

NEW MILFORD PUBLIC SCHOOLS

New Milford, Connecticut



AP Microeconomics

February 2019

Revision/Draft

New Milford Board of Education

David Lawson, Chairperson

Tammy McInerney, Vice Chairperson

Angela Chastain, Secretary

Eileen Monaghan, Assistant Secretary

Bill Dahl

Joseph Failla

Wendy Faulenbach

Brian McCauley

J.T. Schemm

Interim Superintendent of Schools

Dr. Kerry Parker

Assistant Superintendent

Ms. Alisha DiCorpo

Authors of Course Guide

Cara Abraham

Revision/Draft

New Milford's Mission Statement

The mission of the New Milford Public Schools, a collaborative partnership of students, educators, family and community, is to prepare each and every student to compete and excel in an ever-changing world, embrace challenges with vigor, respect and appreciate the worth of every human being, and contribute to society by providing effective instruction and dynamic curriculum, offering a wide range of valuable experiences, and inspiring students to pursue their dreams and aspirations.

AP Microeconomics

1-12

AP Microeconomics is a college-level course that introduces students to the principles of economics that apply to the functions of individual economic decision-makers. The course develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

Pacing Guide

1. Basic Economic Concepts	7-80 minute block periods
2. Supply and Demand	17-80 minute block periods
a. Supply & Demand (12 periods)	
b. Consumer Choice Theory (5 periods)	
3. Production, Cost, and the Perfect Competition Model	15-80 minute block periods
a. Production and Cost Analysis (6 periods)	
b. Perfect Competition (9 periods)	
Midterm Exam	
4. Imperfect Competition	12-80 minute block periods
5. Factor/Resource Markets	10-80 minute block periods
6. Market Failure & Role of Government	9-80 minute block periods
Classroom Review	
AP Exam	

Revision/Draft

AP Microeconomics Unit 1 Basic Economic Concepts

Stage 1 Desired Results

ESTABLISHED GOALS

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.

D2.Eco.3.9-12. Analyze the ways in which incentives influence what is produced and distributed in a market system.

D2.Eco.9.9-12. Describe the roles of institutions such as clearly defined property rights and the rule of law in a market economy.

D2.Eco.13.9-12. Explain why advancements in technology and investments in capital goods and

Transfer

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

1. Apply the concept of trade-offs in many aspects of their lives.
2. Recognize how different economies produce and supply goods and services.
3. Identify when trade is advantageous.

Revision/Draft

Meaning

UNDERSTANDINGS

Students will understand that...

1. Resources are finite, so that in any economy, the existence of limited resources along with unlimited wants results in the need to make choices.
2. People and governments choose different types of economies to determine what types of goods and services to produce and distribute.
3. Opportunity costs can be illustrated

ESSENTIAL QUESTIONS

Students will keep considering...

1. What information is necessary to make educated choices?
2. What cultural values impact what type of economy a society chooses?
3. How can tables and graphs be used and refined to illustrate key economic concepts?
4. How can a country be incentivized to

<p>human capital increase economic growth and standards of living.</p>	<p>graphically.</p> <p>4. Countries can engage in mutually advantageous trade.</p>	<p>participate in international trade?</p>
Acquisition		
<p>D2.Eco.14.9-12. Analyze the role of comparative advantage in international trade of goods and services.</p> <p><i>From C3 Framework for Social Studies</i></p> <p>CEE #1: (Explain why) Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.</p> <p>CEE #3: (Identify how) Different methods can be used to allocate goods and services. People acting individually or collectively must choose which methods to use to allocate different kinds of goods and services.</p> <p>CEE #5: (Explain why) Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations</p>	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● economics ● economic systems (command and market) ● scarcity ● opportunity costs ● marginal analysis ● production possibilities tables and graphs ● optimal allocation of resources ● economic growth ● private property rights ● incentives ● specialization ● circular flow model ● absolute and comparative advantage 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Constructing and interpreting graphs as models of economic relationships. ● Describing the nature of the economizing problem for an individual and for society. ● Constructing, interpreting and analyzing production possibilities tables and graphs and calculate rising opportunity costs and optimal allocation of resources. ● Differentiating between command and market systems and explaining how each determines which goods and services to produce, how to produce them, and to whom to distribute them. ● Explaining how and why specialization and trade/exchange increase the total output of goods and services. ● Describing and manipulating the mechanics of the circular flow model, including how households, businesses and government all buy and sell, produce and consume. ● Calculating comparative advantage from differences in opportunity costs in order to determine the basis under which mutually advantageous trade can take place between countries.

<p><i>CEE = Council for Economic Education</i></p> <p>CCSS ELA 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.</p>		
--	--	--

Stage 2 – Evidence		
Code	Evaluative Criteria	Assessment Evidence

Revision/Draft

<p>T, M, A</p>	<p>School-wide Communication Rubric contextualized for role play.</p>	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand evidence of...</i></p> <p><i>The major types of economic systems (market, command, mixed) in how each answers the key economic questions of which goods and services to produce, how to produce them, and to whom to distribute them through a role play.</i></p> <p>A. Economic Systems Role Play</p> <p>Goal: Present a skit (5 min) that portrays how either a market, command, or mixed economy determines which goods and services to produce, how those goods and services will be produced, and to whom the goods and services will be distributed.</p> <p>Role: Students are workers (labor or management) in each economy.</p> <p>Audience: Classmates.</p> <p>Situation: Students are stranded in an isolated community and must rely on resources and people in their immediate area.</p> <p>Product/Performance and Purpose: Each student plays (at least) one distinct role portraying how (at least) one good or service is produced and distributed. The decision-making process is embedded within the action and dialogue among actors keeping expository narrative to a minimum.</p> <p>Standards/criteria for success: Actions and dialogue drive the clear and obvious description of each type of economy so that the audience can easily differentiate among the three skits/economies.</p> <p><i>A production possibilities curve reflects a country's opportunity costs in producing consumer and capital goods, and how investment or underemployment leads to economic growth or recession.</i></p>
----------------	---	--

M, A

AP free response rubric

B. AP Free-Response Style Question:

This table provides 6 possible production combinations that Northville can produce from its available resources and technology during this year. Assume that Northville only produces bicycles and tents from its available resources.

Combination	Bicycles	Tents
A	100	0
B	90	10
C	70	25
D	40	36
E	10	42
F	0	44

Revision/Draft

1. Graph Northville's PPC. Include all labels.
2. Assume Northville is currently producing at Combination C. If it chooses to produce at Combination B, what is the OC of moving from C to B?
3. Assume Northville is currently producing at Combination C. If it chooses to produce at Combination D, what is the OC of moving from C to D?
4. Northville's PPC is not linear. Explain.

Calculating comparative advantage allows a country to engage in mutually advantageous trade.

M, A

AP free response rubric

C. AP Free-Response Style Question:

American and Japanese workers can each produce 4 cars in one

		<p>year. An American worker can produce 10 tons of grain a year, whereas a Japanese worker can produce 5 tons of grain a year. To keep things simple, assume that each country has 100 million workers.</p> <ul style="list-style-type: none"> ● Construct a table for this situation. ● Construct side-by-side graphs of both countries' PPC. ● For the U.S., what is the OC of a car? OC of grain? Add to your table. ● For Japan, what is the OC of a car? OC of grain? Add to your table. ● Which country has the absolute advantage in producing cars? In producing grains? ● Which country has the comparative advantage in producing cars? In producing grains? ● Without trade, $\frac{1}{2}$ of each country's workers produce cars and $\frac{1}{2}$ produce grain. What quantities of cars and grain does each country produce? ● Starting from a position without trade, give an example in which trade makes each country better off.
<p>A</p> <p>M, A</p>	<p>Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.</p> <p>Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate</p>	<p>OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i></p> <p>Guided reading and note-taking from economics textbook chapters about scarcity, market systems, circular flow, and trade.</p> <p>Small group practice problem-solving for graphing, marginal analysis, opportunity costs, production possibilities curves, absolute and comparative advantage, and terms of trade.</p>

Revision/Draft

M, A	<p>presentation of solutions.</p> <p>AP rubrics for multiple choice and free response questions.</p>	<p>AP style multiple choice, stimulus-based, graphing, and short answer responses on quizzes and unit test.</p>
------	--	---

Stage 3 – Learning Plan

Code	Pre-Assessment	
	<p>Ask students to write scenarios in which they needed to choose between two opportunities; differences between dictatorial and democratic political and command and market economic systems.</p>	
M, A	<p>Summary of Key Learning Events and Instruction <i>Student success at transfer meaning and acquisition depends on...</i></p> <p>Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.</p>	<p>Progress Monitoring</p> <p>Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.</p>
T, M, A	<p>Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.</p>	<p>Teacher looks for engaged and varied responses from multiple students.</p>
A	<p>Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.</p>
A	<p>Viewing slide presentations of key unit vocabulary, concepts and skills.</p>	<p>Teacher looks for engaged and varied responses to scaffolded questions from multiple students.</p>

A	Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.
A	Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.	Teacher looks for engaged and evidence-based responses from multiple students.

AP Microeconomics Unit 2a The Nature and Functions of Markets: Demand and Supply

Stage 1 Desired Results		
ESTABLISHED GOALS	Transfer	
<p>D2.Eco.8.9-12. Describe the possible consequences, both intended and unintended, of government policies to improve market outcomes.</p> <p>CEE #7: (Demonstrate how) A market exists when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.</p> <p>CEE #8: (Explain how) Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.</p> <p>CEE# 9: (Analyze how)</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ol style="list-style-type: none"> 1. Recognize when a market exists. 2. Explain how price reflects competition within markets. 3. Identify how changes in consumer and producer behaviors alter markets. 4. Recognize and evaluate the effectiveness of government interventions within markets. 	
	Meaning	
	UNDERSTANDINGS <i>Students will understand that...</i>	ESSENTIAL QUESTIONS <i>Students will keep considering...</i>
	<ol style="list-style-type: none"> 1. In a free-market economy, price is a function of supply and demand. 2. Demand and supply can be illustrated graphically. 3. Behaviors by consumers and 	<ol style="list-style-type: none"> 1. What do price changes mean? 2. How can changes in behavior by consumers or producers alter markets? 3. How can tables and graphs be used and refined to illustrate key economic

<p>Competition among sellers usually lowers costs and prices, and encourages producers to produce what consumers are willing and able to buy. (Analyze how) Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.</p> <p>CSSF ECO 9–12.1 Analyze how incentives influence choices that may result in policies with a range of costs and benefits for different groups.</p> <p><i>CSSF = CT Social Studies Framework</i></p> <p>CCSS ELA 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.</p>	<p>producers can change demand and supply.</p> <p>4. Governments can intervene to change demand or supply of goods and services.</p>	<p>concepts?</p> <p>4. When should governments intervene in a market?</p>
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● demand and supply ● normal (superior) goods ● inferior goods ● substitute goods ● complementary goods ● market equilibrium, equilibrium quantity, equilibrium price ● productive efficiency ● allocative efficiency ● government-set prices: price ceilings, price floors, excise taxes, tariffs, quotas, export subsidies ● product surpluses ● product shortages ● total revenue test ● price elasticity of demand ● price elasticity of supply ● income elasticity ● cross price elasticity ● consumer surplus ● producer surplus ● efficiency losses 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Describing what affects demand. ● Giving examples of normal (superior) goods, inferior goods, substitute goods, complementary goods. ● Describing what affects supply. ● Explaining how supply and demand together determine market equilibrium. ● Describing how productive efficiency and allocative efficiency are achieved. ● Explaining and demonstrating using models how changes in supply and demand affect equilibrium prices and quantities. ● Giving examples of price ceilings, price floors, excise taxes, tariffs, quotas, and export subsidies. ● Explaining how government-set prices can cause product surpluses and shortages. ● Describing what affects price elasticity of demand and demonstrating what it looks like using models and with real-life examples. ● Applying the total revenue test to determine price elasticity of demand. ● Describing what affects price elasticity of supply and demonstrating what it looks

		<p>like using models and with real-life examples.</p> <ul style="list-style-type: none"> • Describing cross elasticity of demand and income elasticity of demand and demonstrating what they look like using models and with real-life examples. • Demonstrating how to find consumer surplus, producer surplus and efficiency losses using models. • Applying supply and demand analysis to real life economic situations.
--	--	--

Stage 2 – Evidence		
Code	Evaluative Criteria	Assessment Evidence
T, M, A	Classroom Participation Rubric contextualized for role play	<p><i>Students will show that they really understand evidence of...</i></p> <p><i>Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.</i></p> <p>A. Cocoa Market Simulation</p> <p>Goal: Create a market where buyers and sellers are pursuing their self-interest while negotiating to achieve the best price for cocoa.</p> <p>Role: Students are either buyers or sellers of cocoa.</p> <p>Audience:Classmates.</p> <p>Situation: Students are either buyers or sellers in a market for cocoa where they actively negotiate prices over 2-3 market periods.</p> <p>Product/Performance and Purpose: Students play the role of either a buyer or a seller during market periods. After the market periods</p>

<p>M, A</p>	<p>Classroom Participation Rubric contextualized for peer teaching</p>	<p>end they generate and use supply and demand graphs to determine the equilibrium price and quantity.</p> <p>Standards & Criteria for Success: Students effectively operate as buyers (buying for a price lower than directed on card) and as sellers (selling for a price higher than directed on card)</p> <p><i>Equilibrium quantity and price change when there is a shift of the demand and/or supply curves. Shifts occur through changes in consumer and producer behavior according to specific determinants.</i></p> <p>B. Poster of Supply and Demand Shifters</p> <p>Goal: Students create posters that list several examples of real world determinants that shift the demand and supply curves.</p> <p>Role: Student is a generator of a good or service and a real world example of a determinant that shifts the demand or supply curve. Student is also an evaluator of classmates' generated examples to foster discussion.</p> <p>Audience: Classmates as evaluators.</p> <p>Situation: Students are creating classroom resources for immediate discussion and as ongoing reference guides for the duration of the course.</p> <p>Product/Performance and Purpose: Posters as classroom resources</p> <p>Standards/criteria for success: Accurate determinants; humor a plus</p> <p><i>Real world competition influences price and quantity in the marketplace.</i></p>
-------------	--	--

Revised

T, M, A	Classroom Presentation Rubric contextualized for peer teaching	<p>C. Market Research and Analysis Project</p> <p>Goal: Synthesize information acquired from public media sources about a current market of goods or services experiencing fluctuations in supply and demand.</p> <p>Role: Students serve as experts in a market for a particular good or service.</p> <p>Audience: Classmates.</p> <p>Situation: Students are in a peer teaching situation using real world markets to reinforce key vocabulary, concepts, and skills.</p> <p>Product/Performance and Purpose: Each pair of students creates an audio-visual presentation for their peers to see and hear how the forces of supply and demand interact to set prices in a market; how government may intervene in a market; and how consumer elasticity of demand influences producer and consumer behaviors. Each pair of students writes an analytical summary describing the forces of change in a market.</p> <p>Standards & Criteria for Success: Presentations clearly demonstrate expertise in style of presentation and substance of content.</p>
---------	--	--

Revised
2/2018

A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i> Guided reading and note-taking from economics textbook chapters about supply, demand, equilibrium, elasticity, consumer and producer surplus
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	Small group practice problem-solving for graphing, market equilibrium, determinants of demand and supply, government-set prices, efficiency, consumer and producer surpluses, and elasticity of demand and supply.
M, A	AP rubrics for multiple choice and free response questions.	AP style multiple choice, stimulus-based, graphing, and short answer responses on quizzes and unit test.

Revision/ID

Stage 3 – Learning Plan

Stage 3 – Learning Plan					
Code	Pre-Assessment				
	Ask students to write scenarios that use supply and demand; give examples of when government intervenes in markets; predict what happens when goods, services, and resources become scarce or abundant and when income increases.				
M, A	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"> Summary of Key Learning Events and Instruction <i>Student success at transfer meaning and acquisition depends on...</i> </td> <td style="width: 50%;"> Progress Monitoring </td> </tr> <tr> <td> Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions. </td> <td> Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill. </td> </tr> </table>	Summary of Key Learning Events and Instruction <i>Student success at transfer meaning and acquisition depends on...</i>	Progress Monitoring	Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.	Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.
Summary of Key Learning Events and Instruction <i>Student success at transfer meaning and acquisition depends on...</i>	Progress Monitoring				
Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.	Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.				

T, M, A	Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.	Teacher looks for engaged and varied responses from multiple students.
A	Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.
A	Viewing slide presentations of key unit vocabulary, concepts and skills.	Teacher looks for engaged and varied responses to scaffolded questions from multiple students.
A	Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.
A	Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.	Teacher looks for engaged and evidence-based responses from multiple students.

Revision/Draft

AP Microeconomics Unit 2b Consumer Behavior

Stage 1 Desired Results	
ESTABLISHED GOALS	<i>Transfer</i>
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. CEE #2: (Demonstrate how) Effective decision making requires comparing the additional	<p><i>Students will be able to independently use their learning to...</i></p> <ol style="list-style-type: none"> 1. Use a cost-benefit analysis when making decisions in their life, such as choosing a path after high school or taking on debt to make a purchase.

<p>costs of alternatives with the additional benefits. Many choices involve doing a little more or a little less of something: few choices are “all or nothing” decisions.</p> <p>CCSS ELA 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.</p>	Meaning	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> 1. The market demand curve is derived from all the individual consumers in the market. 2. Consumers take into account income, prices, and tastes (preferences) when making purchases 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> 1. How can consumer choices influence the demand for a good or service?
	Acquisition	
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> • total utility • marginal utility • law of diminishing marginal utility • utility-to-price ratios • utility-maximization model 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> • Describing the relationship among total utility, marginal utility and the law of diminishing marginal utility. • Explaining how rational consumers compare marginal utility-to-price ratios for products in purchasing combinations of products that maximize their utility. • Drawing an individual’s demand curve by observing the outcomes of price changes in the utility-maximization model. • Using the utility-maximization model to highlight how incomes, prices, substitutions and tastes affect consumer purchases.

Stage 2 – Evidence

Code	Evaluative Criteria	Assessment Evidence
-------------	----------------------------	----------------------------

M, A

AP Free Response Rubric

PERFORMANCE TASK(S):

Students will show that they really understand evidence of...

Rational consumers compare marginal utility-to-price ratios for products in purchasing combinations of products that maximize their utility.

A. AP Free Response Style Question

Mark consumes ice cream and hamburgers. The following table provides information about the relationship between the quantity of ice cream and hamburgers and the total utility Mark gets from their consumption.

Utility from Ice Cream Consumption		Utility from Hamburger Consumption	
Quantity of ice cream (cones)	Total utility from ice cream (utils)	Quantity of hamburgers	Total utility of hamburgers (utils)
0	0	0	0
1	20	1	15
2	38	2	28
3	53	3	39
4	66	4	48
5	77	5	53
6	84		
7	89		

Revision Draft

8	92		
9	94		
10	95		

Mark's income for expenditure on ice cream and hamburgers is \$50 per month. The price of ice cream is \$5 a cone and the price of hamburgers is \$10 a hamburger.

Calculate Mark's marginal utility for ice cream and for hamburgers at every quantity. Then calculate Mark's marginal utility per dollar for ice cream and for hamburgers at every quantity.

What is Mark's optimal consumption of ice cream and hamburgers?

Economic concepts include scarcity, opportunity costs, cost benefit analysis, supply, and demand.

B. Cumulative Review Presentation

Goal: Students create a classroom community in which every member contributes to the greater good by becoming an expert in one economic concept and teaching it to others.

Role: Students act as teachers/tutors.

Audience: Classmates

Performance/Product and Purpose: Students will teach a review concept from units 1 & 2 using an interactive slideshow presentation and practice problems.

Standards/Criteria for Success: Presentations clearly demonstrate expertise in style of presentation and substance of content.

Revision/Draft

T, M, A

School-wide Communication Rubric contextualized for peer teaching

A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	<p>OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i></p> <p>Guided reading and note-taking from economics textbook chapter about consumer behavior.</p> <p>Small group practice problem-solving for marginal analysis, calculating total, marginal utility, and utility to price ratios.</p> <p>AP style multiple choice, stimulus-based, and short answer responses on quizzes.</p> <p>Cumulative Exam encompassing units 1 and 2a&b using released AP multiple choice and free response questions.</p>
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	
M, A	AP rubrics for multiple choice and free response questions.	
T, M, A	AP rubrics for multiple choice and free response questions.	

Revision/Draft

Stage 3 – Learning Plan

Pre-Assessment

Ask students to write scenarios in which they needed to choose between two goods and/services; when they overindulged; when they were short on funds.

Code	Summary of Key Learning Events and Instruction	Progress Monitoring
	<i>Student success at transfer meaning and acquisition depends on...</i>	
M, A	Reading and taking notes from textbook chapter according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.	Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.
T, M, A	Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.	Teacher looks for engaged and varied responses from multiple students.
A	Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.
A	Viewing slide presentations of key unit vocabulary, concepts and skills.	Teacher looks for engaged and varied responses to scaffolded questions from multiple students.
A	Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.
A	Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.	Teacher looks for engaged and evidence-based responses from multiple students.

Revision Draft

AP Microeconomics Unit 3a Costs of Production

Stage 1 Desired Results

Stage 1 Desired Results	
ESTABLISHED GOALS	<i>Transfer</i>

<p>D2.Eco.3.9-12. Analyze the ways in which incentives influence what is produced and distributed in a market system.</p> <p>CEE #2: Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Many choices involve doing a little more or a little less of something: few choices are “all or nothing” decisions.</p> <p>CCSS ELA 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.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ol style="list-style-type: none"> Calculate the true costs of bringing a product to market. 	
Meaning		
<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> Producers must take into account many types of costs 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> What can determine if a firm is economically successful? 	
Acquisition		
<p><i>Students will know...</i></p> <ul style="list-style-type: none"> explicit and implicit costs fixed and variable costs total, average and marginal costs normal profit, accounting profit and economic profit law of diminishing returns economies of scale diseconomies of scale returns to scale 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> Giving examples of explicit and implicit costs. Differentiating among normal profit, accounting profit and economic profit. Explaining the relationship between the law of diminishing returns and a firm’s short-run production costs. Making distinctions between fixed and variable costs and among total, average and marginal costs. Calculating and constructing cost curves and explaining how they shift. Describing the link between a firm’s size and its average costs in the long run. Describing economies and diseconomies of scale and returns to scale. 	

Stage 2 – Evidence

Code	Evaluative Criteria	Assessment Evidence
T, M, A	Teacher created rubric	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand evidence of...</i></p> <p><i>All of the costs included in bringing a product or service to market.</i></p> <p>A. Thanksgiving Dinner for Ten</p> <p>Goal: Inform potential investors and dinner guests about how you are able to prepare an amazing Thanksgiving dinner for 10 and keep your costs lower than your competitors.</p> <p>Role: Producers (shoppers, cooks, servers) of a Thanksgiving meal for ten.</p> <p>Audience: Potential investors and dinner guests.</p> <p>Situation: Students need to shop for, prepare, and serve an appetizing Thanksgiving dinner for ten for the least cost among their competitors.</p> <p>Product and Purpose: Each group submits a written prospectus that includes all costs (fixed, variable, explicit, implicit) and a menu for a Thanksgiving dinner for ten which is both lower cost and most appetizing.</p> <p>Standards/criteria for success: Student groups account for all costs (including estimates for implicit costs) and make appetizing menu choices that set them apart from their competitors.</p>

Revision/Draft

A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i> Guided reading and note-taking from economics textbook chapter about the costs of production.
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	Small group practice problem-solving for total revenue, average revenue, marginal revenue, total costs, fixed costs, variable costs, average total costs, average fixed costs, average variable costs, and marginal costs.
M, A	AP rubrics for multiple choice and free response questions.	AP style multiple choice, stimulus-based, and short answer responses on quizzes and unit test.

Revision/Draft

Stage 3 – Learning Plan

Stage 3 – Learning Plan	
Code	<i>Pre-Assessment</i> Ask students to write scenarios for a student-run business venture (lemonade stand to computer fixer); recall differences in production of goods and services before and after the industrial revolution (between home/cottage production and industrial production).

	<p>Summary of Key Learning Events and Instruction</p> <p><i>Student success at transfer meaning and acquisition depends on...</i></p>	<p>Progress Monitoring</p>
M, A	<p>Reading and taking notes from textbook chapter according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.</p>	<p>Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.</p>
T, M, A	<p>Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.</p>	<p>Teacher looks for engaged and varied responses from multiple students.</p>
A	<p>Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.</p>
A	<p>Viewing slide presentations of key unit vocabulary, concepts and skills.</p>	<p>Teacher looks for engaged and varied responses to scaffolded questions from multiple students.</p>
A	<p>Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.</p>
A	<p>Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.</p>	<p>Teacher looks for engaged and evidence-based responses from multiple students.</p>

Revision Draft

Stage 1 Desired Results

<p>ESTABLISHED GOALS</p>	<p><i>Transfer</i></p>	
<p>D2.Eco.4.9-12. Evaluate the extent to which competition among sellers and among buyers exists in specific markets.</p> <p>CEE #3: (Describe how) Different methods can be used to allocate goods and services. People acting individually or collectively must choose which methods to use to allocate different kinds of goods and services.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ol style="list-style-type: none"> 1. Recognize and evaluate markets for their level of competitiveness. 2. Explain why entrepreneurs start businesses, and why some businesses fail. 3. Assess the relationship between competition and economic efficiency. 	
<p>CEE #9: (Analyze how) Competition among sellers usually lowers costs and prices, and encourages producers to produce what consumers are willing and able to buy. (Analyze how) Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.</p> <p>CCSS ELA 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</p>	<p><i>Meaning</i></p>	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> 1. Perfect competitors produce standardized products that become perfect substitutes for each other. 2. Perfect competitors produce and sell products that meet consumer demand to maximize both consumer and producer surplus. 3. Perfect competitors maximize their profits by producing what consumers demand. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> 1. Should consumers pay attention to different producers of standardized products? 2. Why are perfect competitors efficient? 3. How do firms with several competitors maximize their profits?
	<p><i>Acquisition</i></p>	
<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● purely/perfectly competitive markets 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Describing the conditions required for 	

Revision/Draft

<p>question or solve a problem.</p>	<ul style="list-style-type: none">● total revenue, average revenue, and marginal revenue● maximizing profit rule● marginal cost curve● side by side models● short-run equilibrium● long-run equilibrium● efficiency● constant cost, increasing cost, and decreasing cost industries	<p>purely competitive markets.</p> <ul style="list-style-type: none">● Describing how revenues are calculated in a purely competitive market.● Explaining how purely competitive firms maximize profits or minimize losses.● Explaining and demonstrating with models why the marginal-cost curve and supply curve of competitive firms are identical.● Comparing firm and market supply and market demand and constructing side-by-side models to show short-run competitive equilibrium.● Explaining how industry entry and exit produce economic efficiency.● Explaining how long-run competitive equilibrium results in economic efficiency.● Differentiating among constant-cost, increasing-cost, and decreasing-cost industries.
-------------------------------------	--	---

Revision/Draft

Stage 2 – Evidence

Code	Evaluative Criteria	Assessment Evidence
T, M, A	Classroom Participation Rubric contextualized for role play	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand evidence of...</i></p> <p><i>Perfect competitors differ from other producers by producing identical, standardized products and as such cannot set the market price.</i></p> <p>A. Eraser Market</p> <p>Goal: Students compete to sell their eraser more often than any other students. Some students are allowed to communicate with others, while some students are not.</p> <p>Role: Students are sellers of a mixed variety of erasers; some are identical, some are differentiated. Students are divided into 4 groups (#1 = 1 person; #2 = 3 people; #3 = 6-8 people; #4 = 10+ (most be clear majority of classmates))</p> <p>Audience: Classmates</p> <p>Performance and Purpose: Students will offer their erasers for sale in multiple rounds of a market with the teacher at a price (\$.05 - \$.25) most likely to make the sale. Students should observe the products for sale and the prices offered and ultimately paid by the consumer (teacher).</p> <p>Standards/Criteria for Success: Students accurately offer a competitive price that reflects their group, recognizing that student groups represent 4 different market structures: perfect competitors (\$.05 for identical products); monopolistic competitors (lowest price offered within group without collusion); oligopolies (price set through collusion, however a producer might “cheat” his conspirators and sell for \$.01 less); monopoly (price set at \$.25).</p> <p><i>A perfectly competitive market in long-run equilibrium is allocatively</i></p>

Revision/Draft

M, A	AP Free Response Rubric	<p><i>and productively efficient.</i></p> <p>B. AP Free Response Style Question</p> <p>Suppose that roses are produced in a perfectly competitive, increasing-cost industry in long-run equilibrium with identical firms.</p> <p>A. Draw correctly labeled side by side graphs for the rose industry and a typical firm and show each of the following.</p> <ol style="list-style-type: none">Industry equilibrium price and quantity, labeled PM and QM, respectively.The firm's equilibrium price and quantity, labeled PF and QF, respectively. <p>B. Is PM larger than, smaller than or equal to PF?</p> <p>C. Assume that there is a decrease in the demand for roses. On your graphs in Part (A), show each of the following.</p> <ol style="list-style-type: none">The new short-run industry equilibrium price and quantity, labeled PM2 and QM2, respectively.The new short-run profit-maximizing price and quantity for the typical firm, labeled PF2 and QF2, respectively. <p>D. As the industry adjusts to a new long-run equilibrium,</p> <ol style="list-style-type: none">What will happen to the number of firms in the industry? Explain.Will the firm's average total cost curve shift upward, shift downward, or remain unchanged? <p>E. In the long run, compare the firm's profit-maximizing price to each of the following.</p> <ol style="list-style-type: none">PF in Part (A) (b)PF2 in Part (C) (b)
------	-------------------------	--

Revision/Draft

A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i> Guided reading and note-taking from economics textbook chapter about pure competition.
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	Small group practice problem-solving for average revenue, total revenue, marginal revenue, $MR = \Delta ARP$, maximizing profits, minimizing losses, shut down point, side by side market and firm graphs for perfect competitors, entry/exit of firms, productive and allocative efficiency, constant, increasing and decreasing cost industries.
M, A	AP rubrics for multiple choice and free response questions.	AP style multiple choice, stimulus-based, and short answer responses on quizzes and unit test.
M, A	AP rubrics for multiple choice and free response questions.	Midterm Exam encompassing units 1, 2, and 3 using released AP multiple choice and free response questions.

Revision Draft

Stage 3 – Learning Plan

Code	<i>Pre-Assessment</i>
	Ask students to give examples of identical and differentiated products or try to differentiate between agricultural goods such as bananas, avocados, popcorn.

	<p>Summary of Key Learning Events and Instruction</p> <p><i>Student success at transfer meaning and acquisition depends on...</i></p>	<p>Progress Monitoring</p>
M, A	<p>Reading and taking notes from textbook chapter according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.</p>	<p>Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.</p>
T, M, A	<p>Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.</p>	<p>Teacher looks for engaged and varied responses from multiple students.</p>
A	<p>Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.</p>
A	<p>Viewing slide presentations of key unit vocabulary, concepts and skills.</p>	<p>Teacher looks for engaged and varied responses to scaffolded questions from multiple students.</p>
A	<p>Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.</p>
A	<p>Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.</p>	<p>Teacher looks for engaged and evidence-based responses from multiple students.</p>

Revision Draft

Stage 1 Desired Results

<p>ESTABLISHED GOALS</p>	<p><i>Transfer</i></p>	
<p>D2.Eco.4.9-12. Evaluate the extent to which competition among sellers and among buyers exists in specific markets.</p> <p>CEE #3: (Describe how) Different methods can be used to allocate goods and services. People acting individually or collectively must choose which methods to use to allocate different kinds of goods and services.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ol style="list-style-type: none"> 1. Judge a business that inflates its price for its own benefit. 2. Evaluate the effectiveness of advertising for common retail goods and services. 3. Use strategic behavior when negotiating with others. 	
<p>CEE #9: (Analyze how) Competition among sellers usually lowers costs and prices, and encourages producers to produce what consumers are willing and able to buy. (Analyze how) Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.</p> <p>CSSF: ECO 9–12.3 Describe the possible consequences, both intended and unintended, of government policies to improve market outcomes.</p>	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> 1. Monopolies exert tremendous control over price, extent of competition, and supply in a market. 2. Governments can implement policies to decrease the power of monopolies and improve market outcomes for consumers. 3. Advertising, brand names, patents, and trademarks are used by imperfect competitors to differentiate them from others. 4. Monopolies and oligopolies use several methods to control price and competition to increase their economic 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> 1. Why do we love to hate monopolies? 2. How effective is government in regulating monopolies, monopolistic competitors, and oligopolies. 3. What really differentiates most products? 4. How do firms with few to no competitors maximize their profits?

Revision/Draft

<p>CCSS ELA 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.</p>	<p>profits.</p>	
	<p>Acquisition</p>	
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● perfect competitor ● pure monopoly ● natural monopoly ● monopolistic competitor ● oligopoly ● price maker ● barriers to entry ● profit-maximization ● marginal revenue curve ● fair return price ● socially optimal price ● inefficiency/deadweight loss ● price discriminating monopoly ● anti-trust laws ● Herfindahl Index ● four firm concentration model ● price fixing ● vertical and horizontal integration ● public, industrial, cartel and social regulation ● price matrix ● strategic behavior ● game theory ● mutual interdependence ● dominant strategy ● Nash equilibrium 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Differentiating among the characteristics of perfect competition, pure monopoly, monopolistic competition, and oligopoly. ● Explaining how a pure monopoly sets its profit-maximizing output and price. ● Evaluating the economic effects of monopoly. ● Explaining why a monopolist might prefer to charge different prices in different markets. ● Describing and evaluating how and why government can regulate monopolies. ● Explaining why monopolistic competitors earn only a normal profit in the long run. ● Using game theory strategies. ● Describing three oligopoly models and explaining how incentives and obstacles to collusion influence their behaviors. ● Determining the potential positive and negative effects of advertising for oligopolists.

Stage 2 – Evidence

Code	Evaluative Criteria	Assessment Evidence
T, M, A	Classroom Presentation Rubric contextualized for peer teaching	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand evidence of...</i></p> <p><i>Real world barriers to competition influences price and quantity in the marketplace.</i></p> <p>A. Imperfect Competitors Research and Analysis Project</p> <p>Goal: Synthesize information acquired from public media sources about a contemporary firm operating as an imperfect competitor (monopoly, monopolistic competitor, or oligopoly).</p> <p>Role: Students serve as experts about a business operating as an imperfect competitor.</p> <p>Audience: Classmates.</p> <p>Situation: Students are in a peer teaching situation using real world firms to reinforce key vocabulary, concepts, and skills.</p> <p>Product/Performance and Purpose: Each pair of students creates an audio-visual presentation for their peers to see and hear how the imperfect competitor acts to set prices and quantities in a market and how government may intervene in a market to achieve efficiency. Each pair of students writes an analytical summary describing the behavior and structure of the imperfect competitor.</p> <p>Standards & Criteria for Success: Presentations clearly demonstrate expertise in style of presentation and substance of content.</p> <p><i>Market structure constrains and influences prices, output, and efficiency.</i></p>
M, A	AP Free Response Rubric	B. AP Free Response Style Question

Revision/Print

Rachel's hair salon is a monopoly in a small town and is currently earning an economic profit.

- A. Draw a correctly labeled graph for Rachel and include the curves that are necessary to identify the following:
 - a. The profit maximizing price and quantity of haircuts, labeled P_m and Q_m
 - b. The area representing economic profits, shaded completely.
- B. Does Rachel's hair salon produce the allocatively efficient quantity? Explain.
- C. Assume that Rachel signs a new lease with an increase in rent, a fixed cost. Will the price of haircuts provided by Rachel increase, decrease, or stay the same in the short run? Explain.

Revision/Draft

Assume that new hair salons enter the market and that the market becomes monopolistically competitive. Answer each of the following.

- a. The entry of new hair salons creates close substitutes for each salon's services. As a result, will the demand for Rachel's hair salon become more elastic or become less elastic, or will there be no change in elasticity?
- b. Will the entry cause the demand curve for Rachel's hair salon to shift to the left, shift to the right, or stay the same?
- c. In long run equilibrium, will Rachel's hair salon produce the productively efficient quantity? Explain.

Oligopolies use strategies of game theory wherein the payoff for each firm depends directly on both the firm's own choice and the choices of its competitor.

M, A

AP Free Response Rubric

C. AP Free Response Style Question

Two competing retail firms, Red Shop and Blue Mart, are studying potential locations for new stores in the suburbs of a major city. Each firm must choose between a location north of the city and a location south of the city. The payoff matrix is shown below, with the first entry in each cell indicating Red Shop's daily profit and the second entry indicating Blue Mart's daily profit. Both firms know all the information in the payoff matrix.

Revision/Draft

		Blue Mart	
		North	South
Red Shop	North	\$900, \$1,800	\$3,000, \$3,500
	South	\$5,000, \$4,000	\$1,500, \$1,000

- (a) If Red Shop chooses a location south of the city, which location is better for Blue Mart? Explain.
- (b) Is choosing a location to the south of the city a dominant strategy for Red Shop? Explain.
- (c) If the two firms cooperate in choosing locations, where will each firm locate?
- (d) Assume that the south suburb has enacted an incentive package to attract new business. Any firm that locates south of the city will receive a subsidy of \$2,000 per day. Redraw the payoff matrix to include the subsidy.

A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i> Guided reading and note-taking from economics textbook chapters about monopolies, monopolistic competition, and oligopolies.
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	Small group practice problem-solving for total revenue, marginal revenue, maximizing profits, minimizing losses, entry/exit of monopolistic competitors, productive and allocative efficiency, regulating monopolies, price discriminating monopolies, and game theory.
M, A	AP rubrics for multiple choice and free response questions.	AP style multiple choice, stimulus-based, and short answer responses on quizzes and unit test.

Revision/ID

Stage 3 – Learning Plan

Code		Pre-Assessment
		Ask students to give examples of patent/license monopolies, natural monopolies, price discriminating monopolies, monopolistic competitors, and oligopolies; describe scenarios when they know they have paid more (or less) for a product than a friend or family member; predict what happens when an imperfect competitor dominates a market; describe analog and digital games wherein one's strategy is in part determined by an opponent's actions/strategies.
M, A	<p>Summary of Key Learning Events and Instruction <i>Student success at transfer meaning and acquisition depends on...</i></p> <p>Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.</p>	<p>Progress Monitoring</p> <p>Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.</p>

T, M, A	Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.	Teacher looks for engaged and varied responses from multiple students.
A	Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.
A	Viewing slide presentations of key unit vocabulary, concepts and skills.	Teacher looks for engaged and varied responses to scaffolded questions from multiple students.
A	Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.	Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.
A	Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.	Teacher looks for engaged and evidence-based responses from multiple students.

Revision/Draft

AP Microeconomics Unit 5 Factor/Resource Markets

Stage 1 Desired Results	
<p>ESTABLISHED GOALS</p> <p>CEE #2: Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Many choices involve doing a little more or a little less of something: few choices are “all or nothing” decisions.</p>	<p><i>Transfer</i></p>

<p>CEE #3: Different methods can be used to allocate goods and services. People acting individually or collectively must choose which methods to use to allocate different kinds of goods and services.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ol style="list-style-type: none"> 1. Explain how price reflects competition within resource markets. 2. Apply cost benefit analysis to deciding how much of a resource to employ to achieve a desired goal. 3. Identify how changes in consumer and producer behaviors alter factor/resource markets. 			
<p>CEE #8: Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.</p> <p>CEE #10: Institutions evolve and are created to help individuals and groups accomplish their goals. Banks, labor unions, markets, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.</p>	<p style="text-align: center;">Meaning</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> 1. Prices for resources are derived from their demand in the product market. 2. Firms use marginal analysis of resource prices to make decisions about best combinations of resources. </td> <td style="width: 50%; padding: 5px;"> <p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> 1. What makes one resource (i.e. capital) relatively more expensive than another resource (i.e. labor)? 2. How do firms decide when to hire more or less of one resource in relation to another resource? </td> </tr> </table>		<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> 1. Prices for resources are derived from their demand in the product market. 2. Firms use marginal analysis of resource prices to make decisions about best combinations of resources. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> 1. What makes one resource (i.e. capital) relatively more expensive than another resource (i.e. labor)? 2. How do firms decide when to hire more or less of one resource in relation to another resource?
<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ol style="list-style-type: none"> 1. Prices for resources are derived from their demand in the product market. 2. Firms use marginal analysis of resource prices to make decisions about best combinations of resources. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ol style="list-style-type: none"> 1. What makes one resource (i.e. capital) relatively more expensive than another resource (i.e. labor)? 2. How do firms decide when to hire more or less of one resource in relation to another resource? 			
<p>CEE #13: Income for most people is determined by the market value of the productive resources they sell. What workers earn primarily depends on the market value of what they produce.</p> <p>CSSF: ECO 9–12.2 Evaluate the extent to which competition</p>	<p style="text-align: center;">Acquisition</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● factors of production (land, labor, capital) ● resource pricing ● marginal revenue product ● marginal resource cost ● determinants of resource market shifts ● elasticity of resource demand ● wages ● productivity </td> <td style="width: 50%; padding: 5px;"> <p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Explaining the significance of resource pricing. ● Explaining how the marginal revenue productivity of a resource relates to a firm's demand for that resource. ● Contrasting the marginal revenue product (MRP) curve of a perfect competitor with </td> </tr> </table>		<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● factors of production (land, labor, capital) ● resource pricing ● marginal revenue product ● marginal resource cost ● determinants of resource market shifts ● elasticity of resource demand ● wages ● productivity 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Explaining the significance of resource pricing. ● Explaining how the marginal revenue productivity of a resource relates to a firm's demand for that resource. ● Contrasting the marginal revenue product (MRP) curve of a perfect competitor with
<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ● factors of production (land, labor, capital) ● resource pricing ● marginal revenue product ● marginal resource cost ● determinants of resource market shifts ● elasticity of resource demand ● wages ● productivity 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ● Explaining the significance of resource pricing. ● Explaining how the marginal revenue productivity of a resource relates to a firm's demand for that resource. ● Contrasting the marginal revenue product (MRP) curve of a perfect competitor with 			

<p>among sellers and among buyers exists in specific markets.</p> <p>CSSF: ECO 9–12.5 Explain why advancements in technology and investments in capital goods and human capital increase economic growth and standards of living.</p> <p>CCSS ELA 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.</p>	<ul style="list-style-type: none"> ● perfectly competitive resource market ● monopsony ● unions ● wage differentials ● economic rent 	<p>the MRP curve of an imperfect competitor (monopolist).</p> <ul style="list-style-type: none"> ● Describing the factors that increase or decrease resource demand. ● Explaining the determinants of elasticity of resource demand. ● Calculating how a competitive firm selects its optimal combination of resources. ● Explaining the close relationship between wages and productivity. ● Demonstrating how wage rates and employment levels are determined in competitive and monopsonistic labor markets. ● Describing how unions can raise wages. ● Graphing resource markets. ● Explaining why economic profits occur, and how profits and losses allocate resources among alternative uses.
---	---	--

Revision/Draft

Stage 2 – Evidence

Code	Evaluative Criteria	Assessment Evidence
M, A	Classroom Participation Rubric contextualized for peer teaching	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand evidence of...</i></p> <p><i>Employers' decisions to hire resources is based on the availability, productivity, and cost of the factor of production.</i></p> <p>A. Equine Flu Simulation</p> <p>Goal: Students accurately describe and construct graphs that illustrate changes in both resource and product markets affected by the late 19th century outbreak of equine flu.</p> <p>Role: Students assume various roles of sellers and buyers of resources in the national markets for horses, other beasts of burden, canal and rail transport, construction, housing, and food after the spread of equine flu.</p> <p>Audience: Classmates</p> <p>Product/Performance and Purpose: Students will respond in character to changes in the resource and product markets and construct accurate graphs showing shifts in supply and demand curves in response to equine flu. Students will recognize the interaction among several resource and product markets.</p> <p>Standards/Criteria for Success: Graphs demonstrate mastery of necessary components and determinants of supply and demand shifts.</p> <p><i>Perfect and imperfect factor markets both seek to maximize profits and minimize costs.</i></p>
M, A	AP Free Response Rubric	<p>B. AP Free Response Style Question</p> <p>Coldbox Corporation hires its workers in a perfectly competitive</p>

Revision/Draft

labor market and produces and sells frozen peas in a perfectly competitive product market. The market price for peas is \$4 per bag. The table below shows Coldbox's short run production of frozen peas. Labor is the only variable input. Coldbox Corporation's fixed cost is \$500.

Number of workers	Bags of Frozen Peas
0	0
1	60
2	140
3	250
4	320
5	380
6	400

Revision/Draft

(a) When Coldbox hires the second worker, does it experience diminishing returns? Explain.

(b) Calculate the average fixed cost if Coldbox hires 3 workers. Show your work.

(c) If the wage is \$200 per worker, identify the profit-maximizing number of workers for Coldbox. Explain using marginal analysis

(d) If the price of frozen peas decreases by \$2 per bag, would the number of workers hired by Coldbox be more than, less than, or equal to the number of workers identified in part c? Explain.

(e) Suppose that Coldbox hires workers from a monopsonistic

		labor market. Would the wage be higher, lower, or equal to the equilibrium wage in a perfectly competitive labor market?
A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i> Guided reading and note-taking from economics textbook chapters about the demand for resources, wage determination, rent, interest, and profits
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	Small group practice problem-solving for marginal revenue product, marginal revenue productivity, marginal resource cost, optimal combination of resources (labor and capital), perfectly competitive market wages, monopsonistic market wages, union wages, economic rent.
M, A	AP rubrics for multiple choice and free response questions.	AP style multiple choice, stimulus-based, and short answer responses on quizzes and unit test.

Revision Draft

Stage 3 – Learning Plan

Code	<i>Pre-Assessment</i> Ask students to describe previous/current work experience, wages; make a list of every resource necessary to produce a pencil; recall profit maximizing rule in product markets.
-------------	--

	<p>Summary of Key Learning Events and Instruction</p> <p><i>Student success at transfer meaning and acquisition depends on...</i></p>	<p>Progress Monitoring</p>
M, A	<p>Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.</p>	<p>Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.</p>
T, M, A	<p>Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.</p>	<p>Teacher looks for engaged and varied responses from multiple students.</p>
A	<p>Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.</p>
A	<p>Viewing slide presentations of key unit vocabulary, concepts and skills.</p>	<p>Teacher looks for engaged and varied responses to scaffolded questions from multiple students.</p>
A	<p>Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.</p>
A	<p>Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.</p>	<p>Teacher looks for engaged and evidence-based responses from multiple students.</p>

Revision Draft

AP Microeconomics Unit 6 Market Failure and the Role of Government

Stage 1 Desired Results	
ESTABLISHED GOALS	<i>Transfer</i>

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.

D2.Eco.6.9-12. Generate possible explanations for a government role in markets when market inefficiencies exist.

D2.Eco.7.9-12. Use benefits and costs to evaluate the effectiveness of government policies to improve market outcomes.

D2.Eco.8.9-12. Describe the possible consequences, both intended and unintended, of government policies to improve market outcomes.

CEE #16 (Argue when) There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define

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

1. Differentiate between public and private goods and the relative merit of each in society.
2. Recognize socially efficient and inefficient market outcomes.
3. Assess if, when, and to what extent government should intervene in markets.
4. Describe the sources, changes in, and extent of income inequality.

Meaning

UNDERSTANDINGS
Students will understand that...

1. Public and private goods are valued differently.
2. Markets may create marginal social costs that are higher than marginal social benefits. Conversely, markets may create marginal social benefits that are higher than marginal social costs.
3. Governments can intervene in markets to positively increase efficiency or to negatively increase deadweight loss.
4. Income inequality varies with tax policy, human and social capital, effects of discrimination and unequal access to markets.

ESSENTIAL QUESTIONS
Students will keep considering...

1. Why are public goods usually undervalued?
2. Why are consumers sometimes left with spillover costs? Why are consumers sometimes beneficiaries of spillover benefits?
3. What public policies are desirable in imperfect markets?
4. How do the values of productive resources contribute to income inequality?

Acquisition

Students will know...

- private goods

Students will be skilled at...

- Distinguishing between public and private

<p>and protect property rights, and attempt to make markets more competitive. Most government policies also have direct or indirect effects on peoples' incomes.</p> <p>CEE #17 (Give examples of the) Costs of government policies sometimes exceed benefits. This may occur because of incentives facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.</p> <p>CCSS ELA 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.</p>	<ul style="list-style-type: none"> ● public goods ● free-rider problem ● cost-benefit analysis ● MC= MB rule ● positive externality ● negative externality ● spillover benefits ● spillover costs ● government failure ● market failure ● rent seeking behavior ● progressive tax ● regressive tax ● proportional tax ● efficiency loss of a tax ● subsidies ● income inequality ● Lorenz Curve ● Gini Ratio ● equality-efficiency trade off ● discrimination 	<p>goods.</p> <ul style="list-style-type: none"> ● Employing cost-benefit analysis as a reliable method for determining the optimal quantity of a public good. ● Identifying positive and negative externalities and the methods to remedy them. ● Explaining why government and market failures (public and private sector inefficiencies) occur. ● Differentiating among tax philosophies and ways to distribute a nation's tax burden. ● Applying the principles of tax shifting, tax incidence, and efficiency losses from taxes. ● Providing evidence for and against farm subsidies. ● Measuring and describing the sources, changes in and extent of income inequality in the U.S. ● Providing economic arguments for and against income inequality. ● Measuring and describing poverty among age, gender, ethnic, and citizenship groups. ● Outlining the major components of the income-maintenance program in the U.S. ● Explaining labor market discrimination and how it might affect hiring decisions and wages.
---	--	--

Revision/Draft

Stage 2 – Evidence

Code	Evaluative Criteria	Assessment Evidence
M, A	Classroom Participation Rubric contextualized for discussion	<p>PERFORMANCE TASK(S): <i>Students will show that they really understand evidence of...</i></p> <p><i>How individuals value public and private goods.</i></p> <p>A. Bonus Points Challenge</p> <p>Instructions: You have 10 tokens to divide between two boxes. When instructed by your teacher, write a number in each box, fold the paper, and give to your teacher.</p> <p>Name: _____</p> <div data-bbox="1192 657 1759 1003" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Box 1: You will receive one bonus point for every token you place in this box.</p> </div> <div data-bbox="1192 1024 1759 1377" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Box 2: The sum of all tokens placed in this box by the entire class will be multiplied by 2 to get the total number of bonus points, which will be evenly distributed to everyone in the class.</p> </div> <p>Students may discuss all scenarios of point distribution before all students commit to writing points in boxes. Once each student's</p>

Revision/Draft

M, A	Teacher created rubric	<p>bonus points have been calculated and shared, further discuss the value of points allocated as private goods versus public goods, and why some students choose private benefit over public benefit.</p> <p><i>Market outcomes can result in income inequality.</i></p> <p>B. Income Inequality Research</p> <p>Go to the interactive income distribution activity. Follow the site's directions to correctly populate the 5 quintiles. Study the sum total, mean and median incomes for this fictitious country.</p> <ul style="list-style-type: none"> • What would happen to the mean and median income for this country if the highest income were increased by \$20,000? <p>Complete this chart based on the information found in A.</p> <p>• Aggregate/Total Household Income =</p> <table border="1" data-bbox="982 852 1974 1128"> <thead> <tr> <th>Ranking of Household Groups</th> <th>Aggregate Income by Group</th> <th>Percent Distribution of Aggregate Income</th> </tr> </thead> <tbody> <tr> <td>1st Lowest</td> <td></td> <td></td> </tr> <tr> <td>2nd</td> <td></td> <td></td> </tr> <tr> <td>3rd</td> <td></td> <td></td> </tr> <tr> <td>4th</td> <td></td> <td></td> </tr> <tr> <td>5th Highest</td> <td></td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> • What does this data tell you about the distribution of income for households in this fictitious country? <p>On a separate sheet of graph paper, draw a correctly labeled graph showing a Lorenz Curve using the information in the table above.</p> <ul style="list-style-type: none"> • Does this country seem to have low income inequality or high income inequality? 	Ranking of Household Groups	Aggregate Income by Group	Percent Distribution of Aggregate Income	1 st Lowest			2 nd			3 rd			4 th			5 th Highest		
Ranking of Household Groups	Aggregate Income by Group	Percent Distribution of Aggregate Income																		
1 st Lowest																				
2 nd																				
3 rd																				
4 th																				
5 th Highest																				

Revision/Deft

Via Classroom: Access charts of Income Distribution in U.S. from 1970-2010 (Activity 14.3)

- Looking at Table A: What has happened to the mean income within each quintile from 1970 to 2010?
- Looking at Table B: In 2010, what percentage of total income did households in the lowest/poorest quintile earn?
- In the highest quintile?
- What has happened to the percentage of aggregate income that households earned in each quintile between 1970 and 2010?
- How does this data support the statement that the U.S. has an increasing income gap between wealthier households and poorer ones?

Revision/Draft

Via Classroom: Access charts of Income Distribution among Population Subgroups, 2012 (Activity 14.4)

- Make a generalization for each Table A subgroup across the quintiles.
 - Type of household
 - Age of householder
 - Number of earners
 - Work status

<p>T, M, A</p>	<p>School-wide Communication Rubric contextualized for peer teaching</p>	<ul style="list-style-type: none"> o Mean income <ul style="list-style-type: none"> • Make a generalization about the relationship of income level to education achievement based on Table B. • Compare the characteristics of the lowest quintile to the highest quintile. What generalizations can you make? <p><i>Economic concepts include imperfect competitors, factor markets, market failures, and the role of government in the economy.</i></p> <p>C. Cumulative Review Presentation</p> <p>Goal: Students create a classroom community in which every member contributes to the greater good by becoming an expert in one economic concept and teaching it to others.</p> <p>Role: Students act as teachers/tutors.</p> <p>Audience: Classmates</p> <p>Performance/Product and Purpose: Students will teach a review concept from units 4, 5, & 6 using an interactive slideshow presentation and practice problems.</p> <p>Standards/Criteria for Success: Presentations clearly demonstrate expertise in style of presentation and substance of content.</p>
----------------	--	--

Revision/Draft

A	Evaluation of student notebooks with these criteria for success: accuracy in content of vocabulary; precision in constructing graphs; comprehensive responses to study problems.	OTHER EVIDENCE: <i>Students will show they have achieved Stage 1 goals by...</i> Guided reading and note-taking from economics textbook chapters about public goods, externalities, economics of taxation, agriculture policy, income inequality, and discrimination.
M, A	Evaluation of student problem-solving process and/or presentation of solutions to whole class with these criteria for success: cooperative and collaborative approach; accuracy and comprehensive responses to practice problems; focused and articulate presentation of solutions.	Small group practice problem-solving for marginal revenue product, marginal revenue productivity, marginal resource cost, optimal combination of resources (labor and capital), perfectly competitive market wages, monopsonistic market wages, union wages, economic rent.
M, A	AP rubrics for multiple choice and free response questions.	AP style multiple choice, stimulus-based, and short answer responses on quizzes.
M, A	AP rubrics for multiple choice and free response questions.	Cumulative Exam encompassing units 4, 5, and 6 using released AP multiple choice and free response questions.

Revision/Draft

Stage 3 – Learning Plan

Stage 3 – Learning Plan	
Code	<p style="text-align: center;"><i>Pre-Assessment</i></p> <p>Ask students to describe scenarios when they have benefited from a show, meal, activity for which they did not pay and scenarios in which they have had to shoulder more of a burden in comparison to others participating in the same activity; give examples of government’s role in the economy; share stories of conversations around work experiences, wages, interviews, and job evaluations.</p>

	<p>Summary of Key Learning Events and Instruction</p> <p><i>Student success at transfer meaning and acquisition depends on...</i></p>	<p>Progress Monitoring</p>
M, A	<p>Reading and taking notes from textbook chapters according to Unit Responsibility sheet focusing on acquiring domain specific vocabulary, guided practice of constructing and interpreting graphs and tables, and responding to study questions.</p>	<p>Teacher review of notes as students review difficult questions. May result in whole class review and discussion if majority of students are struggling with a vocabulary term, concept, and/or skill.</p>
T, M, A	<p>Daily prompts that ask provocative, open-ended questions using unit vocabulary, concepts, and skills often connected to current economic events.</p>	<p>Teacher looks for engaged and varied responses from multiple students.</p>
A	<p>Viewing tutorial videos from ACDC Econ accompanied by slide presentations that break down steps for acquiring each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding steps. Periodic pauses for students to explain steps in their own words.</p>
A	<p>Viewing slide presentations of key unit vocabulary, concepts and skills.</p>	<p>Teacher looks for engaged and varied responses to scaffolded questions from multiple students.</p>
A	<p>Working cooperatively to solve and share problems in small groups for peer-guided practice of each concept and/or skill.</p>	<p>Teacher circulates to ensure that students are completing and understanding components to practice problems and working cooperatively.</p>
A	<p>Practicing test-taking strategies with practice quizzes in textbook to explain why the right answer is correct and how the other choices serve as distractors.</p>	<p>Teacher looks for engaged and evidence-based responses from multiple students.</p>

Revision Draft