

Unit 3: Production, Cost, and the Perfect Competition Model

Content Area:

Course(s):

Time Period:

Year

Length:

180

Status:

Published

Summary

Unit 3 focuses on firm behavior and culminates with an introduction to the perfect competition model, which will form a basis of comparison for other market structures in the next unit. This unit builds on the idea of supply, which was introduced in the previous unit, and explores in more detail what drives the decisions that firms make. In this unit, students will be expected to describe the production function, the costs of production, and firms' profit-maximizing behavior.

Standards

H/SS.MICE.II.C	Production and costs
H/SS.MICE.II.C.1	Production functions: short and long run
H/SS.MICE.II.C.2	Marginal product and diminishing returns
H/SS.MICE.II.C.3	Short-run costs
H/SS.MICE.II.C.4	Long-run costs and economies of scale
H/SS.MICE.II.C.5	Cost minimizing input combination and productive efficiency

Priority Content Standards

Supplemental Content Standards

ECON.4.6.1	When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.
ECON.4.6.2	Explain how they can benefit themselves and others by developing special skills and strengths.

Interdisciplinary Connections (Standards)

Please select relevant "Standards for Mathematical Practice (2023)", science and engineering practice standards "Grades 9-12/6-8 (2023)", ELA anchor statements, Social Studies practice standards. (3-6 total are

suggested)

- Planning and Carrying Out Investigations
- Obtaining, Evaluating, and Communicating Information
- Using Mathematics and Computational Thinking
- Developing and Using Models
- Constructing Explanations and Designing Solutions
- Analyzing and Interpreting Data
- Engaging in Argument from Evidence
- Asking Questions and Defining Problems

Career Readiness, Life Literacies, and Key Skills PRACTICES

These practices should be taught and reinforced in all content areas with increasingly higher levels of complexity and expectation as a student advances through a program of study.

- WRK.K-12.P.1 Act as a responsible and contributing community members and employee.
- WRK.K-12.P.2 Attend to financial well-being.
- WRK.K-12.P.3 Consider the environmental, social and economic impacts of decisions.
- WRK.K-12.P.4 Demonstrate creativity and innovation.
- WRK.K-12.P.5 Utilize critical thinking to make sense of problems and persevere in solving them.
- WRK.K-12.P.6 Model integrity, ethical leadership and effective management.
- WRK.K-12.P.7 Plan education and career paths aligned to personal goals.
- WRK.K-12.P.8 Use technology to enhance productivity increase collaboration and communicate effectively.
- WRK.K-12.P.9 Work productively in teams while using cultural/global competence.

Climate Change Standards

Select the Performance Expectations.

ClimateChange Education

Stage I: Desired Results

STAGE I Desired Results
<i>Learning Objective (Transfer)</i>

Students will be able to use their learning to independently...

- Define (using graphs where appropriate) key terms and concepts relating to production and cost.
- Calculate (using data from a graph or table as appropriate) the various measures of productivity and short-run and long-run costs.
- Define the different types of profit.
- Explain (using graphs where appropriate) equilibrium and firm decision making in perfectly competitive markets and how prices in perfectly competitive markets lead to efficient outcomes.
- Calculate (using data from a graph or table as appropriate) economic profit (loss) in perfectly competitive markets.

Mastery

Enduring Understanding..

- The production function explains the relationship between inputs and outputs both in the short run and the long run.
- Marginal product and average product change as input usage changes, and hence, total product changes.
- Diminishing marginal returns occur as the firm employs more of one input, holding other inputs constant, to produce a product (output) in the short run.
- Fixed costs and variable costs determine the total cost.
- The relationship between inputs and outputs in the long run is described by the scale of production increasing, decreasing, or constant returns to scale.

Essential Questions/ Big Ideas

- How do businesses use marginal analysis to make decisions?
- What drives producers' decision-making?
- How can a market be perfectly competitive?

Acquisition

Essential Knowledge...

- Firms respond to economic profit (loss) rather than accounting profit.
- *Accounting profit fails to account for implicit costs (such as cost of financial capital, compensation for risk, or an entrepreneur's time), which, if fully compensated, result in normal profit.*
- In the short run, firms decide to operate (i.e., produce positive output) or shut down (i.e., produce zero output) by comparing total revenue to total variable cost or price to average variable cost (AVC)
- In the absence of barriers to entry or exit, in the long run (i.e., once factors that are fixed in the

Suggested skills...

- Using economic concepts, principles, or models, explain how a specific economic outcome occurs or what action should be taken in order to achieve a specific economic outcome.
- Describing the similarities, differences, and limitations of economic concepts, principles, or models.
- Drawing an accurately labeled graph or visual to represent an economic model or market.

short run become variable), firms enter a market in which there are profit-making opportunities and exit a market when they anticipate economic losses.

- Firms may be in a constant cost, increasing cost, or decreasing cost industry. Long-run prices depend on the portion of the long-run cost curves on which firms operate.

Stage II: Assessment Evidence

STAGE II Assessment Evidence	
Practices	Assessments
Progress check Production cost simulation Group FRQ responses	Accounting vs Economic profit calculations Graphing practice Unit III Test

Modifications

Additional time on assessments

Guided notes

Audio/video examples

Study guides

Acceleration

Additional graphing practice

Supplemental readings

Additional free response practice

Stage III: Learning Plan

Unit 3: 2-3 weeks

- Lesson 1.1: The Production Function, paper airplanes simulation
- Lesson 1.2: Short-Run Production
- Lesson 1.3: Long-Run Production
- Lesson 2.1: Types of Profit- Simulation
- Lesson 2.2: Profit Maximization- Formulas with groups
- Lesson 2.3: Firms' Short-Run Decisions to Produce and Long-Run Decisions to Enter or Exit a Market
- Lesson 3.1: Unit 3 Test

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Diversity, Equity, & Inclusion

Diversity, Equity & Inclusion

Students will consider differing identities and priorities when calculating cost-benefit analysis

Specific Resources for Unit

- [jacob clifford youtube channel](#) & [website](#)
- [Jason Welker youtube channel](#) (has useful videos aligned to the course and a ton of videos about graphs)
- [Review Econ \(Jacob Reed\) youtube channel](#)
- [T-Pock's economics course](#) & [T-Pock youtube channel](#)
- [Wizeprep online course*](#): (similar to Khan academy but focused on the principles of microeconomics)

- [MRU online course*](#) (has not only review videos but teacher resources, review games, etc to use)
- [Federal Reserve Education](#) (can filter the site based on unit/topic and it will provide lesson plans that you can download as a PDF or link to google classroom)
- [AP micro Khan academy*](#)
- [AP practice exams.com](#) (useful platform with practice questions, links to helpful videos/youtube channels)
- [The Economist youtube channel](#) (various videos pertaining to economics)
- [Economics Explained](#) (various videos pertaining to economics)
- [Think Econ](#) (great resource with many videos pertaining to the course)
- [One minute economics](#) (short videos about different economic topics)
- [UMASS Amherst economics](#) (videos from professors)
- [Department of Economics Oxford U](#)
- [Crash course economics](#) (same as the John Green network making these crash course videos)
- [EconDal](#) (videos from an economics teacher about various topics)
- [lessons for AP micro](#)

Free practice tests/questions:

- [Varsity Tutors](#)
- [High School Test Prep](#)
- [AP Microeconomics Practice Test Room](#)
- [AP Microeconomics Practice Tests](#)

Articles:

- [financial times](#)
- [Albert IO](#)

Technology Integration

Northern supports the integration of the [SAMR Model](#): a framework which extends learning through the use of technology. The installation of interactive boards, the purchase of softwares and subscriptions, and the investment in 1:1 laptops and various other instructional technologies are examples of Northern's commitment to enhancing students' learning and preparing the 21st century learner for college and careers.