, and research.
- **CCSS.ELA-LITERACY.WHST.11-12.10** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

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MSMHS 21st Century Learning Expectations

- Competency 1.** Read and write effectively for a variety of purposes
Competency 2. Speak effectively with a variety of audiences in an accountable manner
Competency 3. Make decision and solve problems independently and collaboratively.
Competency 4: Applies scientific knowledge and concepts to a variety of investigative tasks.
Competency 5. Contribute to a positive learning environment with respect and responsibility

Unit Content Overview

- Law of diminishing marginal returns
- Total utility
- Marginal utility
- Fixed cost
- Variable cost
- Cost curve
- Cost of production
- Lump sum subsidy/tax
- Per unit subsidy/ tax
- Economic profit
- Accountant profit
- Average total cost (ATC)
- Average variable cost (AVC)
- Marginal Cost (MC)
- Marginal Revenue (MR)
- Economies of scale
- Diseconomies of scale
- Minimum efficient scale

Interdisciplinary Connections

- Integrated Science- Designing and completing a lab
- Marine Studies I- Taxes and subsidies to certain industries
- Aquaculture and Resource Management- understanding profits, losses, fixed and variable costs from the firm perspective

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- Aquatic Husbandry- understanding profits, losses, fixed and variable costs from the firm perspective
- ECE Horticulture and Design- Factoring in costs to designs
- Algebra I- equations and graphing
- Algebra II- Interpreting data & graphs
- Topics in Mathematics: Business and Personal Finance- applying economic models to real life situations

Daily Learning Objectives with *TWPS Activities*

Students will be able to...

- Identify differences between types of costs and profit and apply to real life business scenarios
 - *You are starting up a lemonade stand, what factors of production will you need? (at end use as exit slip; identify which of your factors represent fixed vs. variable costs)*
- Draw, manipulate, and interpret cost curve graphs to describe changes and the impact of those changes on individual firms
 - *Analyze the impacts of the long run and the short run on a firm. Which holds more significance in terms of costs and profit?*
- Apply knowledge of costs, profit, and revenue to maximize profits in a hands on simulation.
 - *Reflect on your AP progress; What do you find easy/challenging? How can you improve?*
- Interpret and answer AP test style questions
 - *Reflect on your AP progress; What do you find easy/challenging? How can you improve?*
- Apply concepts of economies of scale, constant returns to scale, and diseconomies of scale.
 - *Explain economics of scale, diseconomies of scale and constant return to scale through a real life scenario.*

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Instructional Strategies/Differentiated Instruction

- **HLP:** Accountable Talk
- **HLP:** Effective Feedback
- **HLP:** Writing to Learn (TWPS)
- Homework: reading and practice problems
- Lecture with notes
- Close reading with annotations
- Accountable Talk discussions
- Graphic organizers
- Self-assessments
- Strategic grouping
- Rephrasing information for students
- Student choice
- Learning through competitive games
- Personal connections
- Problem sets with practice AP test questions'
- Graphing practice
- Hands on simulations of concepts
 - Diminishing marginal Utility: How much do you really like candy?
 - Calculating costs & revenue: Marshmallow Tower Building
 - Utility Maximization w/ Oreos, grapes and milk

Assessments

FORMATIVE ASSESSMENTS:

- Daily Written Reflections/ Prompts
- Group Discussion
- Problem Sets: Consumer theory

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- Graphing Assignment (production functions, per-unit cost curves, firm in short run, firm in long run)
- Hands on Simulation- Guiding Questions, Data Collection & Discussion: Marshmallow Tower Building & variations of cost
- Unit Task: Cost Curve Experiment (EU 1,2,3)- In class data collection & Lab Report
 - MSMHS Rubric 4: Scientific Research

SUMMATIVE ASSESSMENTS:

- Quiz (EU 1)
- Unit Test (multiple choice and FRQ)

Unit Task

Unit Task Name: Cost Curve Experiment

Description: Students will use information learned in EU 1,2, & 3 to simulate the production of a good while maximizing profit. They will consider how to achieve this in both a long run and short run scenario. Students will form hypotheses about how production may maximize profit and minimize cost. They will then test these in multiple experimentation rounds testing the production of paper links with variations of resources. Students will collect data in tables and ultimately graph the results. In their discussion section they will use key concepts (diminishing marginal productivity, economies of scale, fixed/variable costs) to explain their results. They will then analyze the validity of the data they found and describe improvements for future testing.

Evaluation: MSMHS Rubric 4: Scientific Research

Unit Resources

- ACDC Economics: Youtube
- Book Chapters
- Laptops