

**FRE** | FEDERAL  
RESERVE  
EDUCATION

# GENERAL

**ECONOMICS** | ENTRANCE /  
EXIT TICKETS

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## Introduction

One of the steepest challenges in any economics class is that many students have not been exposed to economic concepts before in their previous coursework. This leads to students being fearful of new material or not truly mastering the ideas completely.

The best way to meet this challenge is to use both familiar materials to present new concepts and constant informal assessments in low stress ways to check for real understanding.

Entrance tickets should take students no more than two minutes of work to complete. A quick discussion led by the instructor serves as a good introduction to a new economic concept.

Exit tickets should also take less than five minutes at the end of class to reinforce big ideas presented throughout the class period. Emphasize to students that the questions on exit tickets are not formal assessments and are merely intended to give the instructor immediate feedback on that day's lesson. Many teachers encourage students to try their best by only counting the responses as participation or attendance grades.

It is imperative for instructors to use each exit ticket to encourage honest and open feedback from students on where they struggle with that day's lesson. Each exit ticket asks students to write one question about the curriculum content or a statement describing what they are still unsure about. The confidence gauge at the bottom of every slip is an easy way for teachers to see how confident students are with this material. Promote early and often that honestly providing feedback to an instructor during the unit will help avoid confusion as the content builds before the end of a section or course when it's too late. This information allows instructors as soon as the next class period to review/reteach any items that students have lingering struggles with before moving on. Teachers may track student and class confidence in the material with the data tracker spreadsheet at the end of this document.

Some of the activities require students to analyze macroeconomic data from a FRED Dashboard. This may be viewed online at <https://fredaccount.stlouisfed.org/public/dashboard/107737>

Best of luck this semester to you and your students.

**Mike Kaiman** Senior Economic Education Specialist  
Federal Reserve Bank of St. Louis



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click. teach. engage.

# STUDENT

GENERAL ECONOMICS | ENTRANCE /  
EXIT TICKETS

**Topic 1.1 Scarcity**

NAME \_\_\_\_\_

**Entrance Ticket**

1. Write a definition of what you think economists study.

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2. List three things that you use in your life that are scarce.

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**Topic 1.1 Scarcity**

NAME \_\_\_\_\_

**Exit Ticket**

1. What are the four major factors of production?

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2. When a business purchases a machine to make a product, that is considered what type of production factor?

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3. Are you still puzzled about anything we covered? Add one question/comment.

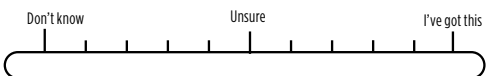
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4. Fill in your level of confidence in understanding what we learned today.



## Topic 1.2 Resource Allocation & Economic Systems

NAME \_\_\_\_\_

### Entrance Ticket

1. What type of economy do you think exists in the United States?

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2. How can a government influence how scarce resources are used?

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## Topic 1.2 Resource Allocation & Economic Systems

NAME \_\_\_\_\_

### Exit Ticket

1. What is the major difference between a command economy and a market economy?

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2. In a pure market economy, what two groups interact with each other in exchanging goods and services?

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3. Are you still puzzled about anything we covered? Add one question/comment.

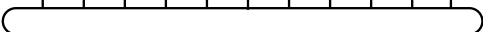
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4. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this



## Topic 1.3 Opportunity Cost & Production Possibilities Curve

NAME \_\_\_\_\_

### Entrance Ticket

1. Is there such a thing as a free lunch?

---



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2. With scarce resources, the United States during World War II endured a “guns vs. butter” debate over economic production. What do you think this means?

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## Topic 1.3 Opportunity Cost & Production Possibilities Curve

NAME \_\_\_\_\_

### Exit Ticket

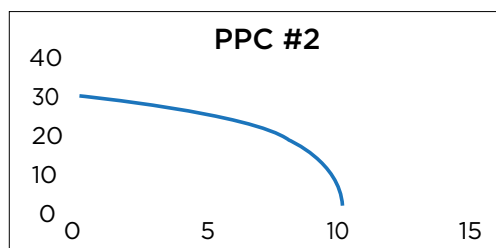
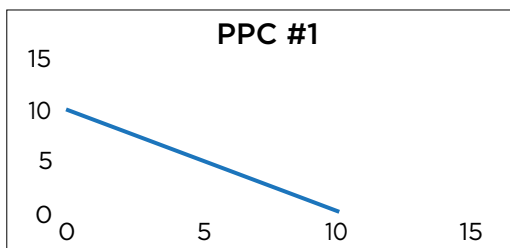
1. What is the definition of opportunity cost?

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2. What is the explanation for the difference in shape between the two PPC curves below?



3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this



Topic 1.4 Cost-Benefit Analysis

NAME \_\_\_\_\_

Entrance Ticket

1. Stickers like the one shown below have been placed on music albums sold in the US since 1985. Describe what you believe “explicit content” to be.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Imagine you have two tests, one in English and one in Chemistry. The English test is going to be hard for you, but bombing it will drop your semester grade dramatically. The chemistry test should be easier, but it won’t impact your semester average as much. Describe your decision-making process for how you plan to study for both tests if you only have 4 hours to study the night before.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Topic 1.4 Cost-Benefit Analysis

NAME \_\_\_\_\_

Exit Ticket

1. Explain the difference between explicit and implicit costs.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. Consider a situation where your parents will pay you to clean the house by room. Using total cost-benefit analysis, identify how many rooms you should clean.

| Rooms | Total Cost / Number of Hours it Takes to Clean | Total Payment | Total Net Benefit |
|-------|------------------------------------------------|---------------|-------------------|
| 0     | 0                                              | \$0           |                   |
| 1     | 2                                              | \$5.00        |                   |
| 2     | 4                                              | \$9.00        |                   |
| 3     | 6                                              | \$14.00       |                   |
| 4     | 8                                              | \$20.00       |                   |
| 5     | 12                                             | \$22.00       |                   |

## Topic 1.4 Cost-Benefit Analysis (cont.)

NAME \_\_\_\_\_

### Entrance Ticket

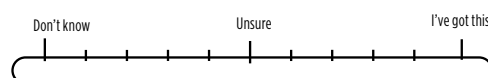
3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.



## Topic 1.5 Marginal Analysis

NAME \_\_\_\_\_

### Entrance Ticket

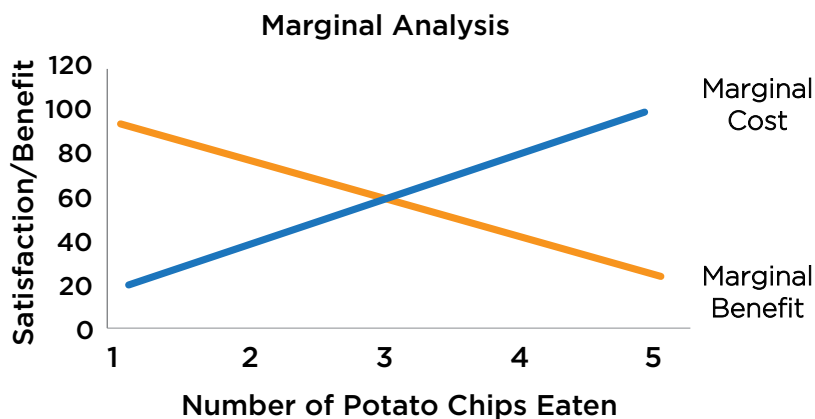
1. Why isn't it a good idea to eat a full bag of potato chips in one sitting, even if you're hungry?  
As you eat potato chips, what happens to your total satisfaction?  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_
2. Imagine in a game of football on a 3rd and 10 play, a quarterback makes a successful pass to gain 18 yards. After the play, a penalty of five yards is assessed. Would the coach be happy with the overall result of that play? Explain why or why not. What if the penalty was 10 yards?  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_

## Topic 1.5 Marginal Analysis

NAME \_\_\_\_\_

### Exit Ticket

1. Define the concept of diminishing returns.  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_
2. Consider the graph below. Explain, using marginal analysis, why eating three potato chips is the optimal quantity consumed.



## Topic 1.5 Marginal Analysis (cont.)

NAME \_\_\_\_\_

### Exit Ticket

3. Are you still puzzled about anything we covered? Add one question/comment.

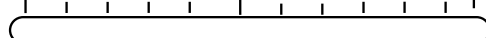
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4. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this



**Topic 1.6 Comparative Advantage and Trade** NAME \_\_\_\_\_

**Entrance Ticket**

1. If Kristen has a lower opportunity cost in producing boomerangs than Megan, and Megan can produce harmonicas at a lower opportunity cost than Kristen, how could both Kristen and Megan benefit if both want boomerangs and harmonicas?

---

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2. Write what you believe the term “mutually beneficial” means.

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**Topic 1.6 Comparative Advantage and Trade** NAME \_\_\_\_\_

**Exit Ticket**

1. Consider the following situation showing how many items Kristen and Megan can produce in one day. Identify which party (if any) has a comparative advantage.

|         | Boomerangs | Harmonicas |
|---------|------------|------------|
| Kristen | 1          | 4          |
| Megan   | 2          | 3          |

2. Should Megan and Kristen trade with each other? Explain why or why not.

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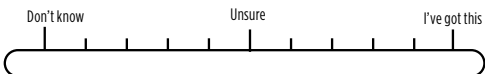
3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.



Topic 2.1 Demand

NAME \_\_\_\_\_

Entrance Ticket

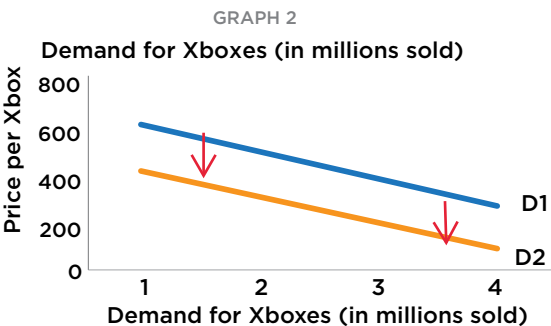
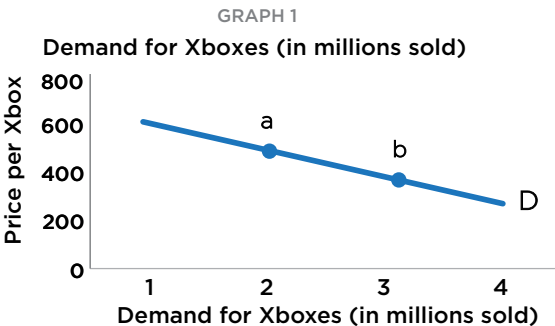
1. Say an Xbox originally costs \$400. Microsoft changes the price to \$500. What do you think will happen to the quantity of Xboxes sold?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. Now say Sony releases a new PlayStation that has dramatically better games, graphics, and features. What do you think will happen to the quantity of Xboxes sold?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Topic 2.1 Demand

NAME \_\_\_\_\_

Exit Ticket

1. Explain what is happening in this demand curve graph as we move from points A to B in graph 1. Why is there a shift in the demand curve for graph 2?



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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## Topic 2.1 Demand (cont.)

NAME \_\_\_\_\_

### Exit Ticket

2. Are you still puzzled about anything we covered? Add one question/comment.

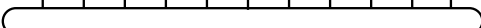
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3. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this



Topic 2.2 Supply

NAME\_\_\_\_\_

Entrance Ticket

1. Imagine running a lemonade stand and charging \$1.00 per glass. Several customers say after buying a drink that they would’ve paid \$5.00. With that feedback, circle what changes you would make (if any) to your business.

| Price Charged for Lemonade |           |          | Amount of Lemonade Produced |           |          |
|----------------------------|-----------|----------|-----------------------------|-----------|----------|
| Decrease                   | No Change | Increase | Decrease                    | No Change | Increase |

Topic 2.2 Supply

NAME\_\_\_\_\_

Exit Ticket

1. Explain one reason why a supply curve would SHIFT either to the left or right.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. How does a change in price of that good or service affect the supply curve?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Are you still puzzled about anything we covered? Add one question/comment

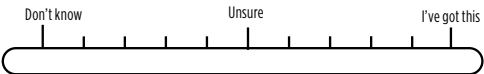
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4. Fill in your level of confidence in understanding what you learned today.



## Topic 2.3 Market Equilibrium

NAME \_\_\_\_\_

### Entrance Ticket

1. Describe what type of economic condition is going on in each photo below.



**Costco Meat Section  
March 2020**

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**Costco Paper Goods  
August 2020**

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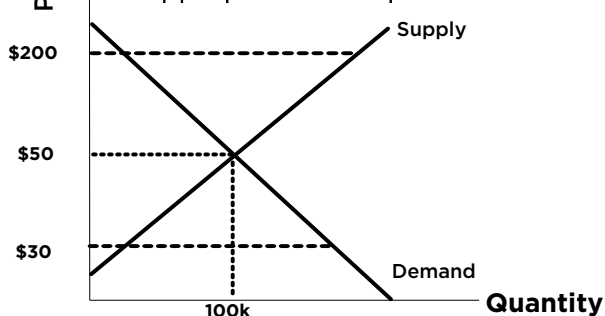
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## Topic 2.3 Market Equilibrium

NAME \_\_\_\_\_

### Exit Ticket

1. Refer to the graph showing the market for jeans below. Note equilibrium price is \$50 and quantity supplied is 100,000. Assume the market price suddenly decreases to \$30. For scenario 1, circle the appropriate description of the market. What if the price increases to \$200?



SCENARIO #1: At \$30 supply is    ☐ ☐ ☐ demand

SCENARIO #2: At \$200 supply is    ☐ ☐ ☐ demand

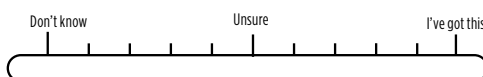
2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



## Topic 2.4 Disequilibrium Entrance Ticket

NAME: \_\_\_\_\_

1. REVIEW! A shift left in EITHER the demand or supply curve indicates a(n) (circle one)

INCREASE / DECREASE

2. Provide a reason why the scales below would be out of balance.




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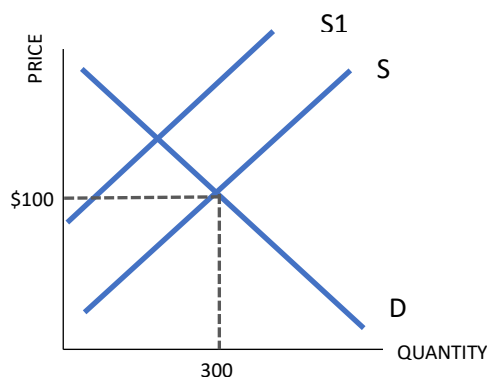


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## Topic 2.4 Disequilibrium Exit Ticket

NAME: \_\_\_\_\_

1. Consider the supply/demand graph below showing a shift of the supply curve. Draw arrows along the X and Y axes indicating which direction price and quantity will change.



2. Are you still puzzled about anything we covered? Add one question/comment.

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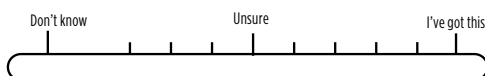


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3. Fill in your level of confidence in understanding what you learned today.



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CENTRAL TO AMERICA'S ECONOMY\*

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Topic 2.5 Elasticity

Name\_\_\_\_\_

Entrance Ticket

1. Identify a good or service that you MUST have and for which you are willing to pay almost any price.
2. Identify a good or service that you could easily give up if the price changed even slightly.
3. If you produced a good or service, why is it a good idea to know how much your customers are willing to pay?

Topic 2.5 Elasticity

NAME\_\_\_\_\_

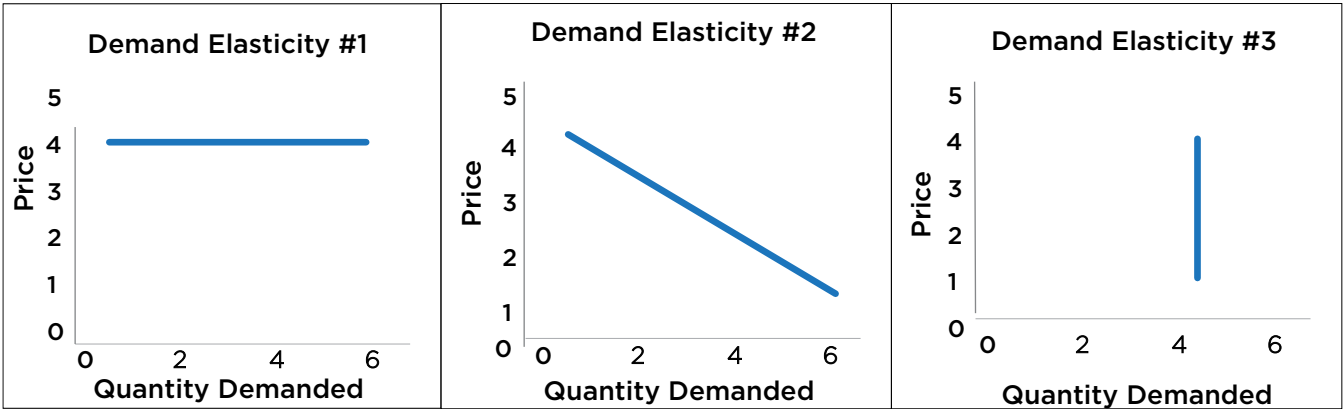
Exit Ticket

1. Consider the three graphs below. If you were calculating price elasticity of demand, which good would be greater than 1, less than 1, or equal to 1? Circle your answer above each graph.

< 1   > 1   = 1

< 1   > 1   = 1

< 1   > 1   = 1



## Topic 2.5 Elasticity (cont.)

NAME \_\_\_\_\_

### Exit Ticket

2. If a producer either raises or lowers a price and it does not impact total revenue, which elasticity value is this?

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3. Are you still puzzled about anything we covered? Add one question/comment.

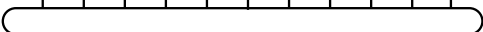
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4. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this



## Topic 3.1 Taxes & Subsidies Entrance Ticket

NAME: \_\_\_\_\_

1. List three things you or your family uses that is taxed.

\_\_\_\_\_

2. Why does a government impose taxes?

\_\_\_\_\_

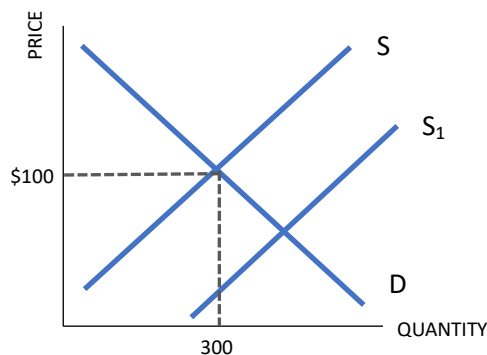
\_\_\_\_\_

\_\_\_\_\_

## Topic 3.1 Taxes & Subsidies Exit Ticket

NAME: \_\_\_\_\_

1. Consider the supply/demand graph below showing a shift of the supply curve after a government subsidy. Draw arrows along the X and Y axes indicating which direction price and quantity will change.



2. Are you still puzzled about anything we covered? Add one question/comment.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Fill in your level of confidence in understanding what you learned today.



## Topic 3.2 Price Ceilings & Floors

Name \_\_\_\_\_

### Entrance Ticket

1. Would you be in favor of the government capping the price gas stations could charge for a gallon of gas at \$2.00? Circle your choice below.

Yes

No

2. Would you be in favor of the minimum wage being raised to \$20.00 an hour? Circle your choice below.

Yes

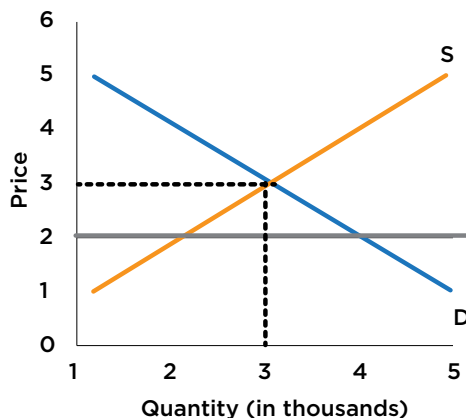
No

## Topic 3.2 Price Ceilings & Floors

NAME \_\_\_\_\_

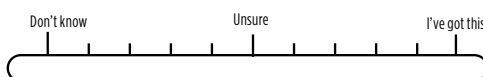
### Exit Ticket

1. Identify what type of government intervention is illustrated in the graph below AND calculate the amount of shortage/surplus this intervention is causing. Briefly explain why this market is in disequilibrium.



2. Are you still puzzled about anything we covered? Add one question/comment.

3. Fill in your level of confidence in understanding what you learned today.



Topic 3.3 Externalities

NAME \_\_\_\_\_

Entrance Ticket

1. Who is responsible for the damage in these pictures?



Library of Congress



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Topic 3.3 Externalities

NAME \_\_\_\_\_

Exit Ticket

1. Correctly identify and circle the externality in the picture below as positive or negative. What actions could the government take to change the situation?



POSITIVE

NEGATIVE

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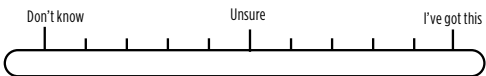
2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



Topic 4.1 Firm Costs

Name\_\_\_\_\_

Entrance Ticket

1. List some of your short-term and long-term educational goals in the table below.

| Short-Term Goals | Long-Term Goals |
|------------------|-----------------|
|                  |                 |

Topic 4.1 Firm Costs

NAME\_\_\_\_\_

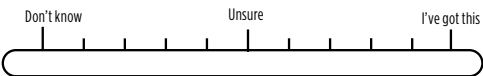
Exit Ticket

1. REVIEW! What’s the difference between a firm’s production costs in the short run and in the the long run?

2. Define economies of scale.

3. Are you still puzzled about anything we covered? Add one question/comment.

4. Fill in your level of confidence in understanding what you learned today.



Topic 4.2 Types of Profit

NAME\_\_\_\_\_

Exit Ticket

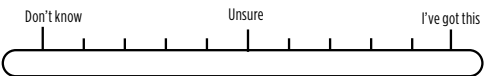
1. In 2022, Amazon reported \$514.0 billion in revenue and \$501.7 billion in costs. How much money did Amazon make/lose in that year?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Topic 4.2 Types of Profit

NAME\_\_\_\_\_

Exit Ticket

1. If firms in a market are running economic profits in the short run, what will happen to the number of firms in the long run?
- \_\_\_\_\_
- \_\_\_\_\_
2. What will happen if firms are not making economic profits, nor breaking even, and are losing money in the long run?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
3. Are you still puzzled about anything we covered? Add one question/comment.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
4. Fill in your level of confidence in understanding what you learned today.



**Topic 4.3 Production Decisions**  
**Entrance Ticket**

NAME: \_\_\_\_\_

1. Scott's Tater Tots needs to know how much to produce for its business and is asking you for advice. Briefly explain from the following options what you would suggest the best strategy to be:

One per customer

A predetermined  
total amount

Enough to stuff  
all customers

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**Topic 4.3 Production Decisions**  
**Exit Ticket**

NAME: \_\_\_\_\_

1. Eva is about to launch her business making nerdy econ laptop stickers to sell online. She knows how much her costs will be and has estimated the best price to charge. Which method of measuring her costs and revenue would be the BEST method to determine the exact number of stickers Eva should produce? Explain why you selected that option.

Total Cost /  
Total  
Revenue

Average Cost /  
Average  
Revenue

Marginal Cost /  
Marginal  
Revenue

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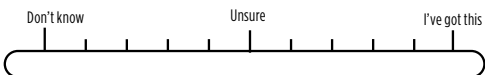
2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



## Topic 4.4 Perfect Competition Entrance Ticket

NAME \_\_\_\_\_

1. List three items you or your family purchases that are the same, regardless of brand name or the store where you purchased the item.

\_\_\_\_\_

## Topic 4.4 Perfect Competition Exit Ticket

NAME \_\_\_\_\_

1. Briefly explain why firms in perfect competition are price takers.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Circle which of the following is NOT considered to be a barrier of entry for a firm in a market.

Start-up costs

Technology

Government regulations

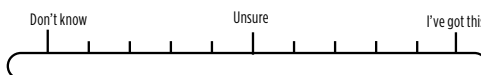
Number of customers

Limited access to resources

3. Are you still puzzled about anything we covered? Add one question/comment.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Fill in your level of confidence in understand what you learned today.



## Topic 4.5 Monopoly

NAME \_\_\_\_\_

### Entrance Ticket

1. Identify an example of a business you think is a monopoly.

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2. Can a monopoly charge as much as it wants for its good/service?

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## Topic 4.5 Monopoly

NAME \_\_\_\_\_

### Exit Ticket

1. Briefly explain how economies of scale allow a monopoly to become a price maker.

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2. List which of the firms below are a natural or a government protected monopoly.

Major League Baseball

Electric Utility Company

Amtrak

Municipal Water Company

DeBeers Diamonds

Drug patent holders

NATURAL MONOPOLY

GOVERNMENT-PROTECTED MONOPOLY

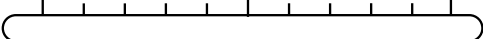
3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this



**Topic 4.6 Price Discrimination**

NAME \_\_\_\_\_

**Entrance Ticket**

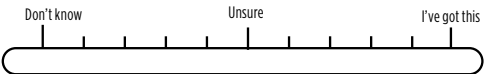
1. Why do airlines charge business fliers more than vacationers for the same ticket?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. Why does Spotify offer a student subscription for \$6/month when its individual subscription is \$11/month?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**Topic 4.6 Price Discrimination**

NAME \_\_\_\_\_

**Exit Ticket**

1. What is the monopolist’s ultimate goal if they can price-discriminate for each consumer?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. If a monopoly could price-discriminate for every available consumer, what would happen to deadweight loss?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
3. Are you still puzzled about anything we covered? Add one question/comment.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
4. Fill in your level of confidence in understanding what you learned today.



Topic 4.7 Oligopoly

NAME \_\_\_\_\_

Entrance Ticket

1. Identify a market that is dominated by just a handful of firms.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Topic 4.7 Oligopoly

NAME \_\_\_\_\_

Exit Ticket

1. Fill in the table below by correctly identifying the type of market based on the description.

| Market Description                                                                                                                   | Type of Market |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Very many firms that have no price-setting power can enter/exit the market extremely easily. Both allocative & productive efficient. | _____          |
| A few firms have limited price-setting power due to significant barriers of entry/exit. Neither allocative nor productive efficient. | _____          |
| A single firm that is an absolute price-maker. Could run long-term profits.                                                          | _____          |

2. Briefly explain how the Oil Producing Exporting Countries (OPEC) organization acts as an oligopoly.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

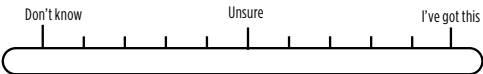
3. Are you still puzzled about anything we covered? Add one question/comment.

\_\_\_\_\_

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\_\_\_\_\_

4. Fill in your level of confidence in understanding what you learned today.



## Topic 4.8 Property Rights Entrance Ticket

NAME: \_\_\_\_\_

1. Imagine you own a roadside apple orchard. If people can pull over and take as many apples as they'd like without paying, what actions could you take to prevent this situation from getting worse?

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2. If Taylor Swift announces that fans who bought tickets for her upcoming tour would be unable to sell or transfer them to another buyer, what do you think would happen to the number of tickets sold?

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## Topic 4.8 Property Rights Exit Ticket

NAME: \_\_\_\_\_

1. Circle all the ways a government can guarantee property rights.

Enforce trespassing laws

Prosecute stealers

Allocate resources fairly

Issue patents & intellectual property rules

Write & fairly judge contract law

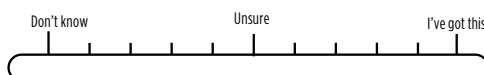
2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



**Topic 4.9 Public & Private Goods**

NAME \_\_\_\_\_

**Entrance Ticket**

1. Why does the government, and not the private sector, provide military protection for the nation?

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**Topic 4.9 Public & Private Goods**

NAME \_\_\_\_\_

**Exit Ticket**

1. Describe how free riders force the government to provide certain goods and services.

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2. Define the two factors that are required for pure public goods.

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3. Provide an example of “the tragedy of the commons.”

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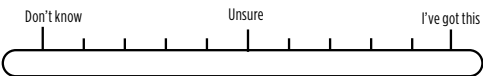
4. Are you still puzzled about anything we covered? Add one question/comment.

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5. Fill in your level of confidence in understanding what you learned today.

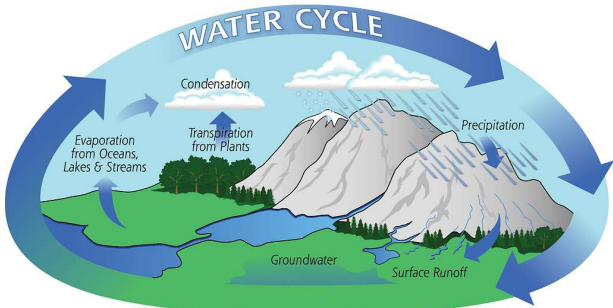


Topic 5.1 Circular Flow and GDP

NAME \_\_\_\_\_

Entrance Ticket

1. Describe what is going on in the illustration below:



Source: [nasa.gov](https://www.nasa.gov)

2. In this circular pattern is any water lost (or gained)?

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Topic 5.1 Circular Flow and GDP

NAME \_\_\_\_\_

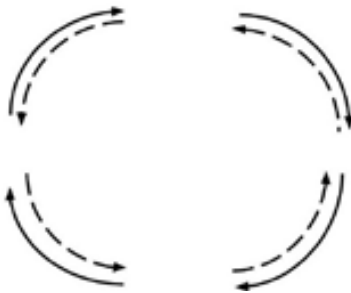
Exit Ticket

1. List the three possible ways to measure GDP.

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2. In the illustration below, identify the major participants (households / businesses) & market types (product / resource) that are found in the circular flow diagram.



3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this

## Topic 5.2 GDP Calculations

NAME \_\_\_\_\_

### Entrance Ticket

1. Think about a visit to a doctor's office. What "vital signs" are usually taken?

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2. What is the benefit of determining these vital signs? What types of medical issues go unchecked if further examination isn't conducted?

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## Topic 5.2 GDP Calculations

NAME \_\_\_\_\_

### Exit Ticket

1. Circle all the possible transactions that would NOT be calculated in GDP.

A \$10 birthday check from Grandma

School purchases a popcorn machine for its students at lunch

Purchasing 1 share of Tesla stock

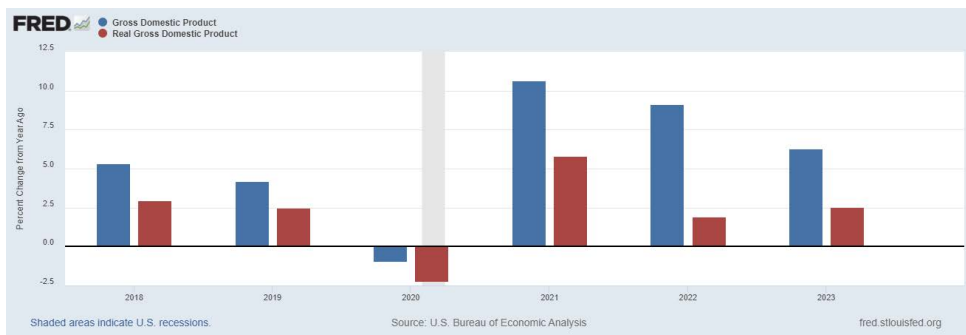
Apple buying screens for its next iPhone

Your midnight fast food taco run of \$4.53

A kid selling lemonade for \$1 in their driveway

Buying a \$5000 used car from a friend

2. Consider the following FRED graph showing GDP data from the US Bureau of Economic Analysis. The blue bars represent annual growth rate of nominal GDP, while the red bars show the annual growth rate of real GDP. Explain why both rates were negative in 2020.



Graph available on FRED Dashboard <https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 1: Ticket 5.2

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## Topic 5.2 GDP (cont.)

NAME \_\_\_\_\_

### Exit Ticket

3. Using the same graph describe why the blue bars are much taller than the red after 2020 than before.

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4. Are you still puzzled about anything we covered? Add one question/comment.

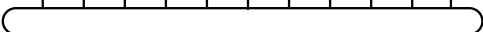
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5. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this



Topic 5.3 Unemployment

NAME \_\_\_\_\_

Entrance Ticket

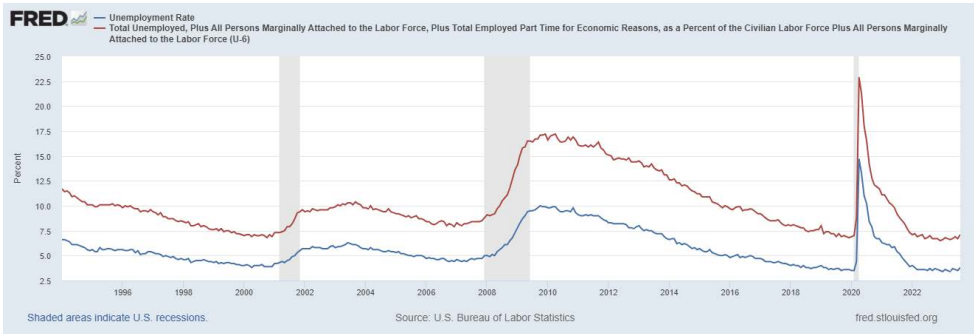
- 1. What types of people do you think are part of the labor force in this country?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 2. Is there a difference between being out of work and not having enough work?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Topic 5.3 Unemployment

NAME \_\_\_\_\_

Exit Ticket

- 1. Consider the unemployment graph below. The lower line (U3) is what the government reports as the unemployment rate. The upper line (U6) includes part time, marginal, and discouraged workers. Describe which measure would give a better understanding of the work force in the United States.



Graph available on FRED Dashboard <https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 2: Ticket 5.3

- 2. The sum of which two types of unemployment make up the natural rate of unemployment?  
\_\_\_\_\_  
\_\_\_\_\_
- 3. Are you still puzzled about anything we covered? Add one question/comment.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 4. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this

\_\_\_\_\_

Topic 5.4 Price Indices & Inflation

NAME \_\_\_\_\_

Entrance Ticket

1. When shopping for food at the grocery store, what type of items do you or your family purchase?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Topic 5.4 Price Indices & Inflation

NAME \_\_\_\_\_

Exit Ticket



Graph available on FRED Dashboard <https://fredaccount.stlouisfed.org/public/dashboard/107737> Graphs 3 & 4: Ticket 5.4

1. Consider the graph on the left showing the consumer price index (CPI) from the US Bureau of Labor Statistics. In February 2022 CPI was reported at 284.610. One year later it was reported at 301.608. Calculate the annual inflation rate between those two dates to find the year-to-year percent growth rate of CPI.
2. Consider the graph on the right showing annual CPI inflation rate from the US Bureau of Labor Statistics. Between 1948 and 2023 when was the highest annual rate of inflation? When was there deflation or negative inflation rates?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Are you still puzzled about anything we covered? Add one question/comment.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this

\_\_\_\_\_

Topic 5.5 Costs of Inflation

NAME \_\_\_\_\_

Entrance Ticket

1. If you are planning to attend college would you rather pay a student loan that charges 2% interest or 10%? Why?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. Say that student loan is charging 2% interest. Unexpectedly, inflation increases from 2% to 5%. Are you better off, worse off, or the same with inflation being higher than your interest rate?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Topic 5.5 Costs of Inflation

NAME \_\_\_\_\_

Exit Ticket

1. Circle all the groups that are HURT by unexpected inflation.
- Savers                      People on fixed incomes                      Borrowers
2. Explain why those groups you circled are hurt by unexpected inflation.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
3. Are you still puzzled about anything we covered? Add one question/comment.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
4. Fill in your level of confidence in understanding what you learned today.
- Don't know

Unsure

I've got this

## Topic 5.6 Business Cycles

NAME \_\_\_\_\_

### Entrance Ticket

1. How do you think the US economy is doing right now? Provide one example to support your point.

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2. In the long run, what do you think is the trend in real GDP?

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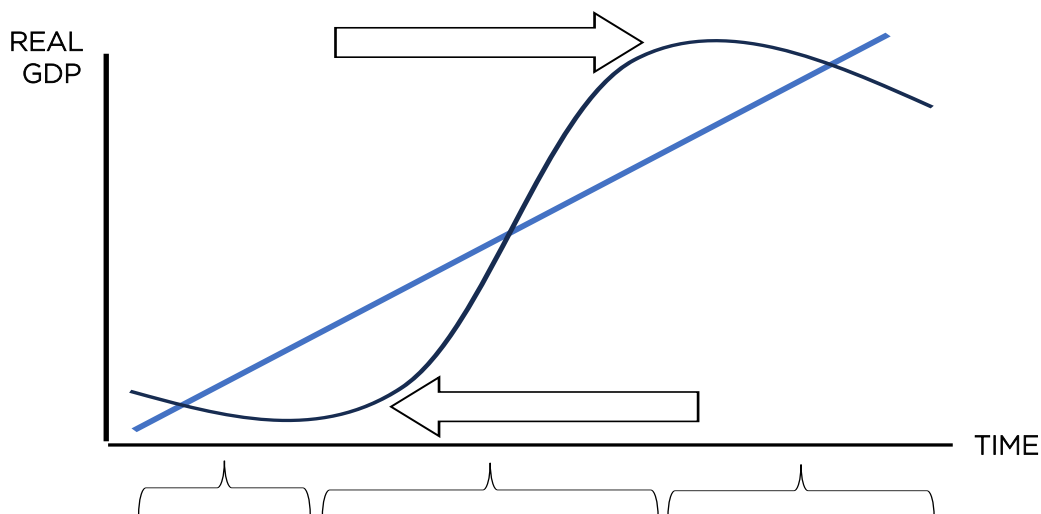
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## Topic 5.6 Business Cycles

NAME \_\_\_\_\_

### Exit Ticket

1. Fill in the business cycle illustration below. In the arrows, identify the peak and trough of the cycle. In the brackets below the X-axis identify if we are in an expansion or contraction phase.



2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



## Topic 5.7 Aggregate Demand & Supply

NAME \_\_\_\_\_

### Entrance Ticket

1. REVIEW! Why is any supply curve upward-sloping?

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2. REVIEW! Why is any demand curve downward-sloping?

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## Topic 5.7 Aggregate Demand & Supply

NAME \_\_\_\_\_

### Exit Ticket

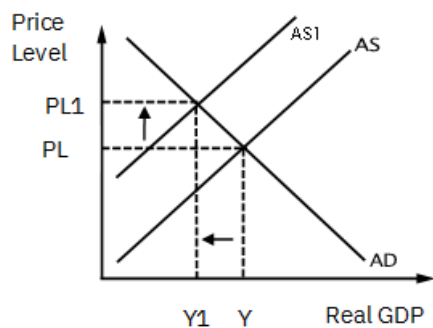
1. Correctly match the following descriptions with the changes to the four AD/AS graphs below.

COST-PULL INFLATION

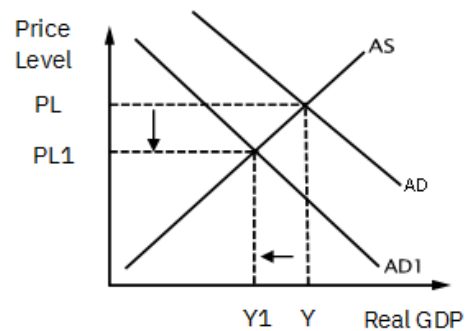
DEMAND-PULL INFLATION

CONTRACTION IN BUSINESS CYCLE

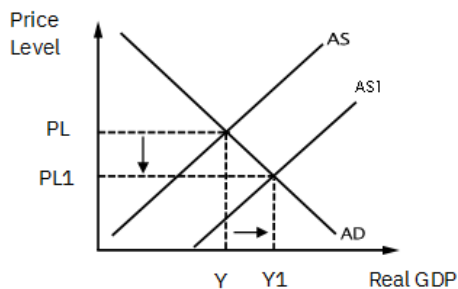
FAVORABLE WEATHER CHANGES IN AGRICULTURE



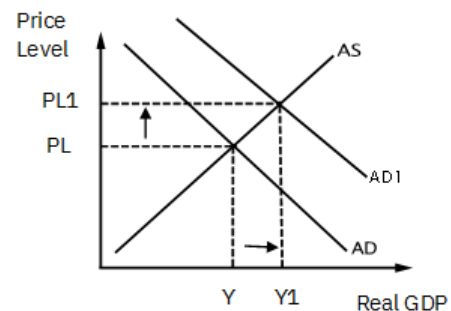
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

## Topic 5.7 Aggregate Demand & Supply

### Exit Ticket

NAME \_\_\_\_\_

3. Are you still puzzled about anything we covered? Add one question/comment.

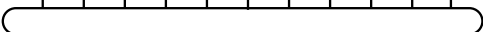
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4. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this



## Topic 6.1 Money

NAME \_\_\_\_\_

### Entrance Ticket

1. You are in a strange US city at midnight and you need to buy gas. You have a \$100 bill, 200. Mexican pesos, 1 bitcoin, and an American Gold Eagle coin. Which would be the easiest financial instrument to purchase gas at midnight?

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2. Is this money? Briefly explain your answer.



*Photo by Ethnological Museum Hamburg  
distributed under a CC-BY 4.0 license*

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## Topic 6.1 Money

NAME \_\_\_\_\_

### Exit Ticket

1. List the three functions of money.

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2. Are you still puzzled about anything we covered? Add one question/comment.

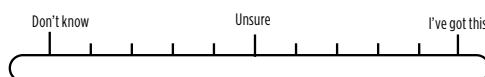
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3. Fill in your level of confidence in understanding what you learned today.



**Topic 6.2 Money Supply**  
**Entrance Ticket**

NAME \_\_\_\_\_

1. Who do you think controls the supply of money in the United States?

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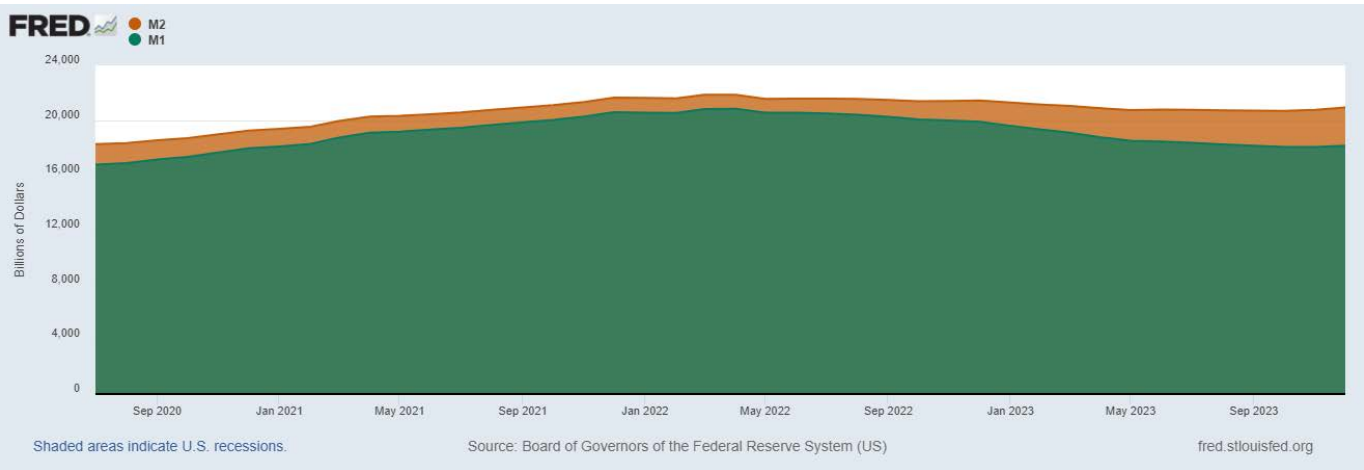
**Topic 6.2 Money Supply**  
**Exit Ticket**

NAME \_\_\_\_\_

1. Consider the money supply data from the Board of Governors of the Federal Reserve. M2 (in orange) is shown behind M1 (in green). Explain why M2 is always a larger figure than M1.

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Graph available on FRED dashboard  
<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 5: Ticket 6.2

3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this

\_\_\_\_\_

Topic 6.3 Banking & Money Supply Expansion

NAME\_\_\_\_\_

Entrance Ticket

1. Quick poll: If you open a savings account at any bank and deposit \$500, does the bank just keep all \$500 in a vault for safekeeping?

YES

NO

Topic 6.3 Banking & Money Supply Expansion

NAME\_\_\_\_\_

Exit Ticket

1. Assume you deposit \$10,000 in a bank that will loan out all its excess reserves. If the required reserve ratio is 10% and each bank loans out the full amount allowable, fill in the table below.

| Original deposit | Bank 1 Loanable funds | Bank 2 Loanable funds | Bank 3 Loanable funds | Maximum increase in money supply |
|------------------|-----------------------|-----------------------|-----------------------|----------------------------------|
|                  |                       |                       |                       |                                  |

3. Are you still puzzled about anything we covered? Add one question/comment.

4. Fill in your level of confidence in understanding what you learned today.



Topic 6.4 Interest Rates

NAME \_\_\_\_\_

Entrance Ticket

1. List three examples from your own or your family’s life that would require you to pay attention to interest rates.

2. Suppose you take out a \$100,000 student loan for college. Would you rather pay 2% or 10% interest?

Topic 6.4 Interest Rates

NAME \_\_\_\_\_

Exit Ticket

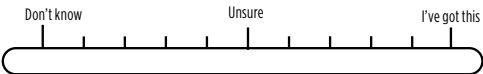
1. Let’s return to that \$100,000 student loan you took at 2% interest. If the inflation rate suddenly rises to 7%, are you (the person paying back the loan) or the bank (which gave you the loan) better off, worse off, or the same? Explain your answer.

2. Calculate the real interest rate in the table below:

| Year | Nominal interest Rate (%) | Infation rate (%) | Real interest rate (%) |
|------|---------------------------|-------------------|------------------------|
| 1980 | 14%                       | 12%               |                        |
| 2010 | 4%                        | 1%                |                        |
| 2021 | 3%                        | 2%                |                        |

3. Are you still puzzled about anything we covered? Add one question/comment.

4. Fill in your level of confidence in understanding what you learned today.



Topic 7.1 Fiscal Policy

NAME \_\_\_\_\_

Entrance Ticket

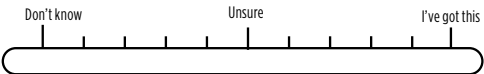
1. List three things you think are the largest part of the federal government’s annual spending.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. REVIEW! Write the expenditure formula for calculating GDP.

Topic 7.1 Fiscal Policy

NAME \_\_\_\_\_

Exit Ticket

1. Circle all the actions the federal government could take to enact a contractionary fiscal policy.
- |             |                         |                           |
|-------------|-------------------------|---------------------------|
| Raise Taxes | Decrease Govt. Spending | Increase Deficit Spending |
| Lower Taxes | Increase Govt. Spending | Decrease Deficit Spending |
2. Explain why, during an expansionary policy, the government’s spending multiplier is always greater than the tax multiplier.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
3. Are you still puzzled about anything we covered? Add one question/comment.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
4. Fill in your level of confidence in understanding what you learned today.



## Topic 7.2 Taxes

### Entrance Ticket

NAME: \_\_\_\_\_

1. List three items that you or your family pay taxes on.

\_\_\_\_\_

2. Why do governments need to impose taxes?

\_\_\_\_\_

\_\_\_\_\_

## Topic 7.2 Taxes

### Exit Ticket

NAME: \_\_\_\_\_

1. Calculate the effective tax rate of a household that has a total income of \$50,000 and pays \$8,000 in taxes.

2. Identify the type of tax based on the description in the table.

| DESCRIPTION                                                     | TYPE OF TAX |
|-----------------------------------------------------------------|-------------|
| The effective tax rate increases as income increases.           |             |
| The effective tax rate decreases as income increases.           |             |
| The effective rate stays the same regardless of income changes. |             |

3. Are you still puzzled about anything we covered? Add one question/comment.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this

\_\_\_\_\_



## Topic 7.3 Automatic Stabilizers

NAME \_\_\_\_\_

### Entrance Ticket

1. Define the difference between discretionary and mandatory.

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2. Do you think the federal government spends more on discretionary or mandatory programs?

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## Topic 7.3 Automatic Stabilizers

NAME \_\_\_\_\_

### Exit Ticket

1. The United States finds itself in the middle of a recession. Circle all the automatic stabilizers the federal government has at its disposal to enact expansionary fiscal policy.

Food Stamp Assistance

Stimulus Checks

New Corporate Tax Cut

New Infrastructure Projects

Unemployment Benefits

Progressive Income Tax System

2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



Topic 7.4 Government Deficits & Debt

NAME \_\_\_\_\_

Entrance Ticket

- 1. REVIEW! How can a government fund its fiscal policy if it doesn't take in enough revenue through taxes?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 2. As of October 2023, the national debt stood at approximately \$30 trillion. What consequences do you think this has on the economy?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

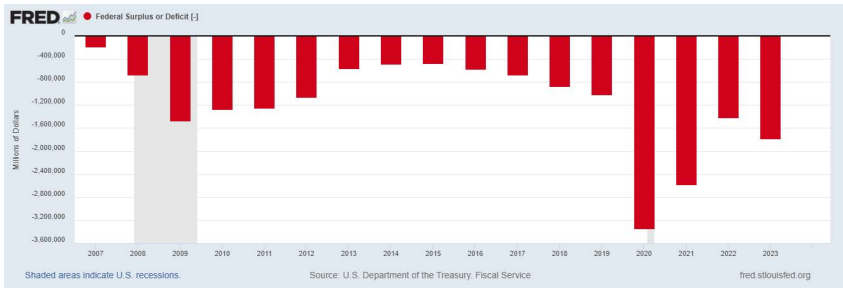
Topic 5.4 Government Deficits & Debt

NAME \_\_\_\_\_

Exit Ticket

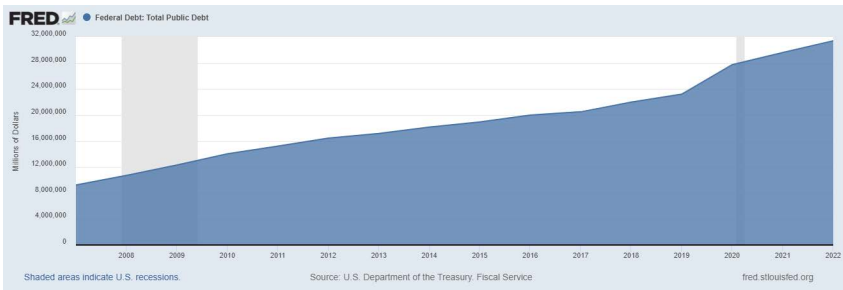
- 1. Graph 1 shows the federal surplus or deficit from the U.S. Treasury. Graph 2 shows the total federal debt. Describe the relationship linking both economic indicators.

Graph 1



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Graph 2



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
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<https://fredaccount.stlouisfed.org/public/dashboard/107737>    Graphs 6 & 7: Topic 7.4

## Topic 7.4 Government Deficits & Debt (cont.)

NAME \_\_\_\_\_

### Exit Ticket

2. Are you still puzzled about anything we covered? Add one question/comment.

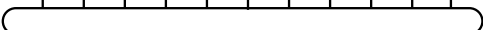
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3. Fill in your level of confidence in understanding what you learned today.

Don't know                      Unsure                      I've got this

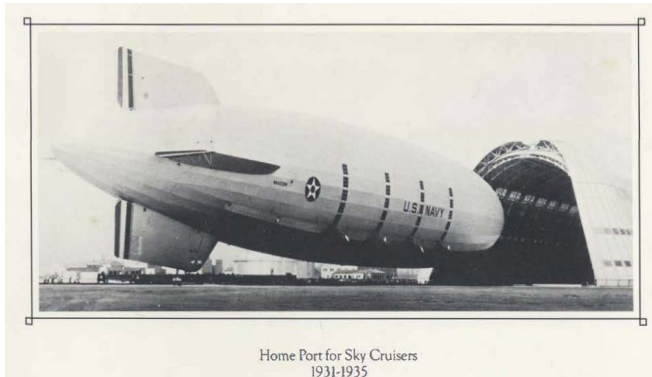


## Topic 7.5 Crowding Out

NAME \_\_\_\_\_

### Entrance Ticket

1. What will happen to the amount of space in this hangar after the blimp is completely inside?



Moffett Field, CA. Image courtesy [historicproperties.arc.nasa.gov](https://historicproperties.arc.nasa.gov)

2. REVIEW! True or False: The federal government can set interest rates.

## Topic 7.5 Crowding Out

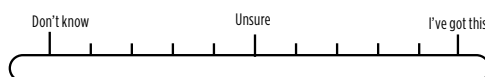
NAME \_\_\_\_\_

### Exit Ticket

1. Assume that sudden and massive government deficit spending has extreme consequences in the loanable funds market. How might that affect interest rates and real GDP?

2. Are you still puzzled about anything we covered? Add one question/comment.

3. Fill in your level of confidence in understanding what you learned today.



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## Topic 7.6 Federal Reserve Structure Entrance Ticket

NAME: \_\_\_\_\_

1. What bank does the federal government use?

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## Topic 7.6 Federal Reserve Structure Exit Ticket

NAME: \_\_\_\_\_

1. Circle all the topics below that correctly describe the Federal Reserve's role.

Setting Monetary Policy

Part of the Legislative Branch

Manage the Federal Funds Rate

Lender of Last Resort for Banks

Part of the Executive Branch

Setting Fiscal Policy

2. Circle the two parts of the Federal Reserve's Dual Mandate

Stable Prices

A Balanced Budget

Low Interest Rates

Constant GDP Growth

Maximum Employment

No Stock Market Crashes

3. Are you still puzzled about anything we covered? Add one question/comment.

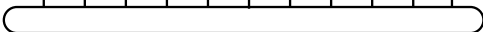
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4. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this



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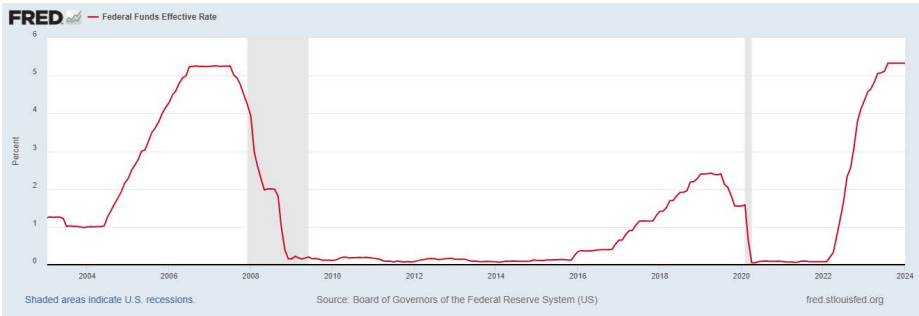
Topic 7.7 Monetary Policy  
Entrance Ticket

NAME \_\_\_\_\_

1. REVIEW! Describe how fiscal policy can help bring about stability in the macro economy.

Topic 7.7 Monetary Policy  
Exit Ticket

NAME \_\_\_\_\_



| Years   | Types of Monetary Policy |
|---------|--------------------------|
| 2004-06 |                          |
| 2007-09 |                          |
| 2020-22 |                          |
| 2022-24 |                          |

<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 8: Ticket 7.7

1. Consider the FRED graph above showing both the effective federal funds rate managed by the Federal Reserve. Note the gray bars in the background indicate periods of recession. Identify what type (expansionary or contractionary) of monetary policy the Fed was conducting during the years in the table above.

3. Are you still puzzled about anything we covered? Add one question/comment.

4. Fill in your level of confidence in understanding what you learned today.

Don't know

Unsure

I've got this

## Topic 7.8 Monetary Policy Tools Entrance Ticket

NAME: \_\_\_\_\_

1. What is the purpose of the bumpers seen in the picture of the bowling alley below?




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2. If you buy a new pair of collectors' edition sneakers and a friend offers you twice what you paid, would you sell them?

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---

## Topic 7.8 Monetary Policy Tools Exit Ticket

NAME: \_\_\_\_\_

1. Which of the following rates/tools does the Federal Reserve use to implement modern monetary policy? Circle below.

Federal Funds Rate

Overnight Reverse Repurchase Agreement

Prime Rate

Interest on Reserves Balance

Required Reserve Ratio

Federal Income Tax Rate

2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this



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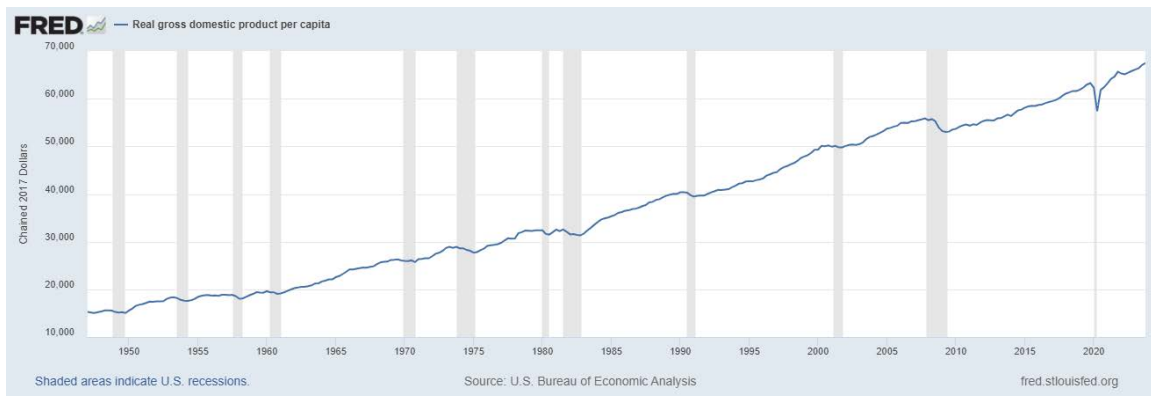
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## Topic 7.9 Economic Growth

NAME \_\_\_\_\_

### Entrance Ticket

1. Consider the real gross domestic product (GDP) per capita data from the US Bureau of Economic Analysis in the graph below. Real GDP per capita is the value of inflation-adjusted GDP divided by the population of the nation. Describe the overall trend of the data since 1947.



<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 9: Ticket 7.9

## Topic 7.9 Economic Growth

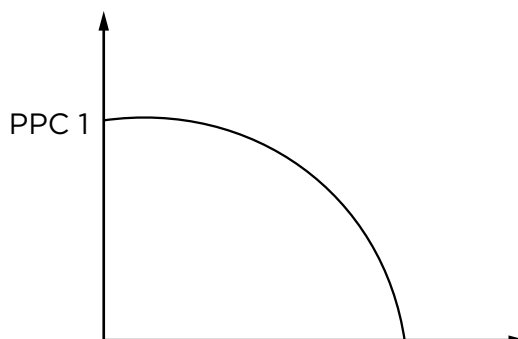
NAME \_\_\_\_\_

### Exit Ticket

1. Circle all the following options that would help create economic growth.

Increasing Population                      New Technology  
Higher Education Attainment by Workers                      Increased Capital Investment

2. Consider the production possibilities curve below. On the same graph, draw another PPC curve showing the consequences of economic growth.



**Topic 7.9 Economic Growth (cont.)**

NAME \_\_\_\_\_

**Exit Ticket**

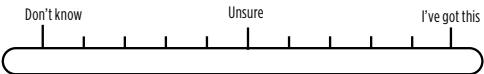
3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.



## Topic 7.10 Public Policy & Economic Growth

NAME \_\_\_\_\_

### Entrance Ticket

1. What are three ways the federal government could potentially assist in creating economic growth?

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2. How can patents like this (for Google's page-rank algorithm) inspire economic growth?

12) **United States Patent** (10) Patent No.: **US 6,285,999 B1**  
 Page (45) Date of Patent: **Sep. 4, 2001**

54) **METHOD FOR NODE RANKING IN A LINKED DATABASE**

(57) **ABSTRACT**

75) Inventor: **Lawrence Page**, Stanford, CA (US)

73) Assignee: **The Board of Trustees of the Leland Stanford Junior University**, Stanford, CA (US)

\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

21) Appl. No.: **09/004,827**

22) Filed: **Jan. 9, 1998**

A method assigns importance ranks to nodes in a linked database, such as any database of documents containing citations, the world wide web or any other hypermedia database. The rank assigned to a document is calculated from the ranks of documents citing it. In addition, the rank of a document is calculated from a constant representing the probability that a browser through the database will randomly jump to the document. The method is particularly useful in enhancing the performance of search engine results for hypermedia databases, such as the world wide web, whose documents have a large variation in quality.

<https://patents.google.com/patent/US6285999>

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## Topic 7.10 Public Policy & Economic Growth

NAME \_\_\_\_\_

### Exit Ticket

1. Describe how a reduction in corporate taxes leads to economic growth.

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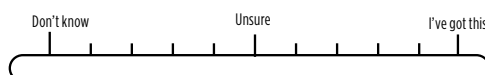
3. Are you still puzzled about anything we covered? Add one question/comment.

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4. Fill in your level of confidence in understanding what you learned today.



## Topic 8.1 Benefits of International Trade Entrance Ticket

NAME: \_\_\_\_\_

- REVIEW! Consider the table below and determine who has the competitive advantage in making butter dishes and aluminum pans and explain why (or why not) Bill and Connie should trade with each other.

|        | Butter Dishes | Aluminum Pans |
|--------|---------------|---------------|
| Bill   | 20            | 4             |
| Connie | 12            | 4             |

Competitive Adv. in Butter Dishes:

Competitive Adv. in Aluminum Pans:

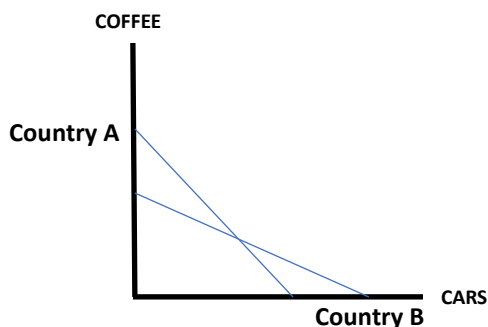
Will both benefit if Connie trades 1 aluminum pan for 4 of Bill's butter dishes?

\_\_\_\_\_

## Topic 8.1 Benefits of International Trade Exit Ticket

NAME: \_\_\_\_\_

- Consider the production possibilities curves of Country A and Country B. If both countries benefit from trade, draw on the graph below what will happen to their PPC curves.



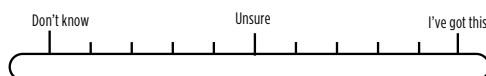
- Are you still puzzled about anything we covered? Add one question/comment.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- Fill in your level of confidence in understanding what you learned today.



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## Topic 8.2 Trade Barriers

### Entrance Ticket

NAME: \_\_\_\_\_

1. In the T-chart below, list items you can find that are labeled made in the USA or made in other countries. Be sure to identify the item and which country manufactured it.

| Made in USA | Made in Another Country |
|-------------|-------------------------|
|             |                         |

## Topic 8.2 Trade Barriers

### Exit Ticket

NAME: \_\_\_\_\_

1. Fill in the table below by identifying the trade barrier from the description provided.

| Description                                                         | Trade Barrier Type |
|---------------------------------------------------------------------|--------------------|
| A tax on imports to raise money for a national government           |                    |
| A total ban on imports from another country                         |                    |
| A tax on imports to protect domestic firms from foreign competition |                    |
| A government policy that caps the amount of imports from a nation   |                    |

2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.

Don't know      Unsure      I've got this



## Topic 8.3 Exchange Rates

NAME \_\_\_\_\_

### Entrance Ticket

1. If you've ever traveled outside the US, did you feel that goods and services were more expensive, less expensive, or about the same as the goods and services at home?

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2. If you haven't traveled outside the US, would you want to visit a nation where the currency is more or less valuable than the dollar? Why?

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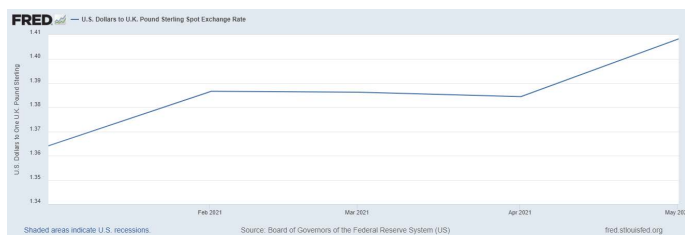
## Topic 8.3 Exchange Rates

NAME \_\_\_\_\_

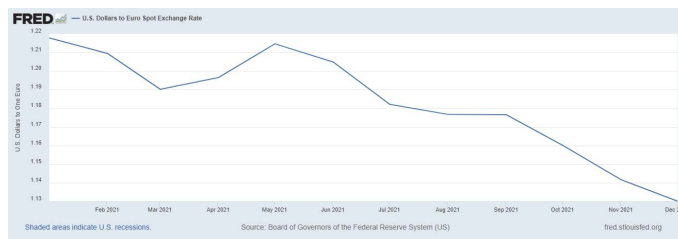
### Exit Ticket

1. Consider the exchange rates between the dollar, the British pound, and the euro. Identify which currency is appreciating in relation to the dollar and which is depreciating.

Graph 1: Dollar to UK Pound



Graph 2: Dollar to Euro



<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graphs 10 & 11: Topic 8.3

2. Are you still puzzled about anything we covered? Add one question/comment.

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3. Fill in your level of confidence in understanding what you learned today.



# TEACHER

## GENERAL ECONOMICS | RESOURCES

## Topic 1.1 Scarcity

### Entrance Ticket

1. Write a definition of what you think economists study.

*Answers will vary. After collecting tickets, instruct students that generally, economics is the study of scarcity and choices made in order to balance scarce resources and unlimited wants.*

2. List three things that you use in your life that are scarce.

*Answers will vary.*

## Topic 1.1 Scarcity

### Exit Ticket

1. What are the four major factors of production?

*land*

*labor*

*capital*

*entrepreneurship*

2. When a business purchases a machine to make a product, that is considered what type of production factor?

*capital*



## Topic 1.2 Resource Allocation & Economic Systems

### Entrance Ticket

1. What type of economy do you think exists in the United States?

*Answers will vary. After discussing this with students, tell them that the US maintains a mixed economy.*

2. How can a government influence how scarce resources are used?

*Answers may vary. Students may say that government can control purchases through taxes. Governments may also restrict access to natural resources through laws and regulations.*

## Topic 1.2 Resource Allocation & Economic Systems

### Exit Ticket

1. What is the major difference between a command economy and a market economy?

*In a command economy, the government owns/controls the means of production. In a pure market economy, individuals and private ownership control the means of production.*

2. In a pure market economy, what two groups interact with each other in exchanging goods and services?

*firms*

*households/consumers*



## Topic 1.3 Opportunity Cost & Production Possibilities Curve

### Entrance Ticket

1. Is there such a thing as a free lunch?

*Answers will vary. Discuss with students the concept of trade offs. While you may be receiving food, your time is being taken and there might be ulterior motives for why someone would want to offer you something.*

2. With scarce resources, the United States during World War II endured a “guns vs. butter” debate over economic production. What do you think this means?

*Answers will vary. Guide students into understanding that decisions must be made about what type of material—in this case, consumer or military goods—needs to be produced at any given time.*

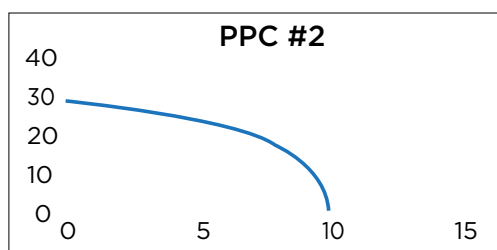
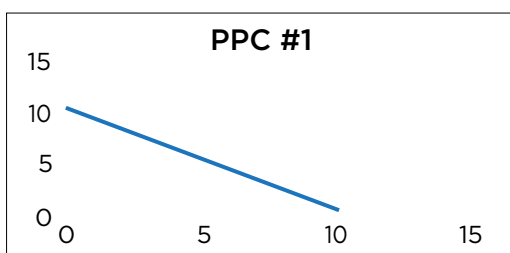
## Topic 1.3 Opportunity Cost & Production Possibilities Curve

### Exit Ticket

1. What is the definition of opportunity cost?

*It is the value of the next-best alternative when a decision is made; it's what is given up.*

2. What is the explanation for the difference in shape between the two PPC curves below?



*Students need to describe that PPC #1 has constant opportunity costs, while PPC #2 has increasing opportunity costs.*



## Topic 1.5 Cost-Benefit Analysis

### Entrance Ticket

1. Stickers like the one shown below have been placed on music albums sold in the US since 1985. Describe what you believe “explicit content” to be.



*Answers will vary, but most students will respond that explicit refers to something direct, dirty, or without innuendo. Discuss with students that the antonym would be "implicit," which means suggested or not plainly expressed. We will look at both of those terms through an economic lens in this section.*

2. Imagine you have two tests, one in English and one in Chemistry. The English test is going to be hard for you, but bombing it will drop your semester grade dramatically. The chemistry test should be easier, but it won't impact your semester average as much. Describe your decision-making process for how you plan to study for both tests if you only have 4 hours to study the night before.

*Answers will vary greatly, but in discussing with the class focus on rational decisions students make, like using all four hours of study time, weighing the risks of each grade, and how hard each exam may be. Close the discussion before starting instruction by telling students that in economics, rational decisions weigh costs against benefits, and that the optimal choice is to maximize the difference between total cost and total benefit.*

## Topic 1.5 Cost-Benefit Analysis

### Exit Ticket

1. Explain the difference between explicit and implicit costs.

*Answers will vary, but explicit costs are direct expenses (usually involving money) while implicit costs are usually measured by determining what kind of benefit is given up by making a decision.*

2. Consider a situation where your parents will pay you to clean the house by room. Using total cost-benefit analysis, identify how many rooms you should clean.

| Rooms | Total Cost / Number of Hours it Takes to Clean | Total Payment | Total Net Benefit |
|-------|------------------------------------------------|---------------|-------------------|
| 0     | 0                                              | \$0           | \$0               |
| 1     | 2                                              | \$5.00        | \$3.00            |
| 2     | 4                                              | \$9.00        | \$5.00            |
| 3     | 6                                              | \$14.00       | \$8.00            |
| 4     | 8                                              | \$20.00       | \$12.00           |
| 5     | 12                                             | \$22.00       | \$10.00           |

*The optimal choice would be to clean 4 rooms for \$20.00, since the total net benefit increases from cleaning rooms 0 – 4. Cleaning the fifth room, while adding two more dollars to the total payment, sees the first decrease in net benefit. Calculate by taking total payment – the cost (which in this case is the number of hours it takes to clean).*



## Topic 1.5 Marginal Analysis

### Entrance Ticket

1. Why isn't it a good idea to eat a full bag of potato chips in one sitting, even if you're hungry?  
As you eat potato chips, what happens to your total satisfaction?

*Answers will vary, but students should respond that the more they eat, the less satisfied they are with each additional potato chip. While the total satisfaction continues to increase, it isn't as satisfying as that first chip. Eventually, you might get to a point where one more potato chip might make you sick. Tell students that the concept of marginal analysis looks at incremental increases of consumer/producer behavior instead of focusing on the total, like we did originally with cost-benefit analysis.*

2. Imagine in a game of football on a 3rd and 10 play, a quarterback makes a successful pass to gain 18 yards. After the play, a penalty of five yards is assessed. Would the coach be happy with the overall result of that play? Explain why or why not. What if the penalty was 10 yards?

*Most students should respond by saying the coach is happy because even with the penalty, the team made a first down. Dig deeper with the class and tell them that in this case, while the marginal cost of the five-yard penalty takes away some of the marginal benefit of the original 18-yard pass, it is still 13 more yards than the overall net benefit of the play, which keeps the drive alive. If the penalty was 10 yards the marginal cost is greater than the marginal benefit and the team will be forced to punt on 4th and 2...probably making the coach terribly upset at the player who just cost the team (and the game...)*

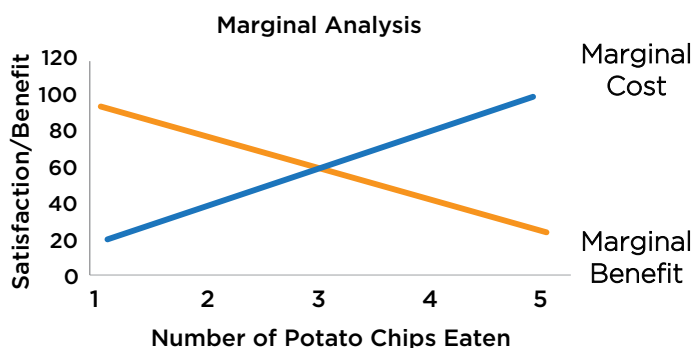
## Topic 1.5 Marginal Analysis

### Exit Ticket

1. Define the concept of diminishing returns.

*Answers may vary slightly, but a good description would be that marginal utility becomes smaller as a person consumes more units of a product. As someone consumes additional units of a product, the marginal utility derived from each additional unit declines.*

2. Consider the graph below. Explain, using marginal analysis, why eating three potato chips is the optimal quantity consumed.



*Students should explain that eating three potato chips is the optimal amount consumed because that is the point where marginal benefit and marginal costs intersect.*

## Topic 1.6 Comparative Advantage and Trade

### Entrance Ticket

1. If Kristen has a lower opportunity cost in producing boomerangs than Megan, and Megan can produce harmonicas at a lower opportunity cost than Kristen, how could both Kristen and Megan benefit if both want boomerangs and harmonicas?

*Answers will vary but most students should see that Kristen and Megan can both benefit by trading with each other as they will have both items.*

2. Write what you believe the term “mutually beneficial” means.

*Answers will vary but the textbook definition of mutually beneficial trade is usually that the cost to a party must fall between the opportunity costs of producers involved in the trade.*

## Topic 1.6 Comparative Advantage and Trade

### Exit Ticket

1. Consider the following situation showing how many items Kristen and Megan can produce in one day. Identify which party (if any) has a comparative advantage.

|         | Boomerangs                             | Harmonicas                             |
|---------|----------------------------------------|----------------------------------------|
| Kristen | 1<br>(1 Boomerang costs 4 Harmonicas)  | 4<br>(1 Harmonica costs 1/4 Boomerang) |
| Megan   | 2<br>(1 Boomerang cost 1.5 Harmonicas) | 3<br>(1 Harmonica cost 2/3 Boomerangs) |

*Megan has a comparative advantage in producing boomerangs since her opportunity cost to produce harmonicas is higher ( $1.5 < 4$ ). Kristen has a comparative advantage in producing harmonicas for the exact same reason ( $1/4 < 2/3$ ).*

2. Should Megan and Kristen trade with each other? Explain why or why not.

*Yes, they should because with their comparative advantages both would specialize in making either boomerangs or harmonicas AND still gain with the addition of the other party producing their item.*



## Topic 2.1 Demand

### Entrance Ticket

1. Say an Xbox originally costs \$400. Microsoft changes the price to \$500. What do you think will happen to the quantity of Xboxes sold?

*Students should respond that with the increase in price fewer people will want to buy Xboxes.*

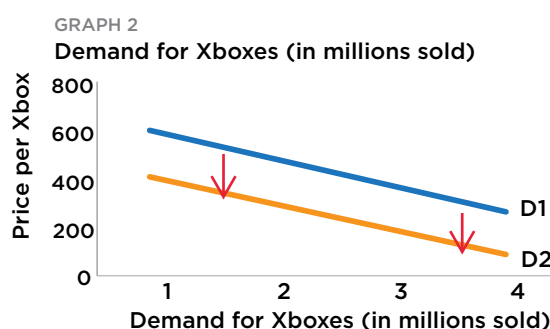
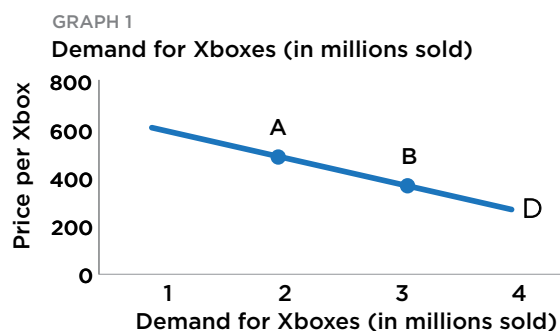
2. Now say Sony releases a new PlayStation that has dramatically better games, graphics, and features. What do you think will happen to the quantity of Xboxes sold?

*Students should respond that more people will start buying PlayStations and fewer people will want Xboxes. Before starting the lesson make it clear to the class that even though the outcome is the same and there is a reduction in demand for Xboxes in these two scenarios, the causes for each type of change are different.*

## Topic 2.1 Demand

### Exit Ticket

1. Explain what is happening in this demand curve graph as we move from points A to B in graph 1. Why is there a shift in the demand curve for graph 2?



*In short, students should describe that only a change in price can result in a movement ALONG an existing demand curve as show in Graph 1. This is known as a change in demand. Graph 2 shows a change in the overall demand curve due to a determinant other than price, such as substitute goods or a change in consumer tastes.*



## Topic 2.2 Supply

### Entrance Ticket

1. Imagine running a lemonade stand and charging \$1.00 per glass. Several customers say after buying a drink that they would've paid \$5.00. With that feedback, circle what changes you would make (if any) to your business.

#### Price Charged for Lemonade

Decrease

No Change

Increase

#### Amount of Lemonade Produced

Decrease

No Change

Increase

*Most students should easily mark that they would increase the price they charge for lemonade. Some students might argue that they should not increase the amount of lemonade they make. Discuss with them that if you, as a supplier, can charge a higher price for the product, you have an incentive to produce more as well.*

## Topic 2.2 Supply

### Exit Ticket

1. Explain one reason why a supply curve would SHIFT either to the left or right.

*Determinants of supply can cause a shift to the left or the right. Students should respond with one of the following determinant changes: input prices / technology / taxes-subsidies / prices of other goods / producer expectations / number of suppliers.*

2. How does a change in price of that good or service affect the supply curve?

*Students should respond that the overall curve does not shift in any direction, but the price will move along the existing curve.*



## Topic 2.3 Market Equilibrium

### Entrance Ticket

1. Describe what type of economic condition is going on in each photo below.



**Costco Meat Section  
March 2020**



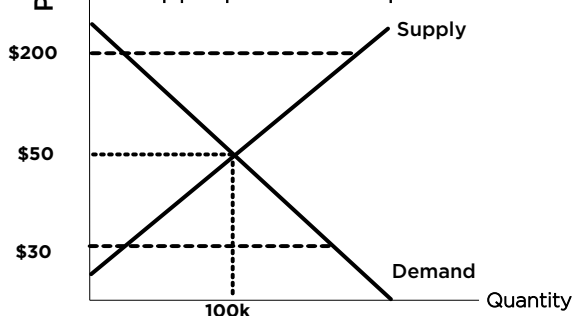
**Costco Paper Goods  
August 2020**

Answers will vary, but students should describe that the Costco meat section is showing a shortage and the paper goods section is showing a surplus, both from impacts of the COVID pandemic of 2020. Introduce the rest of the lesson by telling the class that there are different reasons—caused by supply and demand shifts—that explain these two scenes.

## Topic 2.3 Market Equilibrium

### Exit Ticket

1. Refer to the graph showing the market for jeans below. Note equilibrium price is \$50 and quantity supplied is 100,000. Assume the market price suddenly decreases to \$30. For scenario 1, circle the appropriate description of the market. What if the price increases to \$200?



SCENARIO #1: At \$30 supply is  $>$   $<$  = demand

SCENARIO #2: At \$200 supply is  $<$   $>$  = demand



## Topic 2.4 Disequilibrium

### Entrance Ticket

1. REVIEW! A shift left in EITHER the demand or supply curve indicates a(n) (circle one)

INCREASE / DECREASE

2. Provide a reason why the scales below would be out of balance.

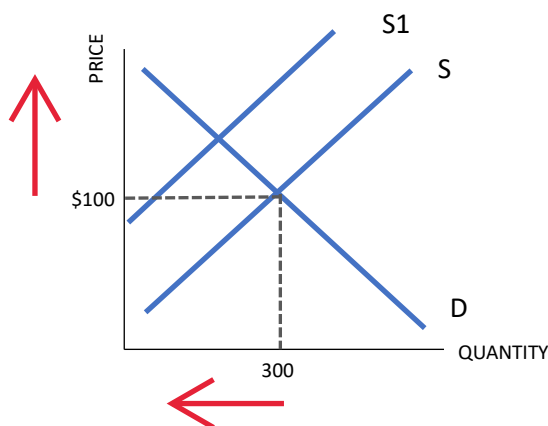


*Answers will vary. Emphasize to students that there are numerous reasons why balance can be disrupted, but it usually entails one object exerting more force than the other. Preview with the class that in the short run, market forces can also act in a similar way.*

## Topic 2.4 Disequilibrium

### Exit Ticket

1. Consider the supply/demand graph below showing a shift of the supply curve. Draw arrows along the X and Y axes indicating which direction price and quantity will change.



# Topic 2.5 Elasticity

## Entrance Ticket

- 1. Identify a good or service that you MUST have and for which you are willing to pay almost any price.
- 2. Identify a good or service that you could easily give up if the price changed even slightly.
- 3. If you produced a good or service, why is it a good idea to know how much your customers are willing to pay?

List all student answers for the first two prompts on the board and see if there are any commonalities in the list created. Students might suggest that absolute necessities are worth paying for as opposed to conveniences. Others might offer that the existing price level or the amount of change would affect their decisions. Pivot the discussion away from consumers and ask if they think producers might like to know their customers' behavior. Conclude by saying this concept is the very reason for price elasticity of demand.

# Topic 2.5 Elasticity

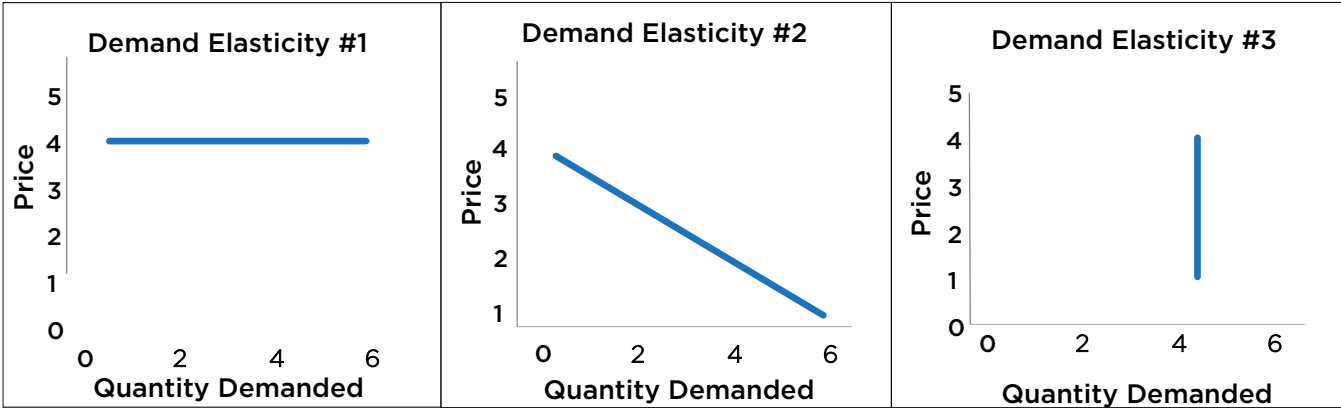
## Exit Ticket

- 1. Consider the three graphs below. If you were calculating price elasticity of demand, which good would be greater than 1, less than 1, or equal to 1? Circle your answer above each graph.

< 1   > 1   = 1

< 1   > 1   = 1

< 1   > 1   = 1



- 2. If a producer either raises or lowers a price and it does not impact total revenue, which elasticity value is this?

That the good/service in question is unit elastic.

## Topic 3.1 Taxes & Subsidies

### Entrance Ticket

1. List three things you or your family uses that is taxed.

*Answers will vary.*

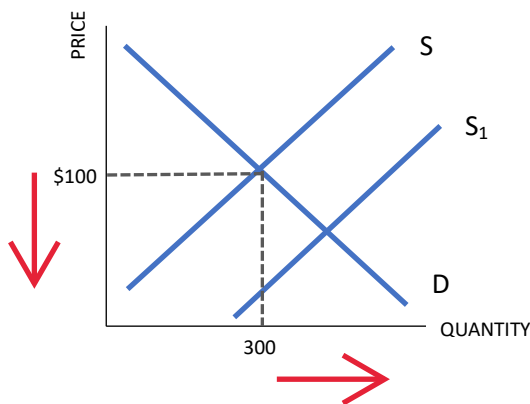
2. Why does a government impose taxes?

*Answers will vary. Discuss with students that government needs to generate revenue for public goods like national defense and social welfare programs. Governments may also introduce taxes to change consumers or producers behavior. Remind students that, no matter the reason for the tax, the consequences on basic economic forces remain the same.*

## Topic 3.1 Taxes & Subsidies

### Exit Ticket

1. Consider the supply/demand graph below showing a shift of the supply curve after a government subsidy. Draw arrows along the X and Y Axis indicating which direction price and quantity will change.



## Topic 3.2 Price Ceilings & Floors

### Entrance Ticket

1. Would you be in favor of the government capping the price gas stations could charge for a gallon of gas at \$2.00? Circle your choice below.

Yes

No

2. Would you be in favor of the minimum wage being raised to \$20.00 an hour? Circle your choice below.

Yes

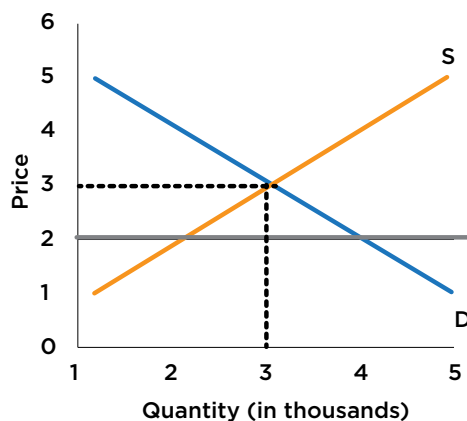
No

*Most students will probably be in favor of both a price ceiling for gas and a price floor for minimum wage. Discuss with them that because of these interventions, the disequilibrium will create winners AND losers. It's easy to identify the winners, but with shortages and surpluses now created, tell students that as a result, either consumer or producer surplus will no longer be equal.*

## Topic 3.2 Price Ceilings & Floors

### Exit Ticket

1. Identify what type of government intervention is illustrated in the graph below AND calculate the amount of shortage/surplus this intervention is causing. Briefly explain why this market is in disequilibrium.



*In this graph a price ceiling of \$2.00 is implemented, creating a shortage of 2000 units. Students should identify that with the ceiling, consumers are demanding 4000 units, but producers will only produce 2000.*



## Topic 3.3 Externalities

### Entrance Ticket

1. Who is responsible for the damage in these pictures?



Library of Congress

Answers will vary. Discuss with students that the air pollution on the left is caused by a producer, and the air pollution on the right is caused by consumers. Deciding who is responsible for these types of market inefficiencies (externalities) is a key question in this section.

## Topic 3.3 Externalities

### Exit Ticket

1. Correctly identify and circle the externality in the picture below as positive or negative. What actions could government take to change the situation?



POSITIVE

NEGATIVE

Students should respond that government can place taxes on producers of pollution, legislate environmental protection policies, create a cap & trade pollution market.

# Topic 4.1 Firm Costs

## Entrance Ticket

1. List some of your short-term and long-term educational goals in the table below.

| Short-Term Goals | Long-Term Goals |
|------------------|-----------------|
|------------------|-----------------|

List all student responses on the board. Most students will say that in the short term they want to keep a 3.0 GPA, have perfect attendance, etc., while in the long term they may respond with bigger picture ambitions, such as “go to college,” “get a degree,” “start a high-paying career,” or “get out of their hometown.” Discuss with the class that in the short term most goals are fixed due to certain constraints like their class schedule, family obligations, etc., while in the long term there are fewer (if any) limitations on what they can achieve. Tell the class this is a major factor that firms consider when planning their short-term and long-term production future.

# Topic 4.1 Firm Costs

## Exit Ticket

1. REVIEW! What’s the difference between a firm’s production costs in the short run and in the long run?

*In the short run, a firm’s fixed costs cannot be changed, while in the long run all costs become variable.*

2. Define economies of scale.

*Economies of scale occur when a firm’s per-unit production costs are reduced as output increases.*

## Topic 4.2 Types of Profit

### Exit Ticket

1. In 2022, Amazon reported \$514.8 billion in revenue and \$501.7 billion in costs. How much money did Amazon make/lose in that year?

*Students should answer that Amazon made (profit) \$12.3 billion in 2022. Instruct the class that this most common version of profit/loss is known as accounting profit.*

## Topic 4.2 Types of Profit

### Exit Ticket

1. If firms in a market are running economic profits in the short run, what will happen to the number of firms in the long run?  
*If firms are making money, more businesses will enter the market, seeing the incentive of profits.*
2. What will happen if firms are not making economic profits, nor breaking even, and are losing money in the long run?  
*If firms are losing money they will exit the market.*



# **Topic 4.3 Production Decisions** **Entrance Ticket**

1. Scott's Tater Tots needs to know how much to produce for its business and is asking you for advice. Briefly explain from the following options what you would suggest the best strategy to be:

One per customer

A predetermined  
total amount

Enough to stuff  
all customers

*Answers will vary. Discuss with students the logic, benefits, and costs of each choice. Tell the class that firm's face decisions like this all the time and that there is an economic explanation for how businesses decide to produce the amount of their goods.*

# **Topic 4.3 Production Decisions** **Exit Ticket**

1. Eva is about to launch her business making nerdy econ laptop stickers to sell online. She knows how much her costs will be and has estimated the best price to charge. Which method of measuring her costs and revenue would be the BEST method to determine the exact number of stickers Eva should produce? Explain why you selected that option.

Total Cost /  
Total  
Revenue

Average Cost /  
Average  
Revenue

Marginal Cost /  
Marginal  
Revenue

*Answers will vary. Discuss with the class that knowing marginal cost/revenue would be the most exact measurement because we can see incrementally what one more unit will do to Eva's overall costs and revenue.*



## Topic 4.4 Perfect Competition Entrance Ticket

1. List three items you or your family purchases that are the same, regardless of brand name or the store where you purchased the item.

*List student responses on the board and discuss. Most will respond with products like fruits, vegetables, or common food stuffs like flour. Tell students that these items are homogeneous, meaning the item is identical no matter who is selling it. Inform the class that this is an essential characteristic of perfect competition.*

## Topic 4.4 Perfect Competition Exit Ticket

1. Briefly explain why firms in perfect competition are price takers.

*Firms are price takers in perfect competition because the product is homogeneous and the price is determined by demand and supply forces, not by differentiation by the firm.*

2. Circle which of the following is NOT considered to be a barrier of entry for a firm in a market.

Start-up costs

Technology

Government regulations

Number of customers

Limited access to resources



# Topic 4.5 Monopoly

## Entrance Ticket

1. Identify an example of a business you think is a monopoly.

*List all student responses on the board. It is common that students initially do not understand that although a business dominates a market (e.g., Amazon/Microsoft/Google) it is not technically a monopoly. Discuss with students that a private utility is usually a good example of a non-natural monopoly due to government regulations and the other barriers of entry discussed in Topic 4.4.*

2. Can a monopoly charge as much as it wants for its good/service?

*No! Students will usually say “yes,” but remind them as an introduction to this lesson that the laws of demand are still in place, and that consumers will forgo what a monopoly is selling if the price is too high. Conclude the introduction by telling students that while a monopoly cannot charge whatever it wants, it will charge the maximum amount a market will allow because there is no other competition.*

# Topic 4.5 Monopoly

## Exit Ticket

1. Briefly explain how economies of scale allow a monopoly to become a price maker.

*Due to high start up costs, as a firm increases output its average total cost will always decrease, discouraging competition.*

2. List which of the firms below are a natural or a government-protected monopoly.

Major League Baseball  
Municipal water company

Electric utility company  
DeBeers Diamonds

Amtrak  
Drug patent holders

NATURAL MONOPOLY

*Amtrak  
DeBeers Diamonds  
Electric utility company  
Municipal water Company*

GOVERNMENT-PROTECTED MONOPOLY

*Drug patent holders  
Major League Baseball*

## Topic 4.6 Price Discrimination

### Entrance Ticket

1. Why do airlines charge business fliers more than vacationers for the same ticket?

*Answers will vary. Discuss with students that business customers have a higher ability to pay because of their specific schedules. Vacationers may not be willing to pay as much because their plans can be more flexible.*

2. Why does Spotify offer a student subscription for \$6/month when its individual subscription is \$11/month?

*Answers will vary, but students should describe that with less income, kids would be less apt to pay for a subscription. A discount makes it more financially appealing for those potential consumers. Instruct the class that if a firm's good/service is non-transferable they can (and should) charge different prices to different consumers beyond what the profit maximizing price/output is.*

## Topic 4.6 Price Discrimination

### Exit Ticket

1. What is the monopolist's ultimate goal if they can price-discriminate for each consumer?

*A monopoly would want to eliminate all consumer surplus.*

2. If a monopoly could price-discriminate for every available consumer, what would happen to deadweight loss?

*A monopoly would eliminate all deadweight loss in addition to eliminating all consumer surplus since they will produce where  $P = MC$ .*



# Topic 4.7 Oligopoly

## Entrance Ticket

1. Identify a market that is dominated by just a handful of firms.

*Answers will vary, but students should list cell phone carriers, domestic airlines, or smartphone manufacturers as acting like an oligopoly market. More savvy responses may include oil-producing countries.*

# Topic 4.7 Oligopoly

## Exit Ticket

1. Fill in the table below by correctly identifying the type of market based on the description.

| Market Description                                                                                                                   | Type of Market             |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Very many firms that have no price-setting power can enter/exit the market extremely easily. Both allocative & productive efficient. | <i>Perfect Competition</i> |
| A few firms have limited price-setting power due to significant barriers of entry/exit. Neither allocative nor productive efficient. | <i>Oligopoly</i>           |
| A single firm that is an absolute price-maker. Could run long-term economic profits.                                                 | <i>Monopoly</i>            |

2. Briefly explain how the Oil Producing Exporting Countries (OPEC) organization acts as an oligopoly.

*Students' responses will vary, but the key concept they must describe involves the major oil-exporting nations colluding to alter the market price of gas. In OPEC's case, this collusion involves agreeing to limit oil production as a way to limit supply in the market.*

## Topic 4.8 Property Rights

### Entrance Ticket

1. Imagine you own a roadside apple orchard. If people can pull over and take as many apples as they'd like without paying, what actions could you take to prevent this situation from getting worse?  
*List all student answers on the board and discuss. Many would respond that they could put up some kind of protection (fencing) to keep people out or call the police when people are stealing apples.*
2. If Taylor Swift announces that fans who bought tickets for her upcoming tour would be unable to sell or transfer them to another buyer, what do you think would happen to the number of tickets sold?  
*Answers will vary. Discuss with students that while her true fans would attend at any cost, many would not want to buy tickets just in case they could not go. This concept of giving people the right to control their possessions after purchase is known as property rights and they are an essential part of the market system.*

## Topic 4.8 Property Rights

### Exit Ticket

1. Circle all the ways a government can guarantee property rights.

Enforce trespassing laws

Prosecute stealers

Allocate resources fairly

Issue patents & intellectual property rules

Write & fairly judge contract law



## Topic 4.9 Public & Private Goods

### Entrance Ticket

1. Why does the government, and not the private sector, provide military protection for the nation?

*Answers will vary. Discuss with students that services like national defense, while extremely costly, can be shared (non-rival) but cannot be excluded—meaning that if someone doesn't pay their taxes to support the army, they're protected anyway. These concepts will be explained in this section to determine whether private firms or the public sector will provide products to the marketplace.*

## Topic 4.9 Public & Private Goods

### Exit Ticket

1. Describe how free riders force the government to provide certain goods and services.

*A person who receives benefits from something for which he or she doesn't pay is considered a free rider. A private firm would not enter a market such as this because there is no incentive for them to participate.*

2. Define the two factors that are required for pure public goods.

*Pure public goods must be BOTH non-rival AND non-excludable.*

3. Provide an example of “the tragedy of the commons.”

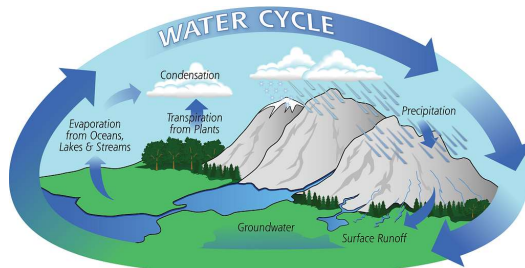
*Answers will vary, but may range from deforestation to over-hunting/fishing.*



## Topic 5.1 Circular Flow and GDP

### Entrance Ticket

1. Describe what is going on in the illustration below:



Source: [nasa.gov](https://www.nasa.gov)

*Answers will vary, but most students will respond that in the water cycle, water moves from one phase to another and from one area of the earth to another.*

2. In this circular pattern is any water lost (or gained)?

*No water is lost or gained in the cycle. Tell students this occurs in economics as well, because goods, services, and money rotate like the water cycle.*

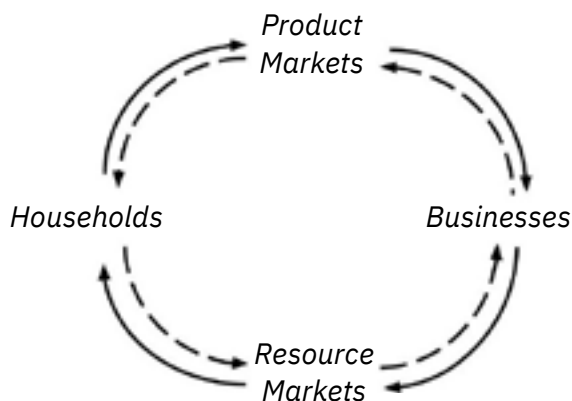
## Topic 5.1 Circular Flow and GDP

### Exit Ticket

1. List the three possible ways to measure GDP.

*The three ways are the expenditure approach, the income approach, and the value-added approach.*

2. In the illustration below, identify the major participants and market types that are found in the circular flow diagram.



## Topic 5.2 GDP Calculations

### Entrance Ticket

1. Think about a visit to a doctor's office. What "vital signs" are usually taken?

*Answers will vary but should include temperature, pulse, blood pressure, and respiration (breathing rate).*

2. What is the benefit of determining these vital signs? What types of medical issues go unchecked if further examination isn't conducted?

*Vital signs are a good way to quickly determine a patient's overall health but cannot show underlying problems. The same can be said for the limitations of GDP. Painting with a broad brush gives us GENERAL indications of the overall health of the economy but may not reveal the full picture. Instruct students that not everything bought and sold in an economy is calculated as part of GDP.*

## Topic 5.2 GDP Calculations

### Exit Ticket

1. Circle all the possible transactions that would NOT be calculated in GDP.

A \$10 birthday check from Grandma

School purchases a popcorn machine for its students at lunch

Purchasing 1 share of Tesla stock

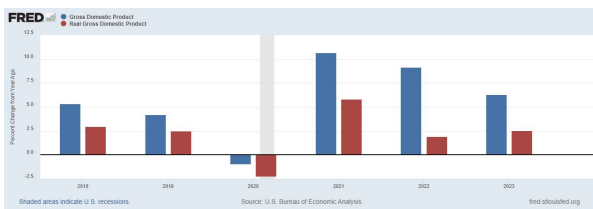
Apple buying screens for its next iPhone

Your midnight fast food taco run of \$4.53

A kid selling lemonade for \$1 in their driveway

Buying a \$5000 used car from a friend

2. Consider the following FRED graph showing GDP data from the US Bureau of Economic Analysis. The blue bars represent annual growth rate of nominal GDP, while the red bars show the annual growth rate of real GDP. Explain why both rates were negative in 2020.



Graph available on FRED Dashboard <https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 1: Ticket 5.2

*Both nominal and real GDP declined due to the COVID pandemic.*

3. Using the same graph describe why the blue bars are much taller than the red after 2020 than before.

*The blue bars are greater than the red bars following the COVID-19 recession as a result of the increase in inflation driving up nominal figures. The red bars illustrating real GDP are adjusted for inflation by being chained to a specific point in time.*

## Topic 5.3 Unemployment

### Entrance Ticket

1. What types of people do you think are part of the labor force in this country?

*Answers will vary. Discuss that there are large segments of the population (kids, retired, disabled) who are not part of the labor force.*

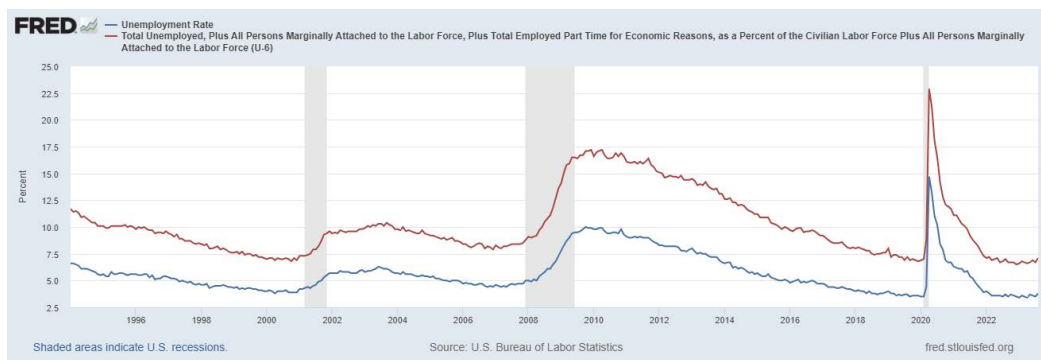
2. Is there a difference between being out of work and not having enough work?

*Answers will vary. Introduce the concept of unemployed and underemployed. Tell students that unemployment in the United States is usually measured in a specific way which leaves out many workers in the labor force. These measurements, and the different types of unemployment, will be discussed in this section of the unit.*

## Topic 5.3 Unemployment

### Exit Ticket

1. Consider the unemployment graph below. The lower line (U3) is what the government reports as the unemployment rate. The upper line (U6) includes part time, marginal, and discouraged workers. Describe which measure would give a better understanding of the work force in the United States.



Graph available on FRED Dashboard <https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 2: Ticket 5.3

*Answers will vary but most students will respond that the U6 measurement also shows underemployed workers in the labor force.*

2. The sum of which two types of unemployment make up the natural rate of unemployment?

*Frictional and structural unemployment make up the natural rate of unemployment.*

## Topic 5.4 Price Indices & Inflation

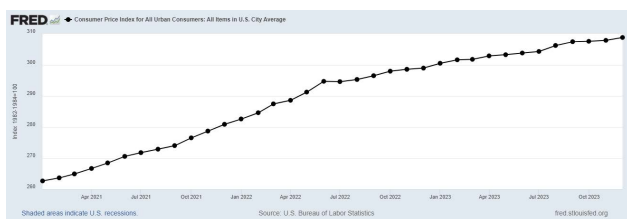
### Entrance Ticket

1. When shopping for food at the grocery store, what type of items do you or your family purchase?

*Answers will vary. List student responses on the board and organize items into categories. (Most will fall under types like “meats” “dairy” “produce” “canned goods” etc.) Discuss with students that most of these categories don’t change much with week-to-week shopping trips because food purchases are fairly standard. The way the US government calculates inflation is to conduct a survey of a much bigger market basket of items other than food to determine how much changes in the prices of these goods and services impact consumers and the larger economy.*

## Topic 5.4 Price Indices & Inflation

### Exit Ticket



Graph available on FRED Dashboard <https://fredaccount.stlouisfed.org/public/dashboard/107737> Graphs 3 & 4: Ticket 5.4

1. Consider the graph on the left showing the consumer price index (CPI) from the US Bureau of Labor Statistics. In February 2022 CPI was reported at 284.610. One year later it was reported at 301.608. Calculate the annual inflation rate between those two dates to find the year-to-year percent growth rate of CPI.

$$(301.608 - 284.610) / 284.610 \times 100 = 5.98\%.$$

2. Consider the graph on the right showing annual CPI inflation rate from the US Bureau of Labor Statistics. Between 1948 and 2023 when was the highest annual rate of inflation? When was there deflation or negative inflation rates?

*Answers will change as inflation changes, but in 2024 the current peak of inflation is the highest since 1982. The BLS also reported annual negative inflation rates in 1949 (-1.83%), 1954 (-0.37%) and 2008 (-0.02%).*

## Topic 5.5 Costs of Inflation

### Entrance Ticket

1. If you are planning to attend college would you rather pay a student loan that charges 2% interest or 10%? Why?

*Students should respond they would rather have a loan at 2% as they would pay less over the life of that loan than if the interest rate were higher.*

2. Say that student loan is charging 2% interest. Unexpectedly, inflation increases from 2% to 5%. Are you better off, worse off, or the same with inflation being higher than your interest rate?

*Answers may vary. The student is better off with a fixed rate of 2%. With a higher inflation rate, the money paid back to the bank is less valuable due to a loss in purchasing power. In this section students will learn that when inflation is either higher or lower than expected, certain groups stand to gain and lose out as a consequence.*

## Topic 5.5 Costs of Inflation

### Exit Ticket

1. Circle all the groups that are HURT by unexpected inflation.

Savers

People on fixed incomes

Borrowers

2. Explain why those groups you circled are hurt by unexpected inflation.

*Answers will vary. Savers lose out as their purchasing power is lower than the interest they would have gained, while people on fixed incomes cannot buy as much without seeing an increase in income.*



## Topic 5.6 Business Cycles

### Entrance Ticket

1. How do you think the US economy is doing right now? Provide one example to support your point.

*Answers will vary. Students should gauge the strength of the economy on the indicators studied in this unit and refer to unemployment or GDP growth or inflation to base their opinions.*

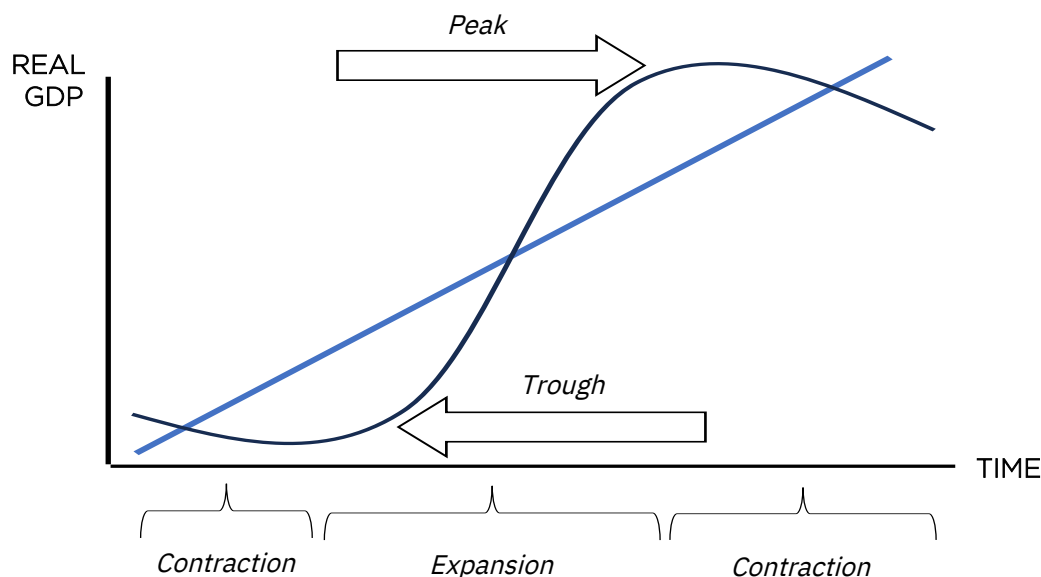
2. In the long run, what do you think is the trend in real GDP?

*Answers will vary. Tell students that in macroeconomics real GDP should steadily increase over time. The fluctuations that occur within the economy away from that constant, steady growth are called elements of the business cycle. This section of the curriculum will explore that topic in more detail.*

## Topic 5.6 Business Cycles

### Exit Ticket

1. Fill in the business cycle illustration below. In the arrows, identify the peak and trough of the cycle. In the brackets below the X-axis identify if we are in an expansion or contraction phase.



## Topic 5.7 Aggregate Demand & Supply

### Entrance Ticket

1. REVIEW! Why is any supply curve upward-sloping?

*The supply curve slopes upward because an increase in price incentivizes producers to increase the amount supplied.*

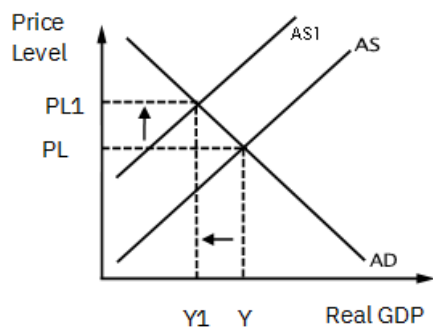
2. REVIEW! Why is any demand curve downward-sloping?

*The demand curve is downward-sloping because there is an inverse relationship between prices and quantity demanded.*

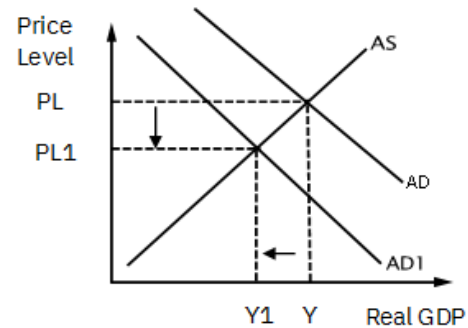
## Topic 5.7 Aggregate Demand & Supply

### Exit Ticket

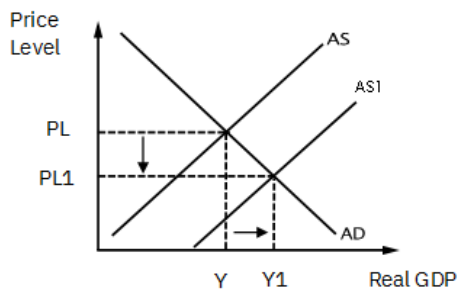
1. Correctly match the following descriptions with the changes to the four AD/AS graphs below.



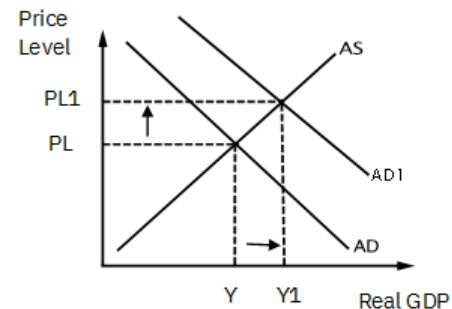
*Cost-push inflation*



*Contraction in business cycle*



*Favorable weather changes in agriculture*



*Demand-pull inflation*

## Topic 6.1 Money

### Entrance Ticket

1. You are in a strange US city at midnight and you need to buy gas. You have a \$100 bill, 200 Mexican pesos, 1 bitcoin, and an American Gold Eagle coin. Which would be the easiest financial instrument to purchase gas at midnight?

*Answers will vary. Discuss that all four options have value, but to varying degrees. The “Benjamin” might not be accepted because filling stations don’t want large denomination bills. The Mexican note might be accepted if you are on the border, but it isn’t likely to be accepted at par (meaning the prevailing market exchange rate). Bitcoin isn’t readily tradeable. Gold is considered “real money” by many people, but it’s unlikely the station would accept it, or if it did, it certainly wouldn’t accept it at market value.*

2. Is this money? Briefly explain your answer.



*Photo by Ethnological Museum Hamburg  
distributed under a CC-BY 4.0 license*

*Answers will vary. Tell students that the rai stone shown in the picture was considered money on the Micronesian island of Yap well into the 20th century. In this section students will learn about the definition and functions of money in an economy.*

## Topic 6.1 Money

### Exit Ticket

1. List the three functions of money.

*Medium of exchange / Standard of value / Store of value*



## Topic 6.2 Money Supply

### Entrance Ticket

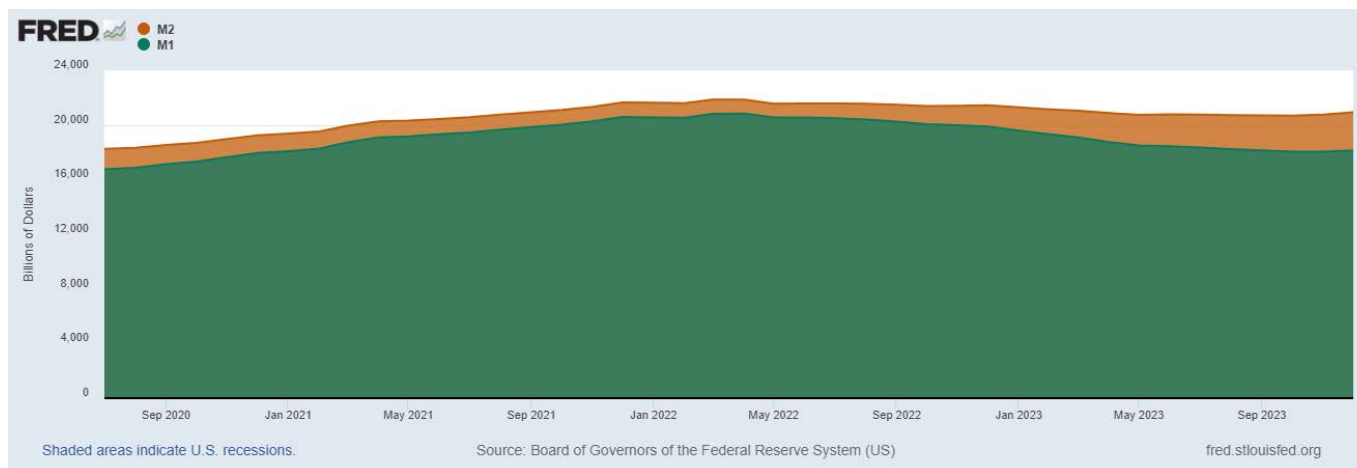
1. Who do you think controls the supply of money in the United States?

*Answers will vary. Tell students that the Federal Reserve establishes the supply of money in the US. (This is why all denominations of bills have the words “Federal Reserve Note” on them.)*

## Topic 6.2 Money Supply

### Exit Ticket

1. Consider the money supply data from the Board of Governors of the Federal Reserve. M2 (in orange) is shown behind M1 (in green). Explain why M2 is always a larger figure than M1.



Graph available on FRED dashboard

<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 5: Ticket 6.2

*Answers will vary, but students should describe M2 as the total of M1 (which consists of coinage plus demand deposits, and [after 2020] savings accounts) plus money market accounts and certificates of deposit (CDs) at financial institutions. [NOTE: Many textbooks and older instructional materials use the old definition of savings accounts as being calculated in M2 not M1.]*

# Topic 6.3 Banking & Money Supply Expansion

## Entrance Ticket

1. Quick poll: If you open a savings account at any bank and deposit \$500, does the bank just keep all \$500 in a vault for safekeeping?

YES

No

*Tabulate results and discuss. Tell students that a bank does not keep all its money in a vault as that is not a good business model. By loaning out a fraction of your savings, it helps create new money through a process called fractional reserve banking which is essential for contributing to economic growth.*

# Topic 6.3 Banking & Money Supply Expansion

## Exit Ticket

1. Assume you deposit \$10,000 in a bank that will loan out all its excess reserves. If the required reserve ratio is 10% and each bank loans out the full amount allowable, fill in the table below.

| Original deposit | Bank 1 loanable funds    | Bank 2 loanable funds   | Bank 3 loanable funds   | Maximum increase in money supply    |
|------------------|--------------------------|-------------------------|-------------------------|-------------------------------------|
| \$10,000         | \$9,000<br>(10,000 x .1) | \$8,100<br>(9,000 x .1) | \$7,290<br>(8,100 x .1) | \$24,390<br>(9,000 + 8,100 + 7,290) |

# Topic 6.4 Interest Rates

## Entrance Ticket

1. List three examples from your own or your family’s life that would require you to pay attention to interest rates.

*Answers will vary. Most students will respond that loans for cars, college, credit cards, and mortgages are all dependent on interest rates. Discuss that the interest rates that are often seen and advertised are nominal interest rates which do not take inflation into account.*

2. Suppose you take out a \$100,000 student loan for college. Would you rather pay 2% or 10% interest?

*Answers will vary, but most students will choose the 2% student loan as they will pay back less over the life of the loan.*

# Topic 6.4 Interest Rates

## Exit Ticket

1. Let’s return to that \$100,000 student loan you took at 2% interest. If the inflation rate suddenly rises to 7%, are you (the person paying back the loan) or the bank (which gave you the loan) better off, worse off, or the same? Explain your answer.

*Answers will vary, but in this situation the bank is worse off because inflation is 5% higher than the interest rate on the loan. In this case the real interest rate is –5%.*

2. Calculate the real interest rate in the table below:

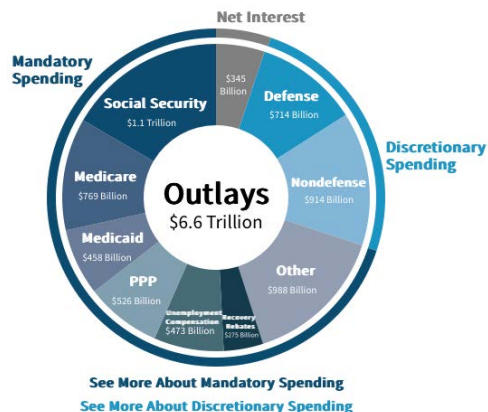
| Year | Nominal interest rate (%) | Inflation rate (%) | Real interest rate (%) |
|------|---------------------------|--------------------|------------------------|
| 1980 | 14%                       | 12%                | 2                      |
| 2010 | 4%                        | 1%                 | 3                      |
| 2021 | 3%                        | 2%                 | 1                      |

## Topic 7.1 Fiscal Policy

### Entrance Ticket

1. List three things you think are the largest part of the federal government's annual spending.

Answers will vary. As a focusing tool, refer to the graphic below showing 2020 spending from the Congressional Budget Office.



Source: [cbo.gov/publication/57170](https://www.cbo.gov/publication/57170)

2. REVIEW! Write the expenditure formula for calculating GDP.

$GDP = C + G + I + (X - M)$ . Remind students that while consumer spending plays an enormous role in GDP, the federal government also has a large influence through its own spending decisions.

## Topic 7.1 Fiscal Policy

### Exit Ticket

1. Circle all the actions the federal government could take to enact a contractionary fiscal policy.

Raise Taxes

Decrease Govt. Spending

Increase Deficit Spending

Lower Taxes

Increase Govt. Spending

Decrease Deficit Spending

2. Explain why, during an expansionary policy, the government's spending multiplier is always greater than the tax multiplier.

Answers will vary. The impact of a tax cut will always be less than direct government spending because not all consumers/firms will spend the extra money created by the tax cut. The choice to save some (or all) of that expansionary fiscal policy stimulus will always lead to a smaller multiplier.



# Topic 7.2 Taxes

## Entrance Ticket

1. List three items that you or your family pay taxes on.  
*List responses on the board. Tell the class that taxes are enforced on consumption (sales tax), income, and personal belongings like real estate. This section will focus on the categories of taxes that governments impose.*
2. Why do governments need to impose taxes?  
*Answers will vary. Discuss with students that government generates significant revenue to operate from all types of tax. While this is the main purpose, governments may also use taxes to influence behaviors. So called "sin taxes" on cigarettes and other items can be designed to increase costs and, consequently, decrease demand.*

# Topic 7.2 Taxes

## Exit Ticket

1. Calculate the effective tax rate of a household that has a total income of \$50,000 and pays \$8,000 in taxes.

$$\$8,000 / \$50,000 = 16\% \text{ effective tax rate}$$

2. Identify the type of tax based on the description in the table.

| DESCRIPTION                                                     | TYPE OF TAX                      |
|-----------------------------------------------------------------|----------------------------------|
| The effective tax rate increases as income increases.           | <i>Progressive</i>               |
| The effective tax rate decreases as income increases.           | <i>Regressive</i>                |
| The effective rate stays the same regardless of income changes. | <i>Proportional (aka "flat")</i> |

## Topic 7.2 Automatic Stabilizers

### Entrance Ticket

1. Define the difference between discretionary and mandatory.

*Answers will vary. In terms of fiscal policy, discretionary spending is money spent by the federal government on an annual basis and can fluctuate year to year. Mandatory spending includes programs that are mandated by prior laws and cannot be changed easily through the Congressional budget process.*

2. Do you think the federal government spends more on discretionary or mandatory programs?

*Answers will vary. Tell students that approximately 75% of the 2020 federal budget was spent on mandatory programs like Medicare, Social Security, and unemployment benefits. Introduce the rest of this unit by saying that since most of these mandatory programs require no further actions by Congress or the President, they act as automatic stabilizers in the macroeconomy.*

## Topic 7.2 Automatic Stabilizers

### Exit Ticket

1. The United States finds itself in the middle of a recession. Circle all the automatic stabilizers the federal government has at its disposal to enact expansionary fiscal policy.

Food Stamp Assistance

Stimulus Checks

New Corporate Tax Cut

New Infrastructure Projects

Unemployment Benefits

Progressive Income Tax System

*Explain to students that although stimulus checks, new infrastructure projects, and tax cuts are expansionary fiscal policy, they require new action to be taken by Congress and the President and therefore are NOT automatic stabilizers. Food stamps, unemployment benefits, and lower tax revenue generated by less income all act as automatic stabilizers and do not require any new policy changes in the middle of a recession.*



## Topic 7.4 Government Deficits & Debt

### Entrance Ticket

1. REVIEW! How can a government fund its fiscal policy if it doesn't take in enough revenue through taxes?

*Answers will vary. Students should respond that the government may either print more money (and risk immediate and drastic inflation) or issue treasury bonds to raise revenue. This is known as deficit spending. Review with students that this is known as expansionary fiscal policy.*

2. As of October 2023, the national debt stood at approximately \$30 trillion. What consequences do you think this has on the economy?

*Answers will vary. Tell students that in this unit they will understand the difference between deficit spending (negative spending in a current budget cycle) and the national debt (which is the sum of all deficits accrued by a government).*

## Topic 5.4 Government Deficits & Debt

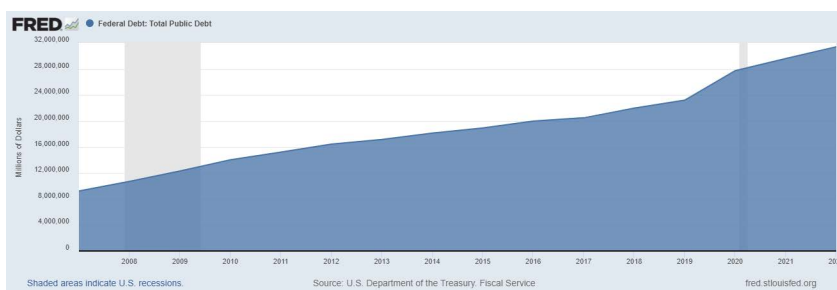
### Exit Ticket

1. Graph 1 shows the federal surplus or deficit from the U.S. Treasury. Graph 2 shows the total federal debt. Describe the relationship linking both economic indicators.

Graph 1



Graph 2



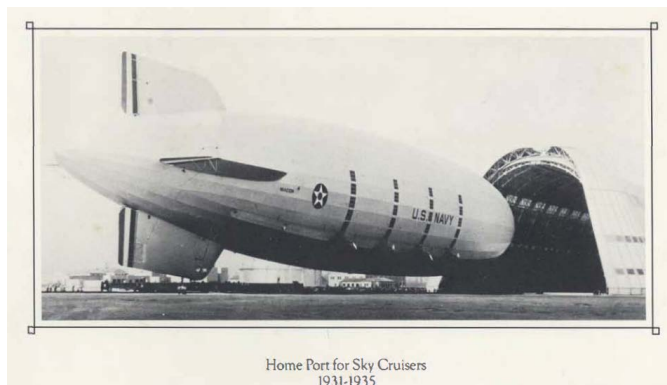
*Graph 1 shows the surplus/deficit the US government ran in each quarter. Graph 2 is the cumulative debt of the US government. Point out to students that the massive deficit spending that occurred during the 2nd quarter of 2020 is a consequence of all the massive government spending that dealt with the COVID pandemic. That large, unique deficit directly led to the significant increase in the national debt seen at the same time (in graph 2).*

<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graphs 6 & 7: Topic 7.4

## Topic 7.5 Crowding Out

### Entrance Ticket

1. What will happen to the amount of space in this hangar after the blimp is completely inside?



*Students should respond that the blimp will take up most of the space in the hangar. Instruct the class that in this topic, government deficit spending can also have an outsized influence on the economy, especially impacting interest rates.*

Moffett Field, CA. Image courtesy [historicproperties.arc.nasa.gov](https://historicproperties.arc.nasa.gov)

2. REVIEW! True or False: The federal government can set interest rates.

*False. Remind students that the federal government participates in the loanable funds market just like corporations or consumers. Consequently, the government is not immune to changes in the interest rates. That said, because the federal government is such a large player in the overall loanable funds market (and the macroeconomy in general) it may have undue influence on the rest of the market, which may lead to the concept of crowding out other economic players.*

## Topic 7.5 Crowding Out

### Exit Ticket

1. Assume that sudden and massive government deficit spending has extreme consequences in the loanable funds market. How might that affect interest rates and real GDP?

*Students should respond that if the government dramatically increases its need for loanable funds at once, that will increase interest rates for everyone. The risk is that with significantly less funds available for private investment, real GDP could decrease as consumer spending and private investment declines because of fiscal policy.*

## Topic 7.6 Federal Reserve Structure

### Entrance Ticket

1. What bank does the federal government use?

*Answers will vary. Discuss with students that the federal government does not use Bank of America, US Bank, or any other commercial bank, but has an account called the general account with the Federal Reserve Bank of New York. Tell the class that in this section they will learn about the structure and history of the Federal Reserve System, the United States' central bank.*

## Topic 7.6 Federal Reserve Structure

### Exit Ticket

1. Circle all the topics below that correctly describe the Federal Reserve's role.

Setting Monetary Policy

Part of the Legislative Branch

Manage the Federal Funds Rate

Lender of Last Resort for Banks

Part of the Executive Branch

Setting Fiscal Policy

2. Circle the two parts of the Federal Reserve's dual mandate.

Stable Prices

A Balanced Budget

Low Interest Rates

Constant GDP Growth

Maximum Employment

No Stock Market Crashes



# Topic 7.7 Monetary Policy

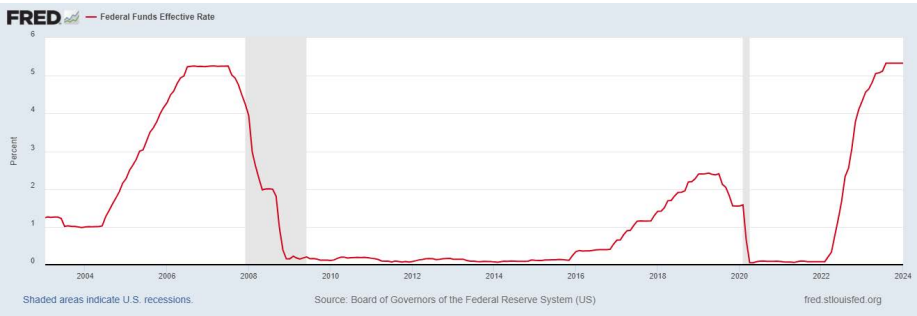
## Entrance Ticket

1. REVIEW! Describe how fiscal policy can help bring about stability in the macro economy.

Answers will vary. Review with students that in recessionary times, the government can increase spending or lower taxes to conduct expansionary fiscal policy to balance the economy. In inflationary periods the government could decrease spending or raise taxes with contractionary fiscal policy. Tell students that a central bank like the Federal Reserve can also contribute independently by conducting expansionary or contractionary monetary policy, which they will learn about in this section of the unit.

# Topic 7.7 Monetary Policy

## Exit Ticket



| Years   | Types of Monetary Policy |
|---------|--------------------------|
| 2004-06 | Contractionary           |
| 2007-09 | Expansionary             |
| 2020-22 | Expansionary             |
| 2022-24 | Contractionary           |

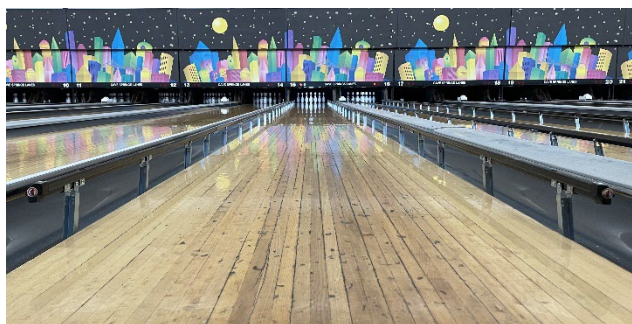
<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 8: Ticket 7.7

1. Consider the FRED graph above showing both the discount rate and federal funds rate managed by the Federal Reserve. Note the gray bars in the background indicate periods of recession. Identify what type (expansionary or contractionary) of monetary policy the Fed was conducting during the years in the table above.

## Topic 7.8 Monetary Policy Tools

### Entrance Ticket

1. What is the purpose of the bumpers seen in the picture of the bowling alley below?



*Answers will vary but most will respond that the bumpers are in place to keep the ball from falling in the gutter. Tell students that the Federal Open Market Committee (FOMC) adjusts two rates that keeps the Federal Funds Rate—the benchmark for monetary policy—in range, just like the bowling alley bumpers.*

2. If you buy a new pair of collectors' edition sneakers and a friend offers you twice what you paid, would you sell them?

*Answers will vary. Discuss with the class that if they do sell them immediately and make a profit, this is what is known as "arbitrage." This concept will be important in understanding how the FOMC is able to implement monetary policy.*

## Topic 7.8 Monetary Policy Tools

### Exit Ticket

1. Which of the following rates/tools does the Federal Reserve use to implement modern monetary policy? Circle below.

Federal Funds Rate

Overnight Reverse Repurchase Agreement

Prime Rate

Interest on Reserves Balance

Required Reserve Ratio

Federal Income Tax Rate



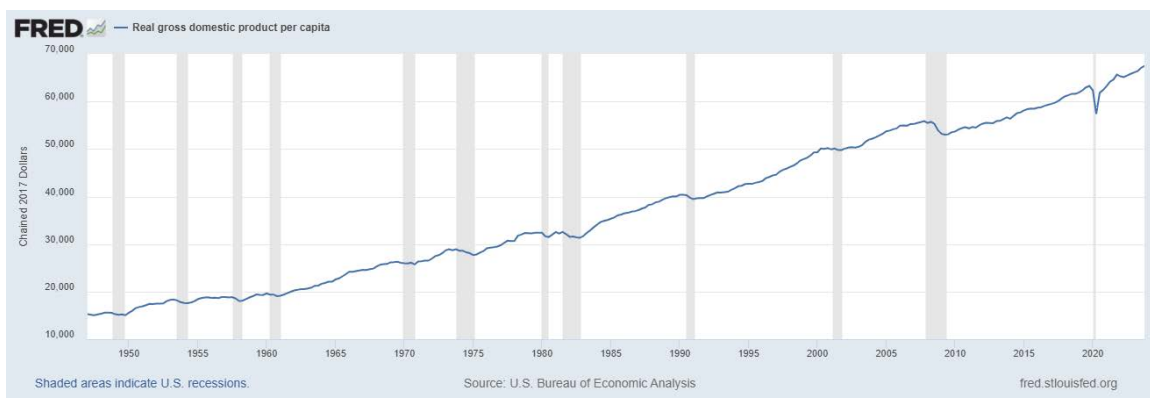
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## Topic 7.9 Economic Growth

### Entrance Ticket

1. Consider the real gross domestic product (GDP) per capita data from the US Bureau of Economic Analysis in the graph below. Real GDP per capita is the value of inflation-adjusted GDP divided by the population of the nation. Describe the overall trend of the data since 1947.



<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graph 9: Ticket 7.9

Answers will vary, but students should respond that since World War II, the general trend has been a constant increase in economic growth at a rate averaging 2% annually. Remind students that long-run trends do not necessarily consider short-run dips brought on by recessions. Introduce the concept of economic growth to the class and say this activity will explain the causes for this long-run growth in the economy.

## Topic 7.9 Economic Growth

### Exit Ticket

1. Circle all the following options that would help create economic growth.

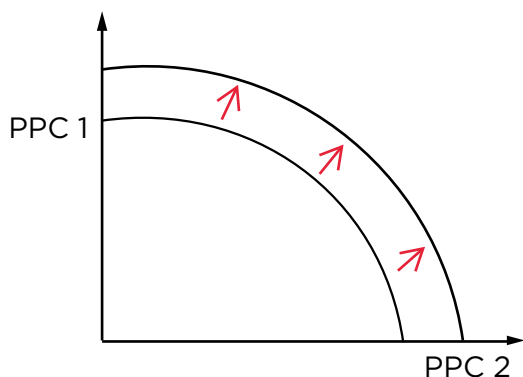
Increasing Population

New Technology

Higher Education Attainment by Workers

Increased Capital Investment

2. Consider the production possibilities curve below. On the same graph, draw another PPC curve showing the consequences of economic growth.



# Topic 7.10 Public Policy & Economic Growth

## Entrance Ticket

1. What are three ways the federal government could potentially assist in creating economic growth?

*Answers will vary from infrastructure to fiscal policy to tax cuts. Tell students that in addition to those listed, providing political stability and protecting property rights are effective tools governments can use to assist in long-term economic growth.*

2. How can patents like this (for Google's page-rank algorithm) inspire economic growth?

|                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12) <b>United States Patent</b><br>Page                                                                                 | (10) Patent No.: <b>US 6,285,999 B1</b><br>(45) Date of Patent: <b>Sep. 4, 2001</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 54) <b>METHOD FOR NODE RANKING IN A LINKED DATABASE</b>                                                                 | (57) <b>ABSTRACT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 75) Inventor: <b>Lawrence Page</b> , Stanford, CA (US)                                                                  | A method assigns importance ranks to nodes in a linked database, such as any database of documents containing citations, the world wide web or any other hypermedia database. The rank assigned to a document is calculated from the ranks of documents citing it. In addition, the rank of a document is calculated from a constant representing the probability that a browser through the database will randomly jump to the document. The method is particularly useful in enhancing the performance of search engine results for hypermedia databases, such as the world wide web, whose documents have a large variation in quality. |
| 73) Assignee: <b>The Board of Trustees of the Leland Stanford Junior University</b> , Stanford, CA (US)                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| *) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 21) Appl. No.: <b>09/004,827</b>                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 22) Filed: <b>Jan. 9, 1998</b>                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

*Answers will vary. By providing the reward of a legal monopoly for a period of time, governments can encourage entrepreneurship and technological advances that would contribute to long-term economic growth.*

<https://patents.google.com/patent/US6285999>

# Topic 7.10 Public Policy & Economic Growth

## Exit Ticket

1. Describe how a reduction in corporate taxes leads to economic growth.

*According to supply-side economic policy, corporations could reinvest that extra money into capital improvements like research and development, which would increase productivity.*

## Topic 8.1 Benefits of International Trade

### Entrance Ticket

- REVIEW! Consider the table below and determine who has the competitive advantage in making butter dishes and aluminum pans and explain why (or why not) Bill and Connie should trade with each other.

|               | Butter Dishes                     | Aluminum Pans                   |
|---------------|-----------------------------------|---------------------------------|
| <b>Bill</b>   | <b>20</b> (1 dish costs 1/5 pans) | <b>4</b> (1 pan costs 5 dishes) |
| <b>Connie</b> | <b>12</b> (1 dish costs 1/3 pans) | <b>4</b> (1 pan costs 3 dishes) |

Competitive Adv. in Butter Dishes: *Bill. His opportunity cost is lower ( $1/5 < 1/3$ )*

Competitive Adv. in Aluminum Pans: *Connie. Her opportunity cost is lower ( $3 < 5$ )*

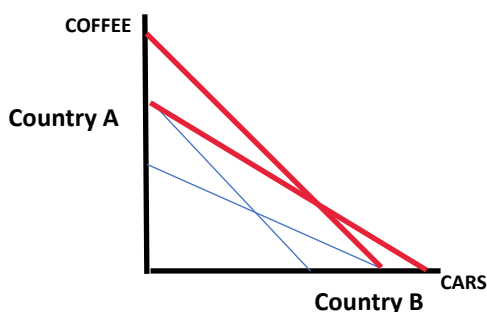
Will both benefit if Connie trades 1 aluminum pan for 4 of Bill's butter dishes?

*Yes! By specializing in the product in which they hold the comparative advantage the terms of trade are beneficial to both Connie and Bill. Connie is able to receive 4 butter dishes for every aluminum pan she trades to Bill (more than the 3 she can produce on her own.) Bill receives an aluminum pan for less than he would give up (opportunity cost) to produce it himself.*

## Topic 8.1 Benefits of International Trade

### Exit Ticket

- Consider the production possibilities curves of Country A and Country B. If both countries benefit from trade, draw on the graph below what will happen to their PPC curves.



*NOTE: Be sure that students only extend the PPC curve outward in one, not both, directions as they are gaining from trade by importing either coffee or cars but are NOT expanding their own production of their domestic good.*



## Topic 8.2 Trade Barriers

### Entrance Ticket

1. In the T-chart below, list items you can find that are labeled made in the USA or made in other countries. Be sure to identify the item and which country manufactured it.

| Made in USA | Made in Another Country |
|-------------|-------------------------|
|-------------|-------------------------|

*Answers will vary. Have a brief discussion with students about why so many items are imported. Ask the class if there would ever be a situation where it would be better to manufacture goods domestically. Tell students that nations might install trade barriers for a wide variety of reasons and those will be discussed in this section.*

## Topic 8.2 Trade Barriers

### Exit Ticket

1. Fill in the table below by identifying the trade barrier from the description provided.

| Description                                                         | Trade Barrier Type       |
|---------------------------------------------------------------------|--------------------------|
| A tax on imports to raise money for a national government           | <i>Revenue Tariff</i>    |
| A total ban on imports from another country                         | <i>Embargo</i>           |
| A tax on imports to protect domestic firms from foreign competition | <i>Protective Tariff</i> |
| A government policy that caps the amount of imports from a nation   | <i>Quota</i>             |



## Topic 8.3 Exchange Rates

Name \_\_\_\_\_

### Entrance Ticket

1. If you've ever traveled outside the US, did you feel that goods and services were more expensive, less expensive, or about the same as the goods and services at home?

*Answers will vary. Start a discussion about why the same items appear to cost more or less when traveling abroad. (A good example and explainer of this concept is The Economist's "Big Mac Index," available at <https://economist.com/big-mac-index>).*

2. If you haven't traveled outside the US, would you want to visit a nation where the currency is more or less valuable than the dollar? Why?

*Answers will vary. Students should respond that they would prefer to visit a nation whose currency is less valuable than the dollar as Americans would have greater purchasing power because of the difference in currency values.*

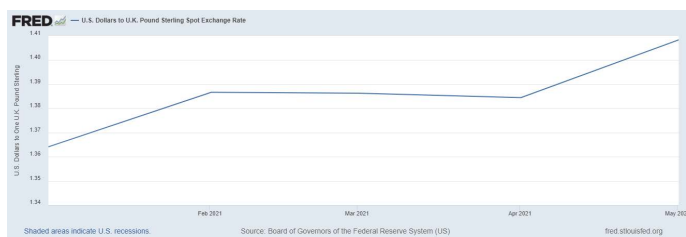
## Topic 8.3 Exchange Rates

Name \_\_\_\_\_

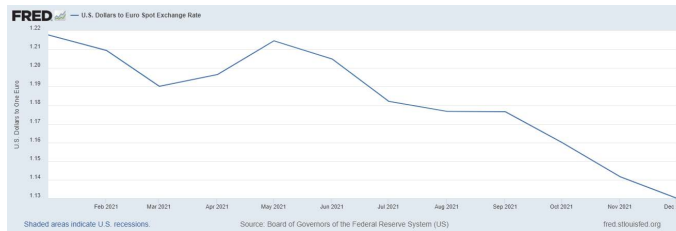
### Exit Ticket

1. Consider the exchange rates between the dollar, the British pound, and the euro. Identify which currency is appreciating in relation to the dollar and which is depreciating.

Graph 1: Dollar to UK Pound



Graph 2: Dollar to Euro



<https://fredaccount.stlouisfed.org/public/dashboard/107737> Graphs10&11: Topic 8.3

*In graph 1, the dollar is depreciating in relation to the British pound because it would take \$1.36 to exchange for £1.00. (Conversely, \$1 could be exchanged for £0.64.) One year later it would take \$1.40 to exchange £1—or \$1 exchanged for £0.60. In graph 2, the dollar is appreciating in relation to the Euro because the original exchange rate in May 2021 was \$1.21 to purchase €1 (or \$1 to €0.79) and by December 2021 the exchange rate was only \$1.13 to purchase €1—or \$1 exchanged for €0.87.*

| UNIT 1       |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
|--------------|------------|--------|---------------|---------------------|--------|---------------|------------------------|--------|---------------|-----------------------|--------|---------------|-------------------|--------|---------------|-----------------------|--------|---------------|--|-----|--|--|
| 1.1          |            |        |               | 1.2                 |        |               |                        | 1.3    |               |                       |        | 1.4           |                   |        |               | 1.5                   |        |               |  | 1.6 |  |  |
| STUDENT NAME | Scarcity   |        |               | Resource Allocation |        |               | Opportunity Cost / PPC |        |               | Cost-Benefit Analysis |        |               | Marginal Analysis |        |               | Comparative Advantage |        |               |  |     |  |  |
|              | Don't Know | Unsure | I've Got This | Don't Know          | Unsure | I've Got This | Don't Know             | Unsure | I've Got This | Don't Know            | Unsure | I've Got This | Don't Know        | Unsure | I've Got This | Don't Know            | Unsure | I've Got This |  |     |  |  |
| 1            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 2            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 3            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 4            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 5            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 6            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 7            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 8            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 9            |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 10           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 11           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 12           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 13           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 14           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 15           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 16           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 17           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 18           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 19           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |
| 20           |            |        |               |                     |        |               |                        |        |               |                       |        |               |                   |        |               |                       |        |               |  |     |  |  |

## Confidence Tracker Sheet





| UNIT 4       |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
|--------------|------------|--------|---------------|-----------------|--------|---------------|----------------------|--------|---------------|---------------------|--------|---------------|------------|--------|---------------|----------------------|--------|---------------|------------|--------|---------------|-----------------|--------|---------------|------------------------|--------|---------------|
| STUDENT NAME | 4.1        |        |               | 4.2             |        |               | 4.3                  |        |               | 4.4                 |        |               | 4.5        |        |               | 4.6                  |        |               | 4.7        |        |               | 4.8             |        |               | 4.9                    |        |               |
|              | Firm Costs |        |               | Types of Profit |        |               | Production Decisions |        |               | Perfect Competition |        |               | Monopoly   |        |               | Price Discrimination |        |               | Oligopoly  |        |               | Property Rights |        |               | Public & Private Goods |        |               |
|              | Don't know | Unsure | I've Got This | Don't know      | Unsure | I've Got This | Don't know           | Unsure | I've Got This | Don't know          | Unsure | I've Got This | Don't know | Unsure | I've Got This | Don't know           | Unsure | I've Got This | Don't know | Unsure | I've Got This | Don't know      | Unsure | I've Got This | Don't know             | Unsure | I've Got This |
| 1            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 2            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 3            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 4            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 5            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 6            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 7            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 8            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 9            |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 10           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 11           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 12           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 13           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 14           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 15           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 16           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 17           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 18           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 19           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |
| 20           |            |        |               |                 |        |               |                      |        |               |                     |        |               |            |        |               |                      |        |               |            |        |               |                 |        |               |                        |        |               |

# Confidence Tracker Sheet



| UNIT 5       |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
|--------------|---------------------|--------|---------------|------------------|--------|---------------|--------------|--------|---------------|---------------------------|--------|---------------|--------------------|--------|---------------|-----------------|--------|---------------|---------------------------|--------|---------------|--|
| STUDENT NAME | 5.1                 |        |               | 5.2              |        |               | 5.3          |        |               | 5.4                       |        |               | 5.5                |        |               | 5.6             |        |               | 5.7                       |        |               |  |
|              | Circular Flow & GDP |        |               | GDP Calculations |        |               | Unemployment |        |               | Price Indices & Inflation |        |               | Costs of Inflation |        |               | Business Cycles |        |               | Aggregate Demand & Supply |        |               |  |
|              | Don't know          | Unsure | I've Got This | Don't know       | Unsure | I've Got This | Don't know   | Unsure | I've Got This | Don't know                | Unsure | I've Got This | Don't know         | Unsure | I've Got This | Don't know      | Unsure | I've Got This | Don't know                | Unsure | I've Got This |  |
| 1            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 2            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 3            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 4            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 5            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 6            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 7            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 8            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 9            |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 10           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 11           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 12           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 13           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 14           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 15           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 16           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 17           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 18           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 19           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |
| 20           |                     |        |               |                  |        |               |              |        |               |                           |        |               |                    |        |               |                 |        |               |                           |        |               |  |

## Confidence Tracker Sheet



| UNIT 6       |            |        |               |              |        |               |                        |        |               |                |        |               |
|--------------|------------|--------|---------------|--------------|--------|---------------|------------------------|--------|---------------|----------------|--------|---------------|
| STUDENT NAME | 6.1        |        |               |              | 6.2    |               |                        | 6.3    |               |                | 6.4    |               |
|              | Money      |        |               | Money Supply |        |               | Banking & Money Supply |        |               | Interest Rates |        |               |
|              | Don't Know | Unsure | I've Got This | Don't Know   | Unsure | I've Got This | Don't Know             | Unsure | I've Got This | Don't Know     | Unsure | I've Got This |
| 1            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 2            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 3            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 4            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 5            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 6            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 7            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 8            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 9            |            |        |               |              |        |               |                        |        |               |                |        |               |
| 10           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 11           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 12           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 13           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 14           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 15           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 16           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 17           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 18           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 19           |            |        |               |              |        |               |                        |        |               |                |        |               |
| 20           |            |        |               |              |        |               |                        |        |               |                |        |               |

# Confidence Tracker Sheet



## UNIT 7

[illegible]

# Confidence Tracker Sheet



| STUDENT NAME | UNIT 8              |        |               |                |        |               |                |        |               |            |        |               |
|--------------|---------------------|--------|---------------|----------------|--------|---------------|----------------|--------|---------------|------------|--------|---------------|
|              | 8.1                 |        |               |                | 8.2    |               |                |        | 8.3           |            |        |               |
|              | International Trade |        |               | Trade Barriers |        |               | Exchange Rates |        |               |            |        |               |
|              | Don't Know          | Unsure | I've Got This | Don't Know     | Unsure | I've Got This | Don't Know     | Unsure | I've Got This | Don't Know | Unsure | I've Got This |
| 1            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 2            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 3            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 4            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 5            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 6            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 7            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 8            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 9            |                     |        |               |                |        |               |                |        |               |            |        |               |
| 10           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 11           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 12           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 13           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 14           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 15           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 16           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 17           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 18           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 19           |                     |        |               |                |        |               |                |        |               |            |        |               |
| 20           |                     |        |               |                |        |               |                |        |               |            |        |               |

## Confidence Tracker Sheet



# **Federal Reserve Bank of St. Louis Print Resources Curriculum Alignment**

## **Unit 1**

The Wealth Game—Factors for Success

- <https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/factors-for-success>

So Few of Me (Elementary Lesson)

- <https://www.stlouisfed.org/education/so-few-of-me>

Four Feet, Two Sandals (Elementary Lesson)

- <https://www.stlouisfed.org/education/four-feet-two-sandals>

*Page One Economics* (Oct 2019) Money & Missed Opportunities

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/money-and-missed-opportunities>

Production Possibilities

- <https://www.stlouisfed.org/education/production-possibilities>

Arsenal of Democracy—the United States in World War II

- <https://www.stlouisfed.org/education/the-arsenal-of-democracy-the-united-states-in-world-war-ii>

Making Choices & Identifying Costs

- <https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/making-choices>

Unintended Consequences

- <https://www.stlouisfed.org/education/unintended-consequences>

Is Trade a Zero Sum Game? The Answer Lies in Candy

- <https://www.stlouisfed.org/education/is-trade-a-zero-sum-game>

*Making Personal Finance Decisions* Lesson 7A: The Spending Decision—Colas and Hot Dogs

- <https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/spending-decision>

*A Yen to Trade* Lesson 3: The Tortoise and the Hare

- <https://www.stlouisfed.org/education/a-yen-to-trade-unit>

## **Unit 2**

How Many Beverages Will Consumers Buy?

- <https://www.stlouisfed.org/education/how-many-beverages-will-consumers-buy>



## Supply and Demand

- <https://www.stlouisfed.org/education/supply-and-demand>

## *Page One Economics* (March 2021) The Science of Supply and Demand

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/science-of-supply-demand>

## *Page One Economics* (Sept. 2020) COVID-19's Effects on the Economy and the Fed's Response

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/covid-19s-effects-economy-feds-response>

## Unit 3

### Tax Incidence

- <https://www.stlouisfed.org/education/tax-incidence>

### Using a Structured Minimum Wage Debate in the Economics Classroom

- <https://www.stlouisfed.org/education/structured-minimum-wage-debate>

### Herd Immunity and Positive Externalities

- <https://www.stlouisfed.org/education/herd-immunity-positive-externalities>

## Unit 4

### Teaching Market Structures with a Competitive Gum Market

- <https://www.stlouisfed.org/education/teaching-market-structures>

### Production Profit and Loss (Middle School Lesson)

- <https://www.stlouisfed.org/education/production-profit-and-loss>

### Market Structures Cost Curves & Perfect Competition

- <https://www.stlouisfed.org/education/perfect-competition>

### Monopoly

- <https://www.stlouisfed.org/education/monopoly>

## *Page One Economics* (Jan. 2014) The Rising Cost of College: Tuition, Aid, and Price Discrimination

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/the-rising-cost-of-college-tuition-financial-aid-and-price-discrimination>

## *Page One Economics* (November 2018) The Economics of Flying (oligopoly)

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/economics-of-flying>

## *Seas, Trees, and Economies* Lesson 5: Eggs-ternal Costs (Middle School Property Rights Lesson)

- <https://www.stlouisfed.org/education/seas-trees-economies-unit>



### *Saving the Environment with Economic Ideas* Lesson 2: Property Rights

- <https://www.stlouisfed.org/education/saving-the-environment-with-economic-ideas>

### What Are Taxes For? (Public Goods Lesson)

- <https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/what-are-taxes-for>

## Unit 5

### The Ox-Cart Man (Elementary Lesson): Circular Flow

- <https://www.stlouisfed.org/education/ox-cart-man>

### GDP Expenditures Equation

- <https://www.stlouisfed.org/education/gdp-expenditures-equation>

### *Page One Economics* (September 2018) How Do Imports Affect GDP?

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/imports-gdp>

### *Page One Economics* (May 2021) What is Potential GDP and Why Does it Matter?

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/minding-the-output-gap>

### How Do We Measure Unemployment?

- <https://www.stlouisfed.org/education/how-do-we-measure-unemployment>

### *Page One Economics* (February 2016) Making Sense of Unemployment Data

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/making-sense-of-unemployment-data>

### *Page One Economics* (January 2022) Gender and Labor Markets

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/gender-and-labor-markets>

### A Classroom Inflation Auction

- <https://www.stlouisfed.org/education/classroom-inflation-auction>

### *Page One Economics* (October 2015) What's in Your Market Basket?

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/whats-in-your-market-basket-why-your-inflation-rate-might-differ-from-the-average>

### Market Basket CPI

- <https://www.stlouisfed.org/education/market-basket>

### The Economic Goal of Price Stability

- <https://www.stlouisfed.org/education/economic-goal-price-stability>

### *Page One Economics* (March 2023) All About the Business Cycle

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/all-about-the-business-cycle>



## Unit 6

Ben Franklin—Highlighting the Printer (Middle School)

- <https://www.stlouisfed.org/education/ben-franklin-highlighting-the-printer>

One Cent, Two Cents, Old Cent, New Cent: All About Money Q&A (Elementary Lesson)

- <https://www.stlouisfed.org/education/parent-resources/all-about-money-q-and-a>

*Page One Economics* (March 2018) Bitcoin: Money or Financial Investment?

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/bitcoin-money-or-financial-investment>

Types of Savings Accounts

- <https://www.stlouisfed.org/education/types-of-savings-accounts>

*Page One Economics* (March 2013) Money and Inflation: A Functional Relationship

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/money-and-inflation-a-functional-relationship>

## Unit 7

*Page One Economics* (December 2018) Individual Income Tax: Basics and New Changes

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/individual-income-tax-basics-changes>

Government Spending and Taxes

- <https://www.stlouisfed.org/education/government-spending-and-taxes>

*Page One Economics* (November 2019) Making Sense of the National Debt

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/making-sense-of-the-national-debt>

Crowding Out

- <https://www.stlouisfed.org/education/crowding-out>

FOMC Challenge

- <https://www.stlouisfed.org/education/fomc-challenge>

Fed Board Builder

- <https://www.stlouisfed.org/education/fed-board-builder>

*Page One Economics* (May 2020) Independence, Accountability, and the Federal Reserve System

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/independence-federal-reserve>

*Page One Economics* (May 2019) Monetary Policy with Ample Reserves

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/monetary-policy-ample-reserve>



## Federal Reserve Monetary Policy Timeline

- <https://www.stlouisfed.org/education/monetary-policy-timeline>

## Lecture Guide: How the Federal Reserve Implements Monetary Policy

- <https://www.stlouisfed.org/education/monetary-policy-lecture-guide>

## *Page One Economics* (March 2017) The Productivity Puzzle

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/the-productivity-puzzle>

## *Page One Economics* (September 2013) What Are the Ingredients for Economic Growth?

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/what-are-the-ingredients-for-economic-growth>

## Unit 8

## *Page One Economics* (November 2016) International Trade: Making Sense of the Trade Deficit

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/international-trade>

## *Page One Economics* (March 2015) Is a Strong Dollar Better than a Weak Dollar?

- <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/is-a-strong-dollar-better-than-a-weak-dollar>



# **General Exit Ticket Curriculum Alignment**

## **Unit 1**

### **1.1 Scarcity**

- Content Standard 1: Scarcity
  - Benchmark Grade 12 #1: Choices made by individuals, firms or government officials are constrained by the resources to which they have access.

### **1.2 Resource Allocation / Economic Systems**

- Content Standard 3: Allocation
  - Benchmark Grade 12 #1: Comparing the benefits and costs of different allocation methods in order to choose the method that is the most appropriate for some specific problem can result in more effective allocations and a more effective overall allocation system.
  - Benchmark Grade 8 #2: There are essential differences between a market economy, in which allocations result from individuals making decisions as buyers and sellers, and a command economy, in which resources are allocated according to central authority.

### **1.3 Opportunity Cost / Production Possibilities Curve**

- Content Standard 1: Scarcity
  - Benchmark Grade 4: The opportunity cost of an activity is the value of the best alternative that would have been chosen instead. It includes what would have been done with the money spent and the time and other resources used in understanding the activity.

### **1.4 Cost-Benefit Analysis**

- Content Standard 2: Decision Making
  - Benchmark Grade 4 #2: A cost is what you give up when you decide to do something. A benefit is what satisfies your wants.

### **1.5 Marginal Analysis**

- Content Standard 2: Decision Making
  - Benchmark Grade 8 #2: Marginal benefit is the change in total benefit resulting from an action. Marginal cost is the change in total cost resulting from an action.

### **1.6 Comparative Advantage / Trade**

- Content Standard 6: Specialization
  - Benchmark Grade 12 #1: Individuals and nations have a comparative advantage in the production of goods or services if they can produce a product at a lower opportunity cost than other individuals or nations.

## **Unit 2**

### **2.1 Demand**

- Content Standard 8: Role of Prices
  - Benchmark Grade 12 #1: Demand for a product changes when there is a change in consumers' incomes, preferences, the prices of related products, or in the number of consumers in a market.



- Benchmark Grade 12 #3: Changes in supply or demand cause relative prices to change; in turn, buyers and sellers adjust their purchase and sales decisions.

## 2.2 Supply

- Content Standard 8: Role of Prices
  - Benchmark Grade 12 #2: Supply of a product changes when there are changes in either the prices of the productive resources used to make the product, the technology used to make the product, the profit opportunities available to producers from selling other products, or the number of sellers in a market.
  - Benchmark Grade 12 #3: Changes in supply or demand cause relative prices to change; in turn, buyers and sellers adjust their purchase and sales decisions.

## 2.3 Market Equilibrium

- Content Standard 7: Markets & Prices
  - Benchmark Grade 8 #3: The market clearing or equilibrium price for a good or service is the price at which quantity supplied equals quantity demanded.

## 2.4 Disequilibrium

- Content Standard 7: Markets & Prices
  - Benchmark Grade 8 #4: If a price is above the market clearing price, it will eventually fall, causing sellers to produce less and buyers to produce more; if it is below the market clearing price, it will eventually rise, causing sellers to produce more and buyers to purchase less.

## 2.5 Elasticity

- Content Standard 7: Markets & Prices
  - Benchmark Grade 8 #1: Market prices are determined through the buying and selling decisions made by buyers and sellers.

# Unit 3

## 3.1 Taxes / Subsidies

- Content Standard 16: Role of Government & Market Failure
  - Benchmark Grade 12 #5 When a price fails to reflect all the benefits of a product, too little of the product is produced & consumed. When a price fails to reflect all the costs of a product, too much of it is produced and consumed. Government can use subsidies to help correct insufficient output; it can use taxes to help correct for excessive output; or it can regulate output directly to correct for over- or under-production or consumption.

## 3.2 Price Ceilings / Floors

- Content Standard 8: Role of Prices
  - Benchmark Grade 12 #4: Government enforced price ceilings set below the market-clearing price and government enforced price floors set above the market-clearing price distort price signals and incentives to producers and consumers. Price ceilings can cause persistent shortages, while price floors can cause persistent surpluses.



### 3.3 Externalities

- Content Standard 16: Role of Government & Market Failure
  - Benchmark Grade 12 #4: Externalities exist when some of the costs or benefits associated with production and consumption fall on someone other than the producers or consumers of the product.

## Unit 4

### 4.1 Firm Costs

- Content Standard 14: Entrepreneurship
  - Benchmark Grade 8 #1: Entrepreneurs compare the expected benefits of entering a new enterprise with the expected costs.

### 4.2 Types of Profit

- Content Standard 14: Entrepreneurship
  - Benchmark Grade 8 #2: Entrepreneurs organize resources to produce goods and services because they expect to earn profits.
  - Benchmark Grade 8 #3: Entrepreneurs (as well as other sellers) earn profits when the revenues they receive from selling the products they sell are greater than the costs of production.

### 4.3 Production Decisions

- Content Standard 2: Decision Making
  - Benchmark Grade 12 #1: To produce the profit-maximizing level of output and hire the optimal number of workers, and other resources, producers must compare the marginal benefits and marginal costs of producing a little more with the marginal benefits and marginal costs of producing a little less.

### 4.4 Perfect Competition

- Content Standard 9: Competition & Market Structure
  - Benchmark Grade 12 #2: The level of competition in an industry is affected by the ease with which new producers can enter the industry, and by consumers' information about the availability, price & quantity of substitute goods & services.

### 4.5 Monopoly

- Content Standard 9: Competition & Market Structure
  - Benchmark Grade 12 #3: Some market structures are dominated by large firms, often competing against only a few other firms. Prices in such markets may be higher than they would be in more competitive markets

### 4.6 Price Discrimination

- Content Standard 9: Competition & Market Structure
  - Benchmark Grade 8 #2: Competition among sellers results in lower costs and prices, higher product quality, and/or better customer service. When competition among sellers is limited, sellers have some control over the prices they set.

#### 4.7 Oligopoly

- Content Standard 9: Competition & Market Structure
  - Benchmark Grade 12 #4: Collusion among buyers or sellers reduces the level of competition in a market. Collusion is more difficult in markets with large numbers of buyers and sellers.

#### 4.8 Property Rights

- Content Standard 16: Role of Government & Market Failure
  - Benchmark Grade 12 #2: An important role for government in the economy is to define, establish and enforce property rights. A property rights to a good or service includes the right to exclude others from using the good or service and the right to transfer the ownership or use of the resource to others.

#### 4.9 Public & Private Goods

- Content Standard 16: Role of Government & Market Failure
  - Benchmark Grade 8 #1: Public goods and services provide benefits to more than one person at a time, and their use can not be restricted to only those people who have paid to use them.

### Unit 5

#### 5.1 Circular Flow & GDP

- Content Standard 18: Economic Fluctuations
  - Benchmark Grade 8 #5: When consumers make purchases, goods & services are transferred from businesses to households in exchange for money payments. That money is used by businesses to pay for productive resources (natural, human & capital). Governments also provide goods and services that are paid for with tax receipts.

#### 5.2 GDP Calculations

- Content Standard 18: Economic Fluctuations
  - Benchmark Grade 12 #1: An increase in nominal GDP may reflect increases in the production of goods and services and also increases in prices. GDP adjusted for price changes is “real GDP.” Real GDP per capita is the basis for comparing material living standards over time and among different countries.

#### 5.3 Unemployment

- Content Standard 19: Unemployment & Inflation
  - Benchmark Grade 12 #1: The unemployment rate is an imperfect measure of unemployment because, among other reasons, it does not: 1) include workers whose job prospects are so poor that they become discouraged from seeking jobs and leave the labor force, and 2) reflect part-time workers who are looking for full-time work.

#### 5.4 Price Indices & Inflation

- Content Standard 11: Money & Inflation
  - Benchmark Grade 12 #3: The consumer price index (CPI) is the most commonly used measure of price-level changes. It can be used to compare the price level in one year with price levels in earlier or later periods.



## 5.5 Costs of Inflation

- Content Standard 19: Unemployment & Inflation
  - Benchmark Grade 12 #6: Unexpected inflation imposes costs on many people and benefits others because it arbitrarily redistributes purchasing power among different groups of people. Unexpected inflation hurts savers and people who fixed incomes; it helps people who have borrowed money at a fixed rate of interest.

## 5.6 Business Cycles

- Content Standard 18: Economic Fluctuations
  - Benchmark Grade 12: 3: A business cycle involves fluctuations of real GDP around its potential level.

## 5.7 Aggregate Demand & Aggregate Supply

- Content Standard 18 Economic Fluctuations
  - Benchmark Grade 12: #2: The potential level of real GDP for a nation is determined by such things as the size and skills of its labor force, the size and quality of its stock of capital goods, the quantity and quality of its natural resources, its technological capabilities, and its legal and cultural institutions.

# Unit 6

## 6.1 Money

- Content Standard 11: Money & Inflation
  - Benchmark Grade 8 #1: As a store of value, money makes it easier for people to save and defer consumption until the future
  - Benchmark Grade 8 #2: As a unit of account, money is used to compare the market value of different goods & services.

## 6.2 Money Supply

- Content Standard 11: Money & Inflation
  - Benchmark Grade 12 #1: The basic money supply in the United States consists of currency, coins, & checking account deposits.

## 6.3 Banking & Money Supply Expansion

- Content Standard 11: Money & Inflation
  - Benchmark Grade 12 #2: In many economies, when banks make loans, the money supply increases, when loans are paid off, the money supply decreases.

## 6.4 Interest Rates

- Content Standard 12: Interest Rates
  - Benchmark Grade 12 #1: The real interest rate is the nominal or current market interest rate minus the rate of inflation.
  - Benchmark Grade 12 #2: Higher real interest rates increase the rewards for saving and make borrowing more expensive.



## Unit 7

### 7.1 Fiscal Policy

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade 12 #1: Fiscal policies are decisions to change spending and taxation levels by the federal government. As fiscal policies, these decisions are adopted to influence national levels of output, employment, and prices.

### 7.2 Taxes

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade #2: In the short run, increasing federal spending and/or reducing taxes can promote more employment and output, but these policies also put upward pressure on the price level and interest rates. Decreased federal spending and/or increased taxes tend to lower price levels and interest rates, but they reduce employment and output levels in the short run.

### 7.3 Automatic Stabilizers

- Content Standard 16: Role of Government & Market Failure
  - Benchmark Grade 8 #3: Most federal government tax revenue comes from personal income and payroll taxes. Payments to Social Security recipients, the costs of national defense and homeland security, medical expenditures (such as Medicare), transfers to state and local governments, and interest payments on the national debt constitute the bulk of federal government spending.

### 7.4 Government Deficits & Debt

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade 12 #5: When the government runs a budget deficit, it must borrow to finance that deficit.
  - Benchmark Grade 12 #6: The national debt is the accumulated sum of all its past annual deficits & surpluses

### 7.5 Crowding Out

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade 12 #3: Over time, the interest rate effects of an expansionary fiscal policy may lead to a decrease in private investment spending that offsets the output and employment effects of the policy.

### 7.6 Federal Reserve Structure

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade 12 #7: Monetary policies are decisions by the Federal Reserve System that lead to changes in the supply of money, short term interest rates, and the availability of credit. Changes in the growth rate of the money supply can influence overall levels of spending, employment, and prices in the economy by inducing changes in the levels of personal and business investment spending.



## 7.7 Monetary Policy

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade 12 #9: The Federal Reserve targets the level of the federal funds rate, a short-term rate that banks charge one another for the use of excess funds. This target is largely reached by buying and selling existing government securities.
  - Benchmark Grade 12 #10: The Federal Reserve tends to increase interest rate targets when it feels the economy is growing too rapidly and/or the inflation rate is accelerating. It tends to lower targets when it wants to stimulate the short-term growth of the economy.

## 7.8 Monetary Policy Tools

- Content Standard 20: Fiscal & Monetary Policy
  - Benchmark Grade 12 #8: The Federal Reserve System's major monetary policy tool is open market purchases or sales of government securities, which affects the money supply and short-term interest rates.

## 7.9 Economic Growth

- Content Standard 15: Economic Growth
  - Benchmark Grade 12 #1: Economic growth is a sustained rise in a nation's production of goods and services. Long term growth in output results from improvements in labor productivity and increases in employment. It varies across countries because of differences in investments in human and physical capital, research and development, technological change, and from alternative institutional arrangements and incentives.

## 7.10 Public Policy & Economic Growth

- Content Standard 16: Role of Government & Market Failure
  - Benchmark Grade 12 #8: Government laws establish the rules and institutions in which markets operate. These include such things as property rights, collective bargaining rules, laws about discrimination, and laws regulating marriage and family life.

# Unit 8

## 8.1 Benefits of International Trade

- Content Standard 6: Specialization
  - Benchmark Grade 12 #2: International trade stems mainly from factors that confer comparative advantage, including international differences in the availability of productive resources in relative prices.

## 8.2 Trade Barriers

- Content Standard 17: Government Failure
  - Benchmark Grade 12 #3: Although barriers to international trade usually impose higher costs than benefits, they are often advocated by people and groups who expect to gain substantially from them. Because the costs of these barriers are typically spread over a large number of people who each pay only a little and may not recognize the cost, policies supporting trade barriers are often adopted through the political process.



### 8.3 Exchange Rates

- Content Standard 7: Markets & Prices
  - Benchmark Grade 12 #5: When the exchange rate between two currencies changes, the relative prices of the goods and services traded among countries using those currencies change; as a result, some groups gain, and others lose.

