The Teacher Notes were developed to help teachers understand the depth and breadth of the standards. In some cases, information provided in this document goes beyond the scope of the standards and can be used for background and enrichment information. Please remember that the goal of social studies is not to have students memorize laundry lists of facts, but rather to help them understand the world around them so they can analyze issues, solve problems, think critically, and become informed citizens. **Children’s Literature:** A list of book titles aligned to the 6th-12th Grade Social Studies GSE may be found at the Georgia Council for the Social Studies website: [http://www.gcss.net/uploads/files/Childrens-Literature-Grades-6-to-12.pdf](http://www.gcss.net/uploads/files/Childrens-Literature-Grades-6-to-12.pdf)

### TEACHER NOTES

#### Fundamentals of Economic Decision-Making

**SSEF1 Analyze how scarcity affects the choices of individuals, businesses, and governments.**

The discipline of economics, along with its application in personal finance, examines the decisions that individuals, businesses, and countries make in response to scarcity. Scarcity exists when a person or a society has unlimited wants and limited (or scarce) resources. Because most resources are **scarce**, individuals, businesses and governments must make **choices** about the best use of their finite resources. These choices have **opportunity costs**.

**SSEF1 Analyze how scarcity affects the choices of individuals, businesses, and governments.**

a. Explain that scarcity is a basic, permanent condition that exists because unlimited wants exceed limited productive resources.

Scarcity is the basic condition that exists when unlimited wants by society exceed limited productive resources. The scarce productive resources (factors of production) are land (or natural), labor (or human), capital (or manufactured) resources.

Very few resources are not scarce, but some examples can be found. Accumulated knowledge, such as a math formula, is not scarce. Air and sunshine are traditionally not considered limited or scarce. Practically every other productive resource is indeed limited.

Things that are scarce are both limited AND desirable. For example, crude oil is a land resource that is limited because there is a finite amount and limitations of capital and human resources limit its extraction at any particular time. It is desirable because it is used to produce goods and services. On the other hand, pollution is not considered scarce because it is not desirable.

On an individual level, consider the time that a person can work. Hours that are devoted to providing human resources to a business are limited. In the broadest sense, there are only 24 hours each day. Many activities compete for that time. Family obligations, social time with friends, rest, eating, and other activities must be considered. Because of limited time, individuals are faced with scarcity. Every hour of the day has multiple possible activities.
<table>
<thead>
<tr>
<th>Is it scarce?</th>
<th>Is it limited?</th>
<th>Is it desirable?</th>
<th>Is it scarce?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Water</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Garbage</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Air</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

It is important to distinguish between scarcity and a shortage. Scarcity always exists, while shortages are temporary. Shortages occur when a resource, good, or service becomes unavailable for a period due to market conditions (specifically when the quantity demanded currently exceeds the quantity supplied). During the COVID pandemic, most markets experienced a shortage of toilet paper. Demand suddenly increased for toilet paper in homes because people stayed home. However, there was an abundance of commercial toilet paper that was unused in offices and other commercial settings. As factories realigned to meet the demand, the shortage was eased.

**SSEF1 Analyze how scarcity affects the choices of individuals, businesses, and governments.**

b. Compare and contrast strategies for allocating scarce resources such as by price, majority rule, contests, force, sharing, lottery, authority, first-come-first-served, and personal characteristics.

**Allocation strategies** are the methods available to societies as they seek to allocate goods, services and resources.

**Price** is an allocation strategy that distributes goods to those who are willing and able to pay. It is the most common allocation strategy in a market economy. The price is set through the interaction of supply and demand, and automatically adjusts in response to changes in the market. **Supply** is the amount of a good, service, or factor of production a seller is willing and able to sell at each price. **Demand** is the amount of a good, service, or factor of production a buyer is willing and able to purchase at each price. The price at which the quantity demanded by the buyer is equal to the quantity supplied by the seller is the market price. This allocation strategy allows rationing of a resource based on who can afford the price set by the market. The more desirable and relatively scarce the item, generally, the higher the price. While price is an efficient allocation strategy, it excludes people from markets if they lack the money to pay the price.

E.g. A wide variety of goods are allocated by price, including tickets to concerts or sporting events, most houses and apartments, clothing, and more.

**Majority Rule** occurs when a group of people vote or seek consensus to decide how a good, service, or factor of production will be distributed.

E.g. National, state, and local government leaders (who have been elected) establish public parks and greenspaces. When land is set aside for this use, it is not available for other uses, including development, housing, or agriculture.
Contest is an allocation strategy that distributes the resource to the person who wins. The “winning” could be based on running a race (who is fastest), or in a test of knowledge/skill (trivia contestant or chess champion). The winner depends on the nature of the contest, so this allocation strategy will favor groups with the skills it is designed to test.

E.g. Some scholarships at colleges or universities are automatically awarded to the valedictorian of a high school class. The valedictorian won by having the highest GPA.

Force allocates goods, services, and factors of production by autocratic decisions or coercion that are supported by intimidation or threat of physical harm. In countries where the government makes and carries out decisions by force, economic changes can happen quickly because the government decides how to distribute all items and enforces the decision through military/police power.

E.g. A country’s resources could be taken by force when a foreign army invades. Police seizure of assets is another example.

Sharing allocates resources jointly between people or organizations. Different standards can be used to determine the distribution, but the parties agree to specific terms. In the case of public or common goods, if a resource is nonexcludable, sharing can lead to overuse or lack of upkeep (free-rider problem).

E.g. A student could share her lunch, and siblings could share a car. Airlines share runways at the airport. Common spaces in a college dorm, community gardens, and public parks all have shared access.

Lottery allocates goods, services, and resources through random selection. A variety of people or organizations each has equal odds of obtaining it. If the government randomly selects individuals to receive farmland, the land may go to someone who has no knowledge of farming techniques and the land resource may be underutilized.

E.g. Admission to some schools is allocated by lottery. During the 19th century, the state of Georgia conducted land lotteries that allocated farmland.

Authority relies on the decisions of a powerful person or group of people who make the decisions about who gets to obtain a good, service, or factor of production. This allocation strategy allows for quick action because a person or a group of people in power can make and implement the decisions quickly.

E.g. Elected representatives have the authority (granted by voters) to pass legislation requiring workers to pay a tax on the income they earn. Elected representatives also decide how the taxes are spent and which groups benefit from the goods and services provided by the government.

First Come, First Served allows people to receive a good, service, or factor of production if they get to it first or are one of the people close enough to the front of the line to receive the good, service, or factor of production before there are none remaining.
E.g. When tickets to a concert or sporting event are released on a certain date at a certain time, people wait to log into the site at the very moment the tickets go on sale. A virtual line forms. Tickets are sold to the customers in the line until they are sold out. At one time, a teenager who wanted to take the driver’s license road test had to arrive early and get in line for the opportunity to take the test. The aspiring driver might wait in line all day for the test. Now, the Georgia Department of Driver’s Services allows potential drivers to schedule a road test for a specific date and time, eliminating the first come, first served strategy and improving efficiency.

**Personal Characteristics** distributes goods, services, and resources based on physical characteristics, need, or merit.

E.g. Allocation based on physical characteristics: During the era of Jim Crow laws, Black citizens of the U.S. were not allowed to access certain public accommodations and services, such as buses, hotels, restaurants, and more.

Allocation based on need - WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) specifically serves “low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and infants and children up to age 5 who are found to be at nutritional risk.” Only families who have these characteristics are eligible for the program. ([https://www.fns.usda.gov/wic](https://www.fns.usda.gov/wic)).

Allocation based on merit - Georgia students who meet certain criteria (e.g. a 3.0 GPA, graduate from an eligible institution, and residents of the state of Georgia) receive the H.O.P.E. scholarship if they attend a higher education program in Georgia. ([https://www.gafutures.org/hope-state-aid-programs/hope-zell-miller-scholarships/hope-scholarship/initial-academic-eligibility/](https://www.gafutures.org/hope-state-aid-programs/hope-zell-miller-scholarships/hope-scholarship/initial-academic-eligibility/))

**Resources:**

Price Signals - The Economic Lowdown Podcast Series, Episode 12.  

**SSEF1 Analyze how scarcity affects the choices of individuals, businesses, and governments.**

c. Define and give examples of productive resources (i.e. factors of production): natural resources (i.e. land), human resources (i.e. labor and human capital), physical capital and entrepreneurship.

**Productive resources**, also known as **factors of production**, are scarce items used in the production of goods and services in an economy.

**Natural resources**, also known as **land resources**, are the gifts of nature we use to produce goods and services. For example, a tree is a natural resource used in the production of goods like lumber or paper.
**Human resources (labor resources)** are the people involved in the production of goods and services. People offer their time, physical abilities, knowledge, and skills to production. The abilities each person brings to the production process is known as their **human capital**.

**Physical capital** refers to tools, machines, equipment, and structures used repeatedly in the production of goods and services.

While natural, human, and capital resources are essential to production, we rely on the fourth productive resource, **entrepreneurship**, to bring the resources together in innovative ways to produce a product. Entrepreneurs take risks to bring a product to market, such as using one’s own financial resources to make a prototype of a product or buy the capital resources required to start the business. In most cases, entrepreneurs begin new businesses because they believe the potential rewards of success outweigh the potential costs associated with the risks, but it can be difficult to predict success.

**Profit** is the primary motivation for an entrepreneur. Profit is equal to a firm’s revenue minus its costs. If revenue (price times the quantity of goods/services sold) exceeds costs (costs of production plus the income they gave up to start the business), the entrepreneur keeps the profit. Besides profit, the motivations of entrepreneurs can include job creation, innovation, and improving society. Some entrepreneurs start for-profit companies or non-profit organizations because they believe their product or service will improve society or create jobs for their community. Some of these socially conscious companies choose a model where each purchase funds charity or gives to someone in need. For example, when you buy a pair of socks and one of the same kind is given to someone experiencing homelessness.

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**If Johan and Maria started a bakery, what types of productive resources would they need to acquire for their business?**

<table>
<thead>
<tr>
<th>Natural Resources</th>
<th>Eggs, butter, salt, sugar, cocoa powder, energy for the oven</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Land)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Human Resources</th>
<th>The time, effort, and energy of the people who work in the bakery, including Sam the pastry chef, Jessie the dishwasher, Ying the chocolatier, Sebastian the cake decorator, Parker the cashier, Manny the delivery driver, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Labor)</td>
<td><strong>Human Capital</strong> includes the skills and education of the workers. The development of human capital makes a worker more productive, and it adds value to the human resources. Eg. Sam earned a degree in Pastry Arts and has 10 years of experience in other bakeries. Jessie has perfected the art of washing the dough bowls and can wash 3 per minute. Sebastian was trained by his grandmother and has made over 600 cakes of all different styles and has learned from his past mistakes and triumphs. Manny has a light commercial trucking license and has strong knowledge of the best routes to...</td>
</tr>
</tbody>
</table>
get around town without wedding cakes falling in the back.

<table>
<thead>
<tr>
<th>Physical Capital</th>
<th>Ovens, cash register, mixers, mixing bowls, spoons, rising racks, refrigerators, the kitchen or the building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>Johan and Maria started the bakery with their own money and time five years ago. It took a year before it was profitable. He rents the space, purchases all of the equipment, orders the ingredients from a supplier. She organizes orders and marketing, and hires, manages, and trains all the workers. Together, they invest in the resources and manage the process to make tasty products that they sell to earn profit.</td>
</tr>
</tbody>
</table>


**Intermediate goods** are goods that are produced that are incorporated into the final good. The bakery also will use many intermediate goods. Ingredients such as food coloring and seasoning blends, as well as packaging such as paper baking cups and bakery boxes, are not natural, human or capital resources. They are part of the final product.
Finally, money is not a resource. Money is a means to purchase resources, but it is not a factor of production. Money is sometimes referred to as “capital” in other disciplines, but in economics, “capital” only refers to the tools and equipment needed to produce as described above.

Federal Reserve Bank of Atlanta Infographic: What Is an Entrepreneur?
Download the infographic, order a poster and download a classroom activity at www.atlantafed.org/education/teach/infographic-posters/entrepreneurs.aspx

Resources:

Federal Reserve Bank of Dallas publication: Everyday Economics: Entrepreneurs. Download or order the publication from www.dallasfed.org/educate/everyday

SSEF1 Analyze how scarcity affects the choices of individuals, businesses, and governments.

d. Apply the concept of opportunity cost (the forgone next best alternative) to personal choices, as well as business and government decisions.

The study of economics is all about the choices made by individuals, businesses, and governments. From an economist’s view, all choices involve both benefits and costs. The value of one’s next best alternative given up when a choice is made is called opportunity cost. Opportunity costs can be defined in many ways, including monetary costs or benefits.

In a personal decision, you have a choice to either babysit and earn $40 OR go to a movie with a friend and spend $20 on a Friday night. If you choose to babysit, the opportunity cost is the satisfaction and fun missed from not getting to see the movie with your friend. If you choose to go to the movie, your opportunity cost is the $20 you spent (that you can’t spend on anything else) and the
$40 you didn’t earn, for a total of $60. Personal preferences often guide how individuals value choices. Rational decision makers choose to do something as long as the marginal benefits are greater than or equal to the marginal costs.

In a business decision, an automobile factory has always hired workers to paint the cars during assembly. A new robot could be purchased to paint the cars. The opportunity cost of choosing the robot to paint is the cost of the robot, as well as any quality lost without the expertise of the workers. The opportunity cost of keeping the workers is their continued wages, along with possible productive efficiency loss from not using the robot. Each firm would weigh the benefits and costs based on their own values and make the choice that is best for their business.

In a government decision, a local city council has land set aside for a park. The community is divided on how to use the land. Some citizens want a skate park while others want a dog park. Because there is a limited amount of land, only one can be built. The opportunity cost of the skate park is the dog park. The opportunity cost of the dog park is the skate park.

**SSEF2** Give examples of how rational decision-making entails comparing the marginal benefits and the marginal costs of an action.

The study of economics traditionally assumes that individuals, businesses, and governments behave rationally when faced with choices. A rational decision is based on comparing the marginal benefits and the marginal costs of a choice or action. **Marginal** in economics means per-unit, incremental or small changes.

**SSEF2** Give examples of how rational decision-making entails comparing the marginal benefits and the marginal costs of an action.

a. Explain that rational decisions occur when the marginal benefits of an action equal or exceed the marginal costs.

Rational actors in the economy will only make a choice if the marginal benefits of it are equal to or greater than the marginal costs of the action. Economics assumes that people are profit-maximizers who act in their own self-interest to get the most out of a given situation (whatever that means to them).

**Marginal Benefit** is the change in total benefit received from one more unit. **Marginal cost** is the change in total cost paid for one more unit. The **profit-maximizing rule** is to choose the point where marginal benefits equal marginal costs. If there is not a point where they are equal, a rational person will choose the highest quantity where marginal benefits outweight the costs.

Imagine that you are very hungry and standing before an all-you-can-eat pizza buffet. The first slice of pizza tastes great and satisfies your hunger. The second and third slices are good, but somehow, they don’t bring the same level of satisfaction that the first slice brought. By the fifth or sixth slice of pizza, you are really full, maybe even feeling a little sick. The cost has increased (making you sick), and the benefit (satisfaction gained) of eating an additional slice has fallen. You will probably decide
to stop eating pizza. The idea that your additional satisfaction eventually decreases as you consume additional units of a good or service is called the Law of Diminishing Marginal Utility.

In the chart below, the person should choose three goods since that is the point where their marginal benefits equal marginal costs. Benefits and costs could be measured in dollars or in units of satisfaction (utility) called utils. Utility is the total satisfaction gained from consuming/using a good or service.

<table>
<thead>
<tr>
<th>Goods Purchased</th>
<th>Total Benefit</th>
<th>Marginal Benefit</th>
<th>Total Cost</th>
<th>Marginal Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>15</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td>10</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>5</td>
<td>40</td>
<td>10</td>
</tr>
</tbody>
</table>

In the graph and the chart above, the rational decision-maker should purchase the first, second and third unit of the good. For the first and second unit, the marginal benefit exceeds the cost. For the third good, the marginal benefit equals the marginal cost (profit-maximizing rule). This is the point where the total profit is maximized, and the person is getting the most out of the situation at the given moment. If the person continues to the fourth unit, their marginal costs will be higher than the marginal benefit and their total profit from the purchase will decrease. Producers use the same rational model as above when they are deciding how much they should produce and sell to maximize their profits.
In much the same way, a business must confront the decision of adding an additional worker. A rational entrepreneur will look at the wages of the new employee (the marginal cost of adding the worker) and compare the wages to the additional production and profit that the employee will bring to the company (the marginal benefit).

<table>
<thead>
<tr>
<th>Marginal Benefit (could also be marginal utility or marginal revenue)</th>
<th>Change in total benefit/Change in quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal Cost</td>
<td>Change in total cost/Change in quantity</td>
</tr>
<tr>
<td>Total Profit</td>
<td>Total Benefit - Total Cost</td>
</tr>
<tr>
<td>Marginal Profit</td>
<td>Marginal Benefit - Marginal Cost or Change in total profit/Change in quantity</td>
</tr>
<tr>
<td>Profit-Maximizing Rule</td>
<td>Produce/consume where: Marginal Benefits = Marginal costs or Marginal Profit = 0</td>
</tr>
</tbody>
</table>

**Resource:**
Marginal Analysis- EconMovies #2 : Monty Python and the Holy Grail (Reupload)  
www.youtube.com/watch?v=5nmyzM6KTnc&list=PL1oDmcs0xTD9Aig5cP8_R1gzq-mQHgcAH&index=18&t=1s

**SSEF2** Give examples of how rational decision-making entails comparing the marginal benefits and the marginal costs of an action.

**b. Explain that individuals, businesses, and governments respond to positive and negative incentives in predictable ways.**

In the study of economics, an **incentive** motivates individuals, businesses, and/or governments to undertake an action or avoid an action. Incentives are positive when these actors in the economy choose an option associated with a perceived benefit or gain. Incentives are negative when actors in the economy avoid a particular option because they associate it with a high cost. The field of economics assumes that rational individuals, businesses, and governments will respond predictably to positive and negative incentives.
### SSEF3 Analyze how economic systems influence the choices of individuals, businesses, and governments.

The term economic system refers to the way a country organizes economic activity and makes economic decisions. Each economic system must answer three basic economic questions – “What to produce?”, “How to produce?”, and “For whom to produce?”. How society answers the questions determines what kind of economic system they have chosen.
SSEF3 Analyze how economic systems influence the choices of individuals, businesses, and governments.

a. Analyze how command, market and mixed economic systems answer the three basic economic questions (what to produce, how to produce, and for whom to produce) to prioritize various social and economic goals such as freedom, security, equity, growth, efficiency, price stability, full employment, and sustainability.

In a **command** economic system, the three basic economic questions are answered by a central authority or government. In a **market** economic system, the answers to the questions are determined by the interactions of buyers and sellers in the market. The interaction of market forces, in which buyers and sellers are motivated by self-interest, is called “the **invisible hand**.” The term was coined by Adam Smith, the founder of the modern study of economics. **Mixed** economic systems are a combination of command and markets, with some industries and markets controlled by government and other industries and producers that are subject to market forces. Most economies in the world are mixed.

<table>
<thead>
<tr>
<th>Economic System</th>
<th>What to produce?</th>
<th>How to produce?</th>
<th>For whom to produce?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Command</strong></td>
<td>The economy will produce what the government or central planner says it will produce.</td>
<td>The economy will produce using whatever methods the government or central planner says it will use. E.g. choose to employ people rather than invest in capital</td>
<td>The economy will distribute the goods and services to whomever the government or central planner says should get it.</td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td>Firms will produce what they believe consumers will want to buy.</td>
<td>Firms will produce goods and services using methods they believe will result in selling goods and services for the most profit.</td>
<td>Individuals and firms in the society who are willing and able to pay the price of the good or service will obtain it.</td>
</tr>
<tr>
<td><strong>Mixed</strong></td>
<td>Many firms will produce what they believe consumers will want to buy, but certain industries will be government-run. The government could restrict the production of certain</td>
<td>Firms will try to produce goods and services using methods they believe will result in selling goods and services for the most profit, but the</td>
<td>Individuals and firms in the society who are willing and able to pay the price of the good or service will usually obtain it, but the government may restrict</td>
</tr>
</tbody>
</table>
goods or produce public goods.

The government may tax firm profits or mandate production processes that minimize harm to the public.

Some people from accessing certain goods or may decide to produce a public good for specific people in the society.


Resources:

“I, Pencil” by Lenard E. Read - Explains the connections and decision making in a market economy. https://fee.org/resources/i-pencil/?itm_source=parsely-api


*The reading below from 1848 is by a French economist named Frédéric Bastiat. It describes how businesses provide all the goods and services that are needed to feed Paris in a market economy. Bastiat’s work is related to Adam Smith’s concept of the invisible hand of the market.*

**Who Feeds Paris?**

Frédéric Bastiat - 1848

“On coming to Paris for a visit, I said to myself: Here are a million human beings who would all die
in a few days if supplies of all sorts did not flow into this great metropolis. It staggers the imagination to try to comprehend the vast multiplicity of objects that must pass through its gates tomorrow, if its inhabitants are to be preserved from the horrors of famine, insurrection, and pillage. And yet all are sleeping peacefully at this moment, without being disturbed for a single instant by the idea of so frightful a prospect. On the other hand, eighty departments have worked today, without co-operative planning or mutual arrangements, to keep Paris supplied. How does each succeeding day manage to bring to this gigantic market just what is necessary—neither too much nor too little? What, then, is the resourceful and secret power that governs the amazing regularity of such complicated movements, a regularity in which everyone has such implicit faith, although his prosperity and his very life depend upon it? That power is an absolute principle, the principle of free exchange. We put our faith in that inner light which Providence has placed in the hearts of all men, and to which has been entrusted the preservation and the unlimited improvement of our species, a light we term self-interest, which is so illuminating, so constant, and so penetrating, when it is left free of every hindrance. Where would you be, inhabitants of Paris, if some cabinet minister decided to substitute for that power contrivances of his own invention, however superior we might suppose them to be; if he proposed to subject this prodigious mechanism to his supreme direction, to take control of all of it into his own hands, to determine by whom, where, how, and under what conditions everything should be produced, transported, exchanged, and consumed? Although there may be much suffering within your walls, although misery, despair, and perhaps starvation, cause more tears to flow than your warmhearted charity can wipe away, it is probable, I dare say it is certain, that the arbitrary intervention of the government would infinitely multiply this suffering and spread among all of you the ills that now affect only a small number of your fellow citizens.

If we all have faith in this principle where our domestic transactions are concerned, why should we not have faith in the same principle when it affects our international transactions, which are certainly less numerous, less delicate, and less complicated? And if there is no need for the local government of Paris to regulate our industries, to balance our opportunities, our profits, and our losses, to concern itself with the draining off of our currency, or to equalize the conditions of production in our domestic commerce, why should it be necessary for the customhouse to depart from its fiscal duties and to undertake to exercise a protective function over our foreign commerce?”

Excerpt from Bastiat’s essay, “There Are No Absolute Principles” First Series, Chapter 18

Social and Economic Goals

Every economic system seeks to achieve a combination of goals that are set by decision makers in the economy. Those decision makers could be voters in a democracy, a government leader in an autocracy, industrial or business leaders in markets, among others.

The social and economic goals are the values underlying the economic system a country chooses and act as a guiding force as individuals, businesses, and governments in the economy make economic decisions.
choices. While most societies pursue multiple goals, the goals can conflict with one another. A society has to weigh the costs and benefits of each economic decision against goals that will be achieved through it, and which of their goals may be hindered by it.

**Economic freedom** refers to the ability of consumers, producers, and workers to make their own decisions about consumption, production, and distribution of goods and services. With more economic freedom, entrepreneurs can choose to start businesses, employees can choose where to seek work, etc.

**Economic security** refers to protecting individuals and businesses from risk. Types of risk can include economic risks (like a recession), health risks (like serious illness or injury), environmental risks from natural disasters (hurricanes, earthquakes, fires), and others. Societies must choose how much protection should be offered and who should pay for that protection. Through private insurance (in a market-driven economy) or government programs (in a command or mixed economy), the financial impact of various risks can be reduced.

**Economic equity** refers to fairness within the economy. Fairness can mean equal access to jobs, goods, and services, while others define fairness based on outcomes. For example, if someone accepts the risk to start a successful business, many believe that it is “fair” for that individual to keep the profit from that business. On the other hand, free public education gives “fair” access to opportunities to increase everyone’s human capital.

**Economic growth** is increasing production of goods and services over time. This occurs through increases in the quantities of resources (factors of production) or new technological innovations that allow those resources to be used more efficiently. Most countries measure growth through calculating the percentage change in real GDP from one period to the next. **Real GDP** is the total value of all final goods and services produced within a nation in a given time period adjusted for inflation.

**Economic efficiency** occurs when factors of production are allocated to their most productive use. The most efficient economies have fully employed resources, specialize in goods and services for which they have the lowest opportunity cost, and have high levels of competition in the market. Efficiency implies both efficient production and efficient distribution. In other words, goods and services are produced with the lowest cost combination of resources, and the types of goods and services produced are desirable to consumers.

**Price stability** refers to an economy where increases in the overall price level of goods and services in the economy is predictable and protects the purchasing power of money in the economy over time. Many central banks target an explicit rate of inflation to achieve price stability. In the U.S. economy, the Federal Reserve system targets a predictable inflation rate of 2%.

**Full employment** seeks to ensure that all those who are willing and able to work have the opportunity to do so. In the United States, full employment is typically defined as an unemployment rate between 3.5% and 4.5%, depending on economic conditions. The unemployment rate is never zero for a variety of reasons. People move from one job to another; people graduate and look for a job;
jobs are available in areas where unemployed people don’t live; workers have skills that are no longer demanded.

**Economic sustainability** usually refers to the goal of individual countries to maintain an upward trend of real GDP growth in the long-run. For developed countries, the goal for the long-run real GDP growth trend desired may be 2-3%, while the goal could be higher for developing countries. To achieve these targets, countries must make decisions and create conditions benefiting the economy for the long-term as well as the short-term. There are many viewpoints about sustainability, but some of the considerations in building a sustainable economy could include food systems, environmental protection, new business creation, technological development, and the health of the overall financial system. The sustainable use of resources to ensure that future generations can continue a similar standard of living is an important consideration.

The cartoon below is part of the Opper Project’s Great Depression cartoons. The cartoon published in 1931 by the Chicago Tribune illustrates the lack of economic security in the U.S. financial system prior to the Great Depression. The man experiences financial ruin because of a bank failure. In response to the bank failures of the 1930s, the United States established the Federal Deposit Insurance Corporation. This program now insures depositors for deposits up to $250,000 if their bank were to fail.

![Cartoon showing a man and a squirrel](image)


**Resource:**

**SSEF3 Analyze how economic systems influence the choices of individuals, businesses, and governments.**

b. Compare the roles of government in different economic systems with regards to providing public goods and services, redistributing income, protecting property rights, resolving market failures, regulation and providing consumer protections.

Public goods are goods (or services) that can be used by many people at one time, even if they don’t pay for them. Governments in market economies usually produce public goods and services only when there is a reason that the private market is unable to provide the goods or service at a level considered beneficial to society. The most common way to pay for public goods is through the collection of tax dollars.

There are two main characteristics of purely public goods; they are non-rivalrous and non-excludable. **Nonrival goods** include goods with “shared consumption.” This means the consumption of the good by one person does not diminish the satisfaction enjoyed by another consumer who consumes the exact same good. For example, public interstate highways are used by one driver without decreasing the benefits enjoyed by another driver. **Non-excludable goods** are difficult or impossible to keep a person who is unwilling to pay from enjoying the benefits of the public good. Non-excludable goods are subject to the free-rider problem, where someone benefits from a good or service without paying for it. For example, the federal government provides national defense to everyone who resides in the United States regardless of whether they pay for protection.

Private goods are both rivalrous and excludable. A bicycle is a private good. It has a price and is therefore excludable (people can be prevented from using one unless they purchase one). It is rivalrous because one person using the bike prevents others from using it. Because they can be sold for a price, private goods have a profit incentive and are provided by the market. Public goods do not have a profit incentive and therefore are not provided by the market without government intervention.

<table>
<thead>
<tr>
<th>Public Goods and Services</th>
<th>Nonrival</th>
<th>Nonexcludable</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Defense</td>
<td>One person being protected does not impede anyone else from being protected.</td>
<td>People within the country are protected whether they help pay for it or not (federal taxes)</td>
</tr>
<tr>
<td>(Uncongested, Non-Toll) Interstate Highways</td>
<td>Drivers can use the road at full speed while other cars use it as well.</td>
<td>Drivers and truckers can use the highways to travel through states or ship items across the country even if they did not help pay to build or maintain the interstate system through federal taxes.</td>
</tr>
<tr>
<td>Streetlights</td>
<td>Many pedestrians can use the light to walk safely at night. One person’s use does not impede the use by others.</td>
<td>People and businesses benefit from the streetlights regardless of whether they paid taxes to the municipality that provided them.</td>
</tr>
<tr>
<td>Fireworks Show</td>
<td>One person watching does not keep others from enjoying the show.</td>
<td>If your neighbor puts on a big fireworks show in the air on July 4th, they can’t stop you from seeing it even if you didn’t contribute to the cost.</td>
</tr>
</tbody>
</table>

When pursuing the social economic goal of equity, governments may choose to **redistribute income**. This involves one group of individuals or firms paying taxes and the government giving that money to other individuals and firms. These transfer payments include social welfare payments to low income citizens, unemployment compensation to those laid-off during a recession, or Social Security payments made to retirees. There can also be redistribution to higher income people such as tax credits for buying electric vehicles.

In a market economy, the protection of **private property rights** is essential. If consumers and businesses are uncertain of their ability to retain property, they are less likely to purchase goods. If entrepreneurs do not believe that they will be able to retain the profits from their businesses, they are less likely to invest in and expand their enterprises. Property rights are protected by intellectual property laws such as copyrights and patents, legal documents like deeds for real estate or titles for cars, and business licenses or corporate charter recognize the legal owner of a business. In an economy that protects private property rights, the court system is available to hear property disputes, and settles them based on an impartial “rule of law”. The Index of Economic Freedom ([https://www.heritage.org/index/ranking](https://www.heritage.org/index/ranking)) uses rule of law, private property rights, and other criteria to rank nations around the world.

**Market Failures** occur when the private market is unable to produce goods and services in a way that the marginal benefit to society from the production of the good is equal to or greater than the marginal cost to society for producing the good. Market failures include externalities and market power.

**Externalities** occur when a third party other than the consumer or producer of a good is hurt or benefits from the production or consumption of that good. For example, some industries cause air pollution while producing a product. If this pollution causes a local resident who does not consume the product to get sick, there is a negative externality. If your roommate at college purchases a TV and allows you to watch it, there is a positive externality. In the United States, governments attempt to correct negative externalities like pollution through increasing taxes or regulations on the polluting industry. This makes it more expensive to produce, and reduces the amount of production. In the case of a positive-externality-producing industry like colleges and universities, the government provides subsidies to certain institutions and to their students so there is an increase in the amount of educated students supplied to the market. Education generates positive externalities by benefiting the individual receiving the education and society in general. The educated person can have infinite ripple effects on the economy by bettering lives other than their own, and a well-educated society creates a more productive and informed citizenry. Increases in education levels can decrease infant...
mortality rates, increase life expectancies in the overall population, decrease crime rates, increase productivity, and decrease production costs.

**Market failure** refers to a market where competition is hindered or removed due to the formation of monopoly and oligopoly market structures. **Monopoly** market structures are markets controlled primarily by one seller of a good or service, an **oligopoly** market is one controlled by several large firms. Under antitrust laws in the United States, monopolies, and oligopoly firms who work together to fix prices or restrain competitors, may be prosecuted by the government and, in some cases, broken up into smaller companies.

**Regulations** are rules placed on the production of goods and services by government agencies. Regulations can be created to provide consumer protections, ensure quality control, streamline processes and protect the environment. The costs and benefits of regulations must be weighed against each other to achieve efficiency. Sometimes regulations are imposed to reduce market failures, but too much regulation can have unintended consequences. Deregulation is when production rules are removed from an industry. This lowers costs and increases the quantity produced, but less oversight can lead to other unintended consequences as well.

Externalities - The Economic Lowdown Podcast Series, Episode 11. (n.d.).
www.stlouisfed.org/education/economic-lowdown-podcast-series/episode-11-externalities

www.stlouisfed.org/education/economic-lowdown-podcast-series/episode-17-public-goods

**SSEF4 Analyze factors that influence the standard of living of individuals and nations.**

**Standard of living** is a measure of economic well-being. Economists measure standard of living in a variety of ways. The most common measure is **real GDP per capita**. There are also broader measures of standard of living, such as the **Human Development Index (HDI)**. The HDI was developed and computed by the United Nations and includes three dimensions–health and longevity, education, and per capita national income.

**Gross Domestic Product** (GDP) is the value of all final goods and services produced within a country’s borders within a given time period. **Real GDP** refers to GDP adjusted for changes in a country’s price level. If there is a change in the value of real GDP, a country knows the change was due to an increase in production and not due to an increase in the prices of goods and services. A change in real GDP from one period to the next indicates economic growth for a country. **Real GDP per capita** is the total real GDP of a country divided by its population. It indicates whether the output per person in the country has also increased. When the real GDP per capita of a country rises, many economists believe that the standard of living (the amount of goods and services each person can consume) will also rise.
Economic growth is an essential component of increasing GDP per capita and increasing per capita national income as part of the HDI. Economic growth is an increase in real GDP. It is measured as a percentage increase in real GDP. The elements in this standard explore the two main contributions to economic growth.

Helpful Analogy: If the entire economy were a big pie where every person gets a slice, then when the overall economy grows, the pie gets bigger, which allows the average person to get a bigger slice. While this does not factor in economic inequality, the idea holds that economic growth is one of the main factors necessary to increase the overall standard of living for a nation.

Resource: Hans Rosling’s 200 Countries, 200 Years, 4 Minutes. www.youtube.com/embed/jbkSRLYSoo

SSEF4 Analyze factors that influence the standard of living of individuals and nations.
a. Explain how investments in human capital (e.g., education, job training, and healthcare) can lead to a higher standard of living.

Human capital includes the health, education, training, and skills of the labor force. Investments in the development of human capital can lead to a more productive labor force that results in growth of real GDP, leading to a higher standard of living for the individual, as well as the nation. Productivity is the ratio of inputs to outputs, so increased productivity allows a society to produce more with existing resources.


Countries with a higher portion of their population attending and graduating from schools often experience faster economic growth. Increases in productivity due to higher health and education levels for a workforce lead to economic growth, which leads to higher overall standards of living. Businesses, schools, and government agencies all benefit from a pool of high-skilled labor. Businesses take the education and skill-level of the populace into consideration when deciding where to locate. Many states in the U.S. spend a significant portion of their budget on primary, secondary, and post-secondary public education to positively impact the economy. Education and job training increase the skills of workers. By increasing the skills of workers, the labor force is more productive.
Investments in healthcare can also increase the productivity of the labor force. By reducing time missed from work and increasing the overall well-being of workers, contributions of labor can be maximized.

While a more productive workforce produces gains to the society overall, the gains can benefit individuals. Higher skill levels that increase a worker’s productivity can also lead to higher wages. In fact, the relationship of education and wages is one of the most consistent in economics. Workers with higher levels of education have higher median wages and they have lower levels of unemployment.


The relationship between economic well-being and educational attainment is particularly noticeable during an economic downturn. February 2020 was just before the pandemic. One year later, the lingering effects of the economic crisis can still be seen in unemployment rates. Workers with less formal education were more likely to be unemployed during the economic downturn.

<table>
<thead>
<tr>
<th>Unemployment Rate by Education Level</th>
<th>Overall Unemployment Rate</th>
<th>No High School Diploma</th>
<th>High School Diploma Only</th>
<th>Some College or Associate Degree</th>
<th>Bachelor Degree or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb. 2020</td>
<td>3.8%</td>
<td>7.2%</td>
<td>4.1%</td>
<td>3.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Feb. 2021</td>
<td>6.6%</td>
<td>11.9%</td>
<td>7.8%</td>
<td>6.2%</td>
<td>3.8%</td>
</tr>
</tbody>
</table>


Resources:
SSEF4 Analyze factors that influence the standard of living of individuals and nations.

b. Explain how investment in equipment and technology can lead to economic growth.

Investments in equipment and technology lead to increases in the productivity of natural and human resources. A more fuel-efficient delivery truck allows gas to move the truck more miles. A worker with a computer to develop documents and spreadsheets, communicate through email, and research on the internet, can produce more output than a worker without the computer. For the purposes of this element, investment refers to the introduction of machines and equipment, the building of new factories, and/or the purchasing and implementation of new production technology. Both firms and government entities invest in equipment and technology leading to economic growth.

In SSEF1(c), the human, natural, and capital resources necessary for a bakery were described. Increases in productivity occur when the bakery can produce more output with the same or fewer inputs. What could happen with one change, the introduction of a new oven. Productivity in the bakery is measured using the ratio of number of cookies baked over number of minutes to bake cookies.

<table>
<thead>
<tr>
<th>Conventional Oven</th>
<th>Productivity = 24 cookies/12 minutes = 2 cookies per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-tech, large-capacity oven</td>
<td>Productivity = 48 cookies/6 minutes = 8 cookies per minute</td>
</tr>
</tbody>
</table>

The investment in the high-tech, large-capacity oven increased productivity from 2 cookies per minute baked to 8 cookies per minute baked. This is a 400% increase in productivity.

SSEF4 Analyze factors that influence the standard of living of individuals and nations.

c. Explain how individuals, businesses, and governments benefit from specialization and voluntary, non-fraudulent trade.

Specialization is when an entity focuses on one production task or the production of one good in order to increase efficiency. Specialization increases productivity and leads to a greater overall output. When someone specializes, they must trade for the rest of the goods and services they desire.

Individuals train and work in a field where they develop expertise. Very few individuals are entirely self-sufficient. They earn wages that can be used to buy other goods and services that they don’t produce.
Businesses specialize in the types of goods and services that they produce and the markets in which they compete. For example, Boeing is an American company that produces 52% of the large airplanes used by commercial airlines. They specialize in producing high-capacity passenger planes like the 737, 747, 777, and 787 that can carry between 162–388 passengers per flight. Canadian company Bombardier specializes in building smaller airplanes that carry 63–104 passengers to use on shorter regional routes. Airlines choose to buy planes based on the demand for a particular route.

Besides specializing in the products and markets where they will compete, businesses typically divide the production process to allow individual workers to specialize. In 1776, Adam Smith recognized the benefits of specialization in production. In his famous book, The Wealth of Nations, he describes production in a pin factory. Before specialization, each worker produced their own pins and was paid based on their own output each day. Workers typically produced less than 20 pins on their own each day. After they specialized, production dramatically increased. Together, they produced up to 12 pounds of pins each day.

‘One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactories, are all performed by distinct hands’...

‘I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day.’

The Wealth of Nations by Adam Smith (1776)


Explore collection of original and curated material to help you and your students think more deeply about Adam Smith, [www.adamsmithworks.org](http://www.adamsmithworks.org) and explore the Interactive Pin Factory, [www.adamsmithworks.org/pin_factory](http://www.adamsmithworks.org/pin_factory)

Henry Ford was an early innovator in his car factory when he introduced the moving assembly line in early 20th century production. Each worker was able to specialize in a specific task.

In the 1928 photograph below, we see one of the most famous examples of division of labor and specialization. This image shows how workers in the Ford Factory had specific tasks as the cars moved through the factory. From 1908 to 1916, the Ford factory gradually increased the number of automobile components made under division of labor and assembly line production. The result was a drop in the price of a Model T Ford from $850 in 1908 to less than $300 by the 1920s.
Governments have different agencies that specialize in tasks to govern effectively and efficiently. Some examples include the Department of Agriculture, Department of Defense, Federal Bureau of Investigation, etc. Different levels of government—federal, state, and local—all specialize in different tasks.

Finally, nations specialize in production of certain goods and services. Nations specialize in the production of goods and services in which they have the comparative advantage and trade for goods and services from other parts of the world and as a result can reach a consumption point outside of their own production capabilities. Comparative advantage is further explained under SSEIN1a.

**Voluntary exchange** occurs when two economic actors willingly trade one item for another because the perceived value of the item they are receiving is greater than the value of the item that is being given up.

<table>
<thead>
<tr>
<th>Situation</th>
<th>The exchange</th>
<th>The benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two students trade desserts at lunch.</td>
<td>The person with cake trades with the person who has cookies.</td>
<td>Both students end up with a dessert that they like better.</td>
</tr>
<tr>
<td>Pay $10.00 for a meal at a fast-food restaurant.</td>
<td>A person buys lunch using income from their job.</td>
<td>The buyer gets food and the associated satisfaction. The restaurant receives revenue.</td>
</tr>
<tr>
<td>Earning $14.00 per hour working at a store.</td>
<td>The business pays a worker $14.00 for one hour of labor.</td>
<td>The worker earns income. The business gains a productive resource (labor).</td>
</tr>
</tbody>
</table>
SSEF4 **Analyze factors that influence the standard of living of individuals and nations.**

d. Illustrate economic growth using a production possibilities curve.

A **production possibilities curve (PPC),** also known as a production possibilities frontier (PPF), is an economic model that illustrates possible production combinations. It can depict the choices of an individual, firm, or country. The model simplifies the economy to demonstrate key concepts of scarcity, trade-offs, opportunity costs and efficiency. It models the production of two goods with fixed resources and fixed technology. Note: Economists often refer to this as the **ceteris paribus** assumption. Ceteris paribus is a Latin phrase that means “all other things being equal.” In this case, the model is considering decisions with technology and resources at a constant level.

The model shows the amount of one good or service sacrificed to produce additional units of the other good or service. When additional units of a good are produced, units of the other good are sacrificed. The sacrificed production is the opportunity cost of the choice.

Consider a country that only produces two goods, tacos and computers. With the current level of resources and technology, the country can produce these two goods in the combinations listed on this **production possibilities table.** This table represents possible production combinations when all of the resources are used in the most efficient way to produce tacos and/or computers, so this is the nation’s maximum production potential when all of their resources are fully employed. The graph of these points is shown in Figure 1.
<table>
<thead>
<tr>
<th>Point on Graph</th>
<th>Tacos</th>
<th>Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>75</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>70</td>
</tr>
<tr>
<td>C</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>D</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>E</td>
<td>80</td>
<td>25</td>
</tr>
<tr>
<td>F</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 1 shows the opportunity cost of choosing a particular combination of tacos and computers over another possible combination. In order to produce 20 tacos, the production of 5 computers is sacrificed. The opportunity cost of choosing point B over point A is 5 computers. The marginal benefit of moving from point A to B is 20 tacos. Moving from point D to E has a trade off of 20 computers lost for 20 tacos gained. The most important concept is that of opportunity cost. Because resources are scarce, production of one good must be reduced to increase production of the other good.
The example of tacos and computers above is as a concave curve (bowed outward) because there are increasing opportunity costs along the curve. This is because the resources used to produce computers and tacos are not easily substitutable. If the resources were easily substitutable, like a short-sleeve t-shirt versus a long-sleeve t-shirt, then the production possibilities table would graph as a downward-sloping line because the opportunity costs would be constant.

On Figure 2, points A, B, C, D, E, F indicate examples of efficient production combinations of tacos and computers. Since the curve represents maximum production, any point on the curve uses all resources (full employment) and is efficient. Points X and Y are examples of inefficient production combinations of tacos and computers. The economy is not producing at its maximum potential. There may be unemployed resources and/or recession in the economy. This combination is possible, but undesirable given underutilized resources. Point Z is an unattainable production combination of tacos and computers because there are not enough resources to produce at this time.

Figure 3 illustrates economic growth on the production possibilities model. This graph measures types of goods in the economy more generally so it can depict the entire economy. Capital goods are tools, equipment and machinery that are used to produce other things, while consumer goods are goods bought by households for final use. Goods produced in the economy typically fall into one of these two categories. Curve B1 shows the economy’s original efficient combinations of capital and consumer goods production. Curve B2 shows the production possibilities curve for the economy following investment in physical capital and technology.
Figure 3

In the United States, the economy experienced a shift outward like this after the construction of the interstate highway system in the 1950s. The interstate system was a government investment in physical capital that allowed more production of other capital goods and consumer goods. The highways made the transportation of inputs and outputs cheaper and faster. Large-scale adoption of computers by industry in the 1990s is another example of investment in physical capital and technology leading to economic growth. Factors that lead to economic growth are listed below.

<table>
<thead>
<tr>
<th>5 Factors of Economic Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increase in the quantity or quality of physical capital (capital stock).</td>
</tr>
<tr>
<td>2. Increase in health or education (human capital).</td>
</tr>
<tr>
<td>3. Increase in production technology.</td>
</tr>
<tr>
<td>4. Increase in the labor force.</td>
</tr>
<tr>
<td>5. Increase in the quantity or quality of natural resources (land).</td>
</tr>
</tbody>
</table>

Note: One of the original examples of the PPC uses guns and butter as the two axis labels. This comparison is meant to show the trade-off that societies face between allocating resources to national defense or private consumption goods, or the trade-off that governments face when allocating their budget to defense versus social programs.

Resources:


Production Possibilities- EconMovies #3: Monsters Inc. [www.youtube.com/embed/UYlBLw-ShIM](http://www.youtube.com/embed/UYlBLw-ShIM)
Microeconomics

SSEMI1 Describe how households and businesses are interdependent and interact through flows of goods, services, resources, and money.

A simple economy is based on the interaction between two sectors: households and businesses. They each need each other to function. Businesses employ workers from the households and purchase resources from the households to produce goods and services. Then households purchase goods and services from the businesses with money they earned from selling their resources (including their labor). They are interdependent because businesses need households to both supply their resources and demand their goods, and households need businesses to both supply the goods and services they need and demand their resources. These individual interactions between households and businesses are the basis for microeconomics, while zooming out to see their impact on the economy as a whole is the basis for macroeconomics.

In a more complex, open economy, the government and foreign economies also interact with both households and businesses. Governments collect revenue through taxes from households and businesses and then use the money to provide public goods and services. They also employ workers from the households, and purchase goods and services from businesses. The foreign sector includes households and businesses from around the world who purchase US goods and services (exports) and supply goods and services to US households and businesses (imports).

SSEMI1 Describe how households and businesses are interdependent and interact through flows of goods, services, resources, and money.

a. Explain, using a circular flow diagram, the real flow of goods and services, resources, and money through the product market and the resource (factor) market.

The circular flow diagram is a model economists use to show the relationships in the economy. Businesses and households are the actors in the economy who interact in the resource and product markets.
Households are the owners of the productive resources (factors of production) in the circular flow model. They sell their land, labor, capital, and entrepreneurship to businesses (firms) in the resources market in exchange for income payments.

Households are the consumers of goods and services in the circular flow model. They buy goods and services from businesses. They spend the income they earned in the resource market to buy goods and services in the product market. Consumer “expenditures” is another term for spending.

Businesses (firms) are the consumers of the productive resources (factors of production) in the circular flow model. They purchase the use of land, labor, capital, and entrepreneurship from households in the resource market (also called the factor market) using the revenue they earned in the product market.

Businesses (firms) are producers of goods and services in the circular flow model. They sell goods and services to households in the product market. They earn revenue in exchange for their goods and services.

In the resource market, the payments for resources have specific names.

<table>
<thead>
<tr>
<th>Payments for Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource</td>
</tr>
<tr>
<td>Land</td>
</tr>
<tr>
<td>Labor</td>
</tr>
<tr>
<td>Capital</td>
</tr>
<tr>
<td>Entrepreneurship</td>
</tr>
</tbody>
</table>
On the diagram above, the outer circle represents the flows of money from households to businesses in the product market and from businesses to households in the resource market. All of the outer arrows flow in the same direction and represent money payments. The inside circle flows are goods, services, and resources.

Circular flow diagrams can be drawn differently. It is important for students to understand the relationships shown in the diagram. For example, the diagram below has the money flows on the inside circle, but the relationships are the same.

Federal Reserve Bank of Atlanta infographic – Circular Flow
To download the infographic, order copies of the poster, and preview related activities, visit: https://www.atlantafed.org/education/teach/infographic-posters/circular-flow.aspx

The graphs below show the role of the households and businesses in the product market and the resource market that are shown in the circular flow model. Once the students understand supply and demand, it is helpful to make the connection back to the circular flow to help students understand the difference between the product market and the resource market. You can use the circular flow to show them how the households are the suppliers and businesses are the demanders in the resource market. This is especially helpful when discussing the labor market, which is one of the resource markets.
Teaching tip: Connect the circular flow to the business cycle (SSEMA1c) and fiscal policy (SSEMA3). For example, you can walk students through how an increase in consumer spending would increase business revenue, which would increase their production and they would need to hire more workers, which would increase household income, which would increase consumer spending, etc. Describe this as an expansion in the business cycle. This is an excellent opportunity for role play or to get the students to share their own creative example of their own that goes all the way around. For example, Hagar goes out to get ice cream with her friends (consumer spending), the ice cream store's revenue increases (revenue), the ice cream store pays their cashier, Minerva, with some of the revenue (wages), and then Minerva takes home her paycheck (income), which she uses part of to get her nails done (consumer spending), etc. Then you can have them point out the goods or services and resources in their story too. For a fun(ny) class activity, have student volunteers stand in a circle and come up with connected examples on the spot. For advanced students, this is a great way to introduce the spending multiplier and to show how saving is a leakage from the circular flow.

To show fiscal policy and the government’s role in the economy, the government can be added to the circular flow as an extension. You would add a box to the center with arrows flowing into the government from households and businesses in the form of taxes. Then add arrows flowing out of the government toward households and businesses labeled as government spending on public goods and services and transfer payments. You can also show students that stopping or slowing down one arrow has a chain reaction that causes other arrows to slow down as well. Show them the process by which decreases in consumer spending could lead to increases in unemployment that further decrease consumer spending. Connect it to fiscal policy intervention by explaining that if the flows between households and businesses start to slow down, the government can try to get the flow going again by increasing their government spending or decreasing taxes.
SSEMI2 Explain how the law of demand, the law of supply, and prices work to determine production and distribution in a market economy.

In a market economy, consumers decide what to produce, firms decide how to produce, and the price system decides who will get the items produced. Consumers of goods, services, and resources behave according to the law of demand. Demand is the quantity a consumer is willing and able to purchase at each price. The law of demand says that as the price of a good rises the quantity of the good consumers are willing and able to buy will decrease. Supply is the quantity a seller is willing and able to sell at each price. The law of supply says that as price rises the quantity a seller is willing and able to sell will increase. A market-clearing or equilibrium price is one where the quantity of a good that buyers are willing and able to buy matches the quantity of a good that producers are willing and able to sell. As the market/equilibrium price in the market changes, it sends signals to buyers and sellers about how much they should be willing and able to buy and sell.

SSEMI2 Explain how the law of demand, the law of supply, and prices work to determine production and distribution in a market economy.

a. Define the law of supply and the law of demand.
The **law of demand** says that as the price of a good rises, the quantity of the good consumers are willing and able to buy will decrease. For consumers, there is an inverse relationship between price and quantity demanded. The graph below illustrates this law.

As price rises from $P_1$ to $P_2$, the quantity of the good consumers are willing and able to buy falls from $Q_1$ to $Q_2$. This is the law of demand.
The **market demand curve** refers to all the quantities of a good, service, or resource buyers are willing and able to buy at each price. The **quantity demanded** is the amount of a good, service, or resource buyers are willing and able to buy at one specific price. In the graph below, the quantity demanded at a price of $1 is 200 units of the good. The market demand includes the quantities demanded at $1, $2, $3, and all other prices found along the curve. The table in the example below is the **Demand Schedule** and provides the data you use to create a demand curve.

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity Demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1</td>
<td>200</td>
</tr>
<tr>
<td>$2</td>
<td>150</td>
</tr>
<tr>
<td>$3</td>
<td>100</td>
</tr>
</tbody>
</table>

The **law of supply** says that as price rises the quantity a seller is willing and able to sell will increase. For sellers, the price and quantity supplied are directly related. The graph below illustrates this law.

The **market supply curve** refers to all the quantities of a good, service, or resource sellers are willing and able to sell at each price. The **quantity supplied** is the amount of a good, service, or resource sellers are willing and able to sell at one specific price. In the graph below, the quantity supplied at a price of $1 is 100 units of the good. The market supply includes the quantities supplied at $1, $2, $3, and all other prices found along the curve. The table in the example below is the **Supply Schedule** and provides the data you use to create a supply curve.
**SSEMI2** Explain how the law of demand, the law of supply, and prices work to determine production and distribution in a market economy.

b. Describe various determinants (shifters) of supply and demand and illustrate on a graph how they can change equilibrium price and quantity.

**Market equilibrium** is the point of intersection between the market demand curve and market supply curve. This is also the point at which the quantity demanded by consumers is equal to the quantity supplied by producers.

If the *price is set too high* in a market (above the equilibrium price), there will be a larger quantity supplied than there is a quantity demanded, resulting in a *surplus*. If the market is left alone and given time, the producers will see the surplus as a signal that the price is too high, and that they have

https://www.atlantafed.org/education/teach/infographic-posters/supply-and-demand.aspx
produced too much. Producers will lower the price (put it on sale) to sell the excess inventory, and reduce the amount that they produce. Consumers will increase the quantity they purchase as the price decreases and the market will eventually return to equilibrium, where the quantity supplied equals the quantity demanded.

If the **price is set too low** in a market (below the equilibrium price), there will be a larger quantity demanded than there is a quantity supplied, creating a **shortage**. If the market is left alone and given time, the producers will see the shortage as a signal to increase production and raise the price. They will need higher prices to increase production since marginal costs increase with quantity. Buyers help determine this price by buying a smaller quantity of a good when they view the price charged by sellers as too high. Sellers respond by lowering the price. When buyers perceive a price as lower than equilibrium price, they will buy all of the available items as quickly as possible. Sellers will notice they are having trouble keeping the item in stock or lack the capacity to provide as many services as consumers want. Sellers will raise the price of the product. Through these interactions between buyers and sellers, price will work its way toward equilibrium.

**Resource:**

Pearl Exchange – market equilibrium activity from Jacob Clifford (ACDC Economics)

https://www.youtube.com/watch?v=KH06hccMpJQ (shortened version)

https://www.youtube.com/watch?v=KH06hccMpJQ (full-length version)

The **determinants of supply** describe the types of changes in a market that will cause the entire supply curve to move to the right or to the left. In other words, all sellers of a good, service, or productive resource will be willing and able to supply more or less of their product at all prices in the market. The shift will cause a change in the equilibrium price and equilibrium quantity in the market.
When supply increases (or the curve shifts to the right), the market price will fall and the market quantity will increase, as seen on the graph below.
The factors (determinants) that will lead to an increase in supply include:

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease in costs</td>
<td>If the cost of electricity used to power an automotive factory falls, the supply of cars in the market increases.</td>
</tr>
<tr>
<td>• Prices of resources decrease</td>
<td></td>
</tr>
<tr>
<td>• Resource availability increases</td>
<td></td>
</tr>
<tr>
<td>• Wages for workers decrease</td>
<td></td>
</tr>
<tr>
<td>• Taxes decrease or subsidies increase</td>
<td></td>
</tr>
<tr>
<td>Decreased government regulation of any phase of production or distribution (called deregulation)</td>
<td>When the U.S. stopped controlling the fares and routes for air travel in 1978, airlines made decisions based on market factors, increasing the supply of flights and the price of air travel fell.</td>
</tr>
<tr>
<td>Firms (or sellers) enter the market</td>
<td>As the international demand for pecans has driven up the price, more farmers are entering the pecan market. As trees become productive, the supply of pecans will increase.</td>
</tr>
<tr>
<td>Producer expectations of future price – if producers expect the price of a good or service to decrease in the future, they will increase supply now to sell before the price falls. *In doing so, they will cause the price to fall. (self-fulfilling expectations)</td>
<td>If airlines expect prices for airline tickets to fall in September when families are less likely to travel due the school calendar, they will supply more during the summer months when they can charge higher fares.</td>
</tr>
<tr>
<td>New technology lowers the cost of production</td>
<td>When auto manufacturers were able to implement robotics on the production line, automobiles were produced more quickly and at a smaller cost per unit. This allowed the industry to supply more cars.</td>
</tr>
<tr>
<td>Development of human capital – the education, training, skills or healthcare of the workforce – leads to higher worker productivity</td>
<td>Workers train on a new software package that will increase productivity in the market and allow supply to increase.</td>
</tr>
</tbody>
</table>

When supply decreases (or the curve shifts to the left), the market price will rise and the market quantity will fall, as seen on the graph below.
The factors (determinants) that will lead to a decrease in supply include:

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in costs</td>
<td>If the price of peanuts rises, then the cost of making peanut butter will increase causing the supply of peanut butter to decrease.</td>
</tr>
<tr>
<td>• Prices of resources increase</td>
<td></td>
</tr>
<tr>
<td>• Resource availability decreases</td>
<td></td>
</tr>
<tr>
<td>• Wages for workers increase</td>
<td></td>
</tr>
<tr>
<td>• Taxes increase or subsidies decrease</td>
<td></td>
</tr>
<tr>
<td>Increased government regulation of any phase of production or distribution</td>
<td>If the government requires factories to reduce pollution, complying will initially increase costs of production in the market and reduce supply.</td>
</tr>
<tr>
<td>Firms (or sellers) leave the market</td>
<td>During the COVID pandemic, numerous factors led restaurants to close, reducing the supply of restaurant meals available.</td>
</tr>
<tr>
<td>Producer expectations of future price – if producers expect the price of a good or service to rise in the future, they will decrease supply now so they can hold it and sell at the higher price. *In doing so, they will cause the price to rise. (self-fulfilling expectations)</td>
<td>If producers expect consumers to be willing to pay a higher price for candy during holidays like Halloween, they will supply less now and put their efforts into producing for the period preceding the holiday when the price is higher.</td>
</tr>
<tr>
<td>Technology limits production (note that this is unusual)</td>
<td>If a cyberattack interferes with the GPS on which farmers rely to monitor and service their fields for a significant amount of time.</td>
</tr>
<tr>
<td>Reduced worker productivity</td>
<td>An economic boom allows skilled workers to move from fast food jobs into white collar office administration jobs. Fast food producers are forced to hire less skilled workers and supply of fast food decreases.</td>
</tr>
</tbody>
</table>
The determinants of demand describe the types of changes in a market that will cause the entire demand curve to move to the right or to the left. In other words, all consumers of a good, service, or productive resource will be willing and able to purchase more or less of a product at all prices in the market. The shift will cause a change in the equilibrium price and equilibrium quantity in the market.

When demand increases (or the curve shifts to the right), the market price will rise and the market quantity will rise, as seen on the graph below.
### The factors (determinants) that will lead to an increase in demand include:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices of complementary goods – If the price falls for one good, the demand for its complement will increase (shift right). This is an inverse relationship.</td>
<td>When the price of cream cheese falls, the demand for bagels will increase.</td>
</tr>
<tr>
<td>Prices of substitute goods – If the price increases for one good, the demand for its substitute will increase (shift right). This is a direct relationship.</td>
<td>When the price of black bean veggie burgers rises, the demand for tofu veggie burgers will increase.</td>
</tr>
<tr>
<td>Change in income for normal goods – if income increases, the demand will also increase (shift right). It is a direct relationship.</td>
<td>If the government decides to lower income tax rates, consumers will have more disposable income so they can afford to buy more cars (a normal good). The demand for cars will increase. If there is a recession and people have less income, they may buy more ramen noodles (an inferior good).</td>
</tr>
<tr>
<td>Note that some goods are inferior goods. For these products, demand increases when incomes fall.</td>
<td></td>
</tr>
<tr>
<td>Consumer expectations of future prices – if consumers expect the price to increase soon, their demand will increase now (shift right). They want to buy the good now, before the price increases.</td>
<td>If consumers expect producers to charge higher prices for candy during holidays like Halloween, some consumers will purchase candy early before prices rise for the holiday.</td>
</tr>
<tr>
<td>Also, if consumers expect their income to increase in the future, they will start spending more now and demand will increase (shift right).</td>
<td></td>
</tr>
<tr>
<td>Consumer preferences change (the item becomes more popular) due to:</td>
<td></td>
</tr>
<tr>
<td>• Successful advertising campaigns</td>
<td>If researchers publish a study concluding that eating a grapefruit every day causes people to lose weight, there will be an increase in demand for grapefruit.</td>
</tr>
<tr>
<td>• New information becomes available about the good</td>
<td></td>
</tr>
<tr>
<td>• New related goods become available</td>
<td></td>
</tr>
<tr>
<td>• Convenience or ease of accessing the good</td>
<td></td>
</tr>
<tr>
<td>• Trends or fads spread by media or social media</td>
<td></td>
</tr>
<tr>
<td>If the number of consumers with access to the good increases, the demand will increase (shift right). This can be affected by population shifts, migration, technology (online access to the good), and logistics/shipping.</td>
<td>As the number of Americans connected to the internet has risen, the number of consumers in the market for online retail has increased and demand has increased.</td>
</tr>
</tbody>
</table>
When demand decreases (or the curve shifts to the left), the market price will fall and the market quantity will fall, as seen on the graph below.

![Graph showing supply and demand with a shift in demand](image)

**The factors (determinants that will lead to an decrease in demand include:**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices of complementary goods</td>
<td>If the price rises for one good, the demand for its complement will decrease (shift left). This is an inverse relationship.</td>
</tr>
<tr>
<td></td>
<td>When the price of peanut butter increases, the demand for jelly will decrease.</td>
</tr>
<tr>
<td>Prices of substitute goods</td>
<td>If the price decreases for one good, the demand for its substitute will decrease (shift left). This is a direct relationship.</td>
</tr>
<tr>
<td></td>
<td>When the price of coffee falls, the demand for tea will decrease.</td>
</tr>
<tr>
<td>Change in income for normal goods</td>
<td>If income decreases, the demand will also decrease (shift left). It is a direct relationship.</td>
</tr>
<tr>
<td></td>
<td>During an economic recession, workers may take pay cuts or lose their job. If a worker’s income falls, he or she will have less to spend on goods and services. The demand for the product will decrease.</td>
</tr>
<tr>
<td>Note that some goods are inferior goods</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer expectations of future prices</td>
<td>If consumers expect the price to decrease soon, their demand will decrease now (shift left). They will wait to buy the good until the price falls.</td>
</tr>
<tr>
<td></td>
<td>If reports come out that real GDP fell last quarter and consumers fear that a recession is looming, they will spend less and save more, decreasing demand for boats (and many other things).</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer preferences change (the item becomes less popular) due to:</td>
<td>A series of airplane crashes will decrease consumer taste for air travel and demand will decrease.</td>
</tr>
<tr>
<td>If the number of consumers with access to the good increases, the demand will increase (shift right). This can be affected by population shifts, migration, technology (online access to the good), and logistics/shipping.</td>
<td>As ride and room sharing apps have expanded, the number of consumers in the traditional taxi and hotel markets has decreased, decreasing demand for these services.</td>
</tr>
</tbody>
</table>

Real estate is heavily affected by supply and demand factors like the number of consumers and number of producers in the location, and how limited the supply is in terms of expansion based on factors like geography and public transportation. The graphic below shows the most expensive cities for real estate in the world.
How Much Real Estate Could You Buy for $1 Million?

In some cities, a million dollars goes a long way—in others, not so much. This graphic illustrates how many square feet of prime real estate you could buy in different cities around the world.


Resources
The Handshake Market is a great activity demonstrated by Jacob Clifford from ACDC Economics to simulate for students how various situations can impact the market: https://www.youtube.com/watch?v=oaTC60svo64

An article explaining how Uber pays attention to supply and demand to change prices from Planet Money: *When a $65 Cab Ride Cost $192*

*SSEMI2* Explain how the law of demand, the law of supply, and prices work to determine production and distribution in a market economy.

- c. Explain and illustrate on a graph how prices set too high (e.g., price floors) create surpluses, and prices set too low (e.g., price ceilings) create shortages.

In some limited circumstances, governments or producers will choose to set a market price rather than allow the forces of supply and demand to determine the market price.

A **price floor** is a minimum legal price set above the equilibrium price. Since price floors are above equilibrium, there will be a larger quantity supplied (Qs) than there is a quantity demanded (Qd) (surplus). Since the price is legally not allowed to adjust below the price floor, and producers cannot lower the price to sell off their excess supply, the market will remain in disequilibrium until the law is changed. A price floor applied below the equilibrium price of the good will have no impact on the market.

![Diagram of Binding Price Floor](image)

A **price ceiling** is a maximum legal price set below the equilibrium price. Since effective (binding) price ceilings are below equilibrium, there will be a larger quantity demanded (Qd) than there is a quantity supplied (Qs) (shortage). Since the seller is legally not allowed to sell at a price higher than the set price ceiling, there will be a persistent shortage of the good, and the market will remain in disequilibrium until the law is changed. A price ceiling applied above the equilibrium price of the good will have no impact on the market.

![Diagram of Binding Price Ceiling](image)
In the example below, the demand and supply schedule table shows that equilibrium price is $2.00. This price is the one at which the quantity demanded is equal to the quantity supplied. If the maximum price is legally set at $1.00, this is a price ceiling. Under this condition, the quantity demanded is greater than the quantity supplied and there is a 100-unit shortage in the market. If the minimum price is legally set at $3.00, this is a price floor. Under this condition, the quantity demanded is less than the quantity supplied and there is a 100-unit surplus in the market. If a price floor were set below equilibrium, or a price ceiling were set above equilibrium, they would be non-binding and have no effect on the market price.

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity Demanded</th>
<th>Quantity Supplied</th>
<th>Condition in the Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1</td>
<td>200</td>
<td>100</td>
<td>100-unit Shortage</td>
</tr>
<tr>
<td>$2</td>
<td>150</td>
<td>150</td>
<td>Equilibrium</td>
</tr>
<tr>
<td>$3</td>
<td>100</td>
<td>200</td>
<td>100-unit Surplus</td>
</tr>
</tbody>
</table>
SSEMI3 Explain the organization and role of business and analyze the four types of market structures in the U.S. economy.
While the course spends a significant amount of time describing a market with perfect competition, the real world has a variety of business structures and market structures that affect competition.

SSEMI3 Explain the organization and role of business and analyze the four types of market structures in the U.S. economy.

a. Compare and contrast three forms of business organization—sole proprietorship, partnership, and corporation with regards to number of owners, liability, lifespan, decision-making, and taxation.

While sole proprietorship, partnerships, and corporations are the three main ways to organize a business in the U.S., students should understand that there are many variations of these forms in real life with complex rules.

- **Sole proprietorships** are firms legally owned by only one person.
- **Partnerships** are firms legally owned by two or more people.
- **Corporations** are firms legally owned by stockholders who have purchased “shares” of the company in the hope that the value of their shares will increase over time and pay dividends. If the company is a public corporation these shares are also called stocks and can be purchased or sold on an exchange. **Dividends** are money payments distributing some of a firm’s profit to shareholders on a quarterly basis. Corporations also have the ability to raise money by issuing corporate bonds to raise money for ventures.

Each business organization has strengths and weaknesses. The standard requires students to compare them using the following categories:

- **Number of owners**
- **Liability** – the responsibility for paying the debts of the business
  - **Unlimited liability** means that if a business is unable to meet its financial obligations, the owner(s) of the business are personally responsible to pay those debts. This means the owner(s) could be required to liquidate personal assets such as their home to pay the debts of the company.
  - **Limited liability** is when responsibility for the debts of the business are restricted to the ownership stake (shares of stock) the business owner owns. The personal assets of the shareholder are not in jeopardy.
- **Lifespan** of the business refers to what happens to the business when an owner leaves or dies.
  - Limited life means the business closing or reorganizing a business under the new owner(s) when the previous owner(s) leaves the business.
  - Unlimited life means the business passes to new owners through the sale of shares without ending the business.
- **Decision Making** refers to the entity responsible for the day-to-day operating decisions of the business.
• Taxation
  o Sole proprietorships and partnerships face a single tax on their business profits as the owner(s)’s personal income. The amount of income they earn from their business will determine the personal income tax rate charged.
  o Corporations must also pay corporate income tax on profits. The remaining profit income distributed to shareholders in the form of dividends is also taxed. This is double taxation.

<table>
<thead>
<tr>
<th>Type of Business Organization</th>
<th>How many owners are there?</th>
<th>What type of liability do owners have?</th>
<th>What is the lifespan of the business?</th>
<th>Who makes the operating decisions?</th>
<th>What type of taxation do owners have?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole Proprietorship</td>
<td>One</td>
<td>Unlimited</td>
<td>Limited</td>
<td>Owner</td>
<td>Single</td>
</tr>
<tr>
<td>Partnership</td>
<td>Two or more</td>
<td>Unlimited</td>
<td>Limited</td>
<td>Owners</td>
<td>Single</td>
</tr>
<tr>
<td>Corporation</td>
<td>Determined by who owns shares of the corporation’s stock</td>
<td>Limited</td>
<td>Unlimited</td>
<td>Board of Directors elected by shareholders, professional managers make day-to-day decisions</td>
<td>Double</td>
</tr>
</tbody>
</table>

Although not expressly required by this element, you may want to categorize these characteristics of the types of business organization into advantages and disadvantages. The following chart accomplishes this task and includes some other key comparisons.
Federal Reserve Bank of Atlanta infographic – What is an Entrepreneur?
To download the infographic, order copies of the poster, and preview related activities, visit: https://www.atlantafed.org/education/teach/infographic-posters/entrepreneurs.aspx

**SSEMI3** Explain the organization and role of business and analyze the four types of market structures in the U.S. economy.

b. Identify the basic characteristics of monopoly, oligopoly, monopolistic competition, and pure (perfect) competition with regards to number of sellers, barriers to entry, price control, and product differentiation.

**The Four Types of Market Structures**

**Pure (Perfect) Competition** is a market structure characterized by a very large number of buyers and sellers of an identical product. (Example: commodities like crude oil)

**Monopolistic Competition** refers to a market structure characterized by a large number of buyers and sellers of products that are similar to one another that can be differentiated by brand, quality, etc. (Examples: restaurants and retail clothing sellers)
An **oligopoly** is a market structure characterized by only a few sellers of a product who dominate the market. (Examples: breakfast cereals and natural gas)

A **monopoly** is a market structure characterized by only one seller of a product dominating the market. (Example: electrical power companies and cable television companies in certain areas)


In 2022, Google Chrome is currently dominating the market with a near monopoly, but many have dominated in the past and have been surpassed by competition who innovated better than they did. Ask students why they think this market becomes easily concentrated and if they think Google Chrome will continue to dominate in the long run.

The following characteristics are usually important when distinguishing between the four market structures:

**Number of Sellers:** Are there many, few, or one seller(s) of the product? The more sellers there are, the more competitive the market is.

**Barriers to Entry:** Are there any obstacles that prevent other firms from entering the market for the good? If barriers are weak or absent from the market, the market will be more competitive. Barriers to entry could be as a result of legal barriers from specific laws, patents, copyrights, and trademarks,
or they could be due to natural barriers like extensive economies of scale for large producers or dominating a key resource needed to produce the good.

**Price Control:** Can the individual firms in the market for a product exercise any control over the price they charge? If not, they are called a price-taker because they must accept the market price as their own. The weaker the control over price, the more competitive the market.

**Product Differentiation:** Is there any difference between the products sold by the sellers in the market for the good? Businesses can differentiate based on quality, service, brand, promotion/advertising, location, convenience, exclusivity, etc. If the products sold by the firms in the market are identical, there is no reason for sellers to engage in non-price competition which refers to methods other than price used to attract customers. If the products are well differentiated, different sellers will be able to charge a wide range of prices.

The chart below identifies the characteristics associated with each of the four market structures.

<table>
<thead>
<tr>
<th>Type of Market Structure</th>
<th>Number of Sellers</th>
<th>Barriers to Entry</th>
<th>Price Control</th>
<th>Product Differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure (Perfect) Competition</td>
<td>Many</td>
<td>Low or No Barriers</td>
<td>None – price taker - must take the market price</td>
<td>None – products are identical</td>
</tr>
<tr>
<td>Monopolistic Competition</td>
<td>Many</td>
<td>Low Barriers</td>
<td>Some</td>
<td>Yes - firms must engage in non-price competition to distinguish their products from those of competitors</td>
</tr>
<tr>
<td>Oligopoly</td>
<td>Few</td>
<td>High Barriers</td>
<td>Yes – price leadership – when one big firm increases or decreases price, the others will follow to maintain market share</td>
<td>Varies – Oligopoly markets may sell identical or differentiated products – those with differentiated products will use non-price competition</td>
</tr>
<tr>
<td>Monopoly</td>
<td>One</td>
<td>High Barriers</td>
<td>Strong Control over Price</td>
<td>Not Applicable – there is only one seller’s product</td>
</tr>
</tbody>
</table>

Teaching Tip: Watch a segment of the show *Shark Tank* in class with your students and, based on the pitch, have them analyze how the business is organized as either a class discussion or an assignment. If a shark gives them an offer, ask them to analyze whether this would change the business organization. Ask them what market structure the product they sell is in and how they know. They
should mention the number of sellers, barriers to entry, price control, and product differentiation to justify their answer.

**Measuring the Level of Competition for Valuable Minerals**


Resource:
The Four Market Structures Candy - This simulation is an experiential learning activity to help students understand the four market structures. This video demonstrates it here: https://www.youtube.com/watch?v=KGrmynnjHjI.
International Economics

SSEIN1 Explain the benefits of international trade and the role of trade barriers.

One of the most universally accepted principles in economics is the overall benefit of specialization and trade. The potential to increase societal well-being through trade is part of the foundation of modern economics, found in the work of Adam Smith and David Ricardo.

However, while specialization and trade benefit society as a whole through increased production, there are gains and losses that are not always shared equally. For example, when imported goods are cheaper, consumers benefit from those lower prices. However, domestic manufacturers and workers are harmed as production shifts to other countries. This provides an incentive to erect trade barriers to protect domestic production.

SSEIN1 Explain the benefits of international trade and the role of trade barriers.

a. Explain how nations benefit when they specialize in producing goods and services in which they have a comparative advantage.

It seems intuitive to admit that almost no individual in the modern world is self-sufficient. Most people specialize in some sort of occupation, earn an income, and buy everything else that they consume. We realize that our standard of living is enhanced when we do not seek to be self-sufficient.

This is the same principle that is addressed in SSEF4c. Individuals, firms, and countries all benefit when they specialize production according to their comparative advantage and trade for other goods and services.

Comparative advantage is when one producer has a lower opportunity cost in production than other producers. If nations specialize based on their comparative advantages, they will increase efficiency and combined output, which allows them to consume beyond their own production capabilities. If two countries have differing opportunity costs, they will always be able to gain from specialization and trade.
In 2022, the U.S. was the world's largest economy and the world's largest importer. The U.S. is also the world's second largest exporter.

**While this standard addresses comparative advantage at the international level, it is helpful to show students a concrete example where individuals are better off if they specialize and trade.** When deciding how to specialize, having a comparative advantage is much more important than having an absolute advantage. Consider using the following example that is adapted from Steve Reff, University of Arizona.

Janet can type 120 WPM with 0 errors and Henry can type 60 WPM with 0 errors.

Who should do the typing? *The students will answer Janet because she is better at it (she has the absolute advantage).*

But I forgot to tell you, Janet is a lawyer and Henry is her paralegal. Janet earns $180 per hour while Henry earns $24 per hour.

A 600-word document needs to be re-typed. It will take Janet 5 minutes, and Henry 10 minutes. Does this change who should do the typing?

*Yes, Henry should do the typing because he has a lower opportunity cost (a comparative advantage). It costs $4 for Henry to type the document, while it costs $15 for Janet.*

Even though she is better at it, he should specialize in typing the document while Janet should focus on research and interviews for her next big case.

Because he has a lower opportunity cost, Henry has the comparative advantage in typing the document. Janet has the comparative advantage in legal work (even though she is better at both tasks). Henry should specialize in typing while Janet should specialize in legal work. If they divide and conquer, they will both get more done and benefit from the specialization and trade. They will be able to get more total done than if Janet tried to do both tasks herself just because she was better at them.
The same principle that works for Henry and Janet works between nations. South Korea produces very little of its own energy (oil and natural gas). It imports almost all of the required energy resources, and it focuses on producing items in which the nation has a comparative advantage: electronics and vehicles. While South Korea has limited reserves of fossil fuels, it does enjoy a comparative advantage in production of electronics that comes from a highly skilled workforce and abundant investments in high-tech industry. South Korean businesses produce the maximum amount of electronics they can and trade some of the revenue to import energy. This specialization leads them to be able to consume more than they could if they sought to be self-sufficient.

These two graphics show the top imports and exports in each state. States, as well as individuals and nations, specialize according to comparative advantage.
The Top Export in Every US State:

The Top Import in Every US State:


Resources:

Video: Council for Economic Education – Benefits of Trade: Comparative Advantage
[https://vimeo.com/336862365](https://vimeo.com/336862365)

Video series: NPR – Planet Money Makes a T-Shirt
[https://apps.npr.org/tshirt/#/title](https://apps.npr.org/tshirt/#/title)
Students are not required to complete the following calculations to be able to master this standard. However, the mathematical basis for comparative advantage is powerful in its ability to show opportunity costs, as well as gains from specialization and trade.

Imagine two fictitious nations, Wenby and Yia, that each produce two goods, wheat, and lumber. The chart shows the maximum of each good that can be produced if they use all of their resources on producing wheat or lumber.
Notice that Wenby has the absolute advantage in the production of both goods. An absolute advantage is when one entity can either produce more overall output with given inputs, or use less overall inputs to produce a given output. Even though Wenby has the absolute advantage in both, it is still beneficial for it to trade based on their comparative advantage.

If a teacher wants to make their own examples, they need to know the process by which comparative advantage is found, but the students do not need to know this to fulfill the standard. In order to find their comparative advantages, one must put them in like terms using their opportunity costs (OC) to see which nation gives up less. Whichever nation has the lower marginal (per unit) opportunity cost (OC) has the comparative advantage and should therefore specialize and produce the maximum amount of that good, and then trade for the other. This problem is an output problem because the inputs are fixed and the output is what is being measured. Input problems would measure the inputs (resources, time, workers) needed to produce a set amount of output.

**Opportunity Cost Formulas**

<table>
<thead>
<tr>
<th></th>
<th>Output Problem</th>
<th>Input Problem</th>
</tr>
</thead>
</table>
| Wenby               | OC of 1 of Good A = 
# of Good B made / # of Good A made                | OC of 1 of Good A = 
inputs to make Good A / inputs to make Good B       |
| Yia                 |                                                      |                                                     |

Wenby can use all of its resources to produce either 500 tons of wheat or 500 tons of lumber. Therefore, as illustrated in the chart below, it gives up 1 ton of wheat for 1 ton of lumber. The same calculation is shown for Yia.

**Calculations of Opportunity Costs**

<table>
<thead>
<tr>
<th></th>
<th>Wenby</th>
<th>Yia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>500 tons of wheat = 500 tons of lumber</td>
<td>150 tons of wheat = 450 tons of lumber</td>
</tr>
<tr>
<td></td>
<td>1 ton of wheat = 1 ton of lumber</td>
<td>1 ton of wheat = 3 ton of lumber</td>
</tr>
<tr>
<td></td>
<td>1 ton of lumber = 1 ton of wheat</td>
<td>1 ton of lumber = $\frac{1}{3}$ ton of wheat</td>
</tr>
</tbody>
</table>
Wenby has the comparative advantage in the production of wheat because they give up less lumber per ton of wheat produced than Yia (1 ton of lumber versus Yia’s 3 tons of lumber given up per ton of wheat). Wenby should specialize and produce all the wheat that they can (500 tons).

Yia has the comparative advantage in the production of lumber because they give up less wheat per ton of lumber produced than Wenby (⅓ ton of wheat versus Wenby’s 1 ton of wheat per 1 ton of lumber). Yia should specialize and produce all the lumber that they can (450 tons).

If both nations specialize based on the above comparative advantages and choose terms of trade that are between their opportunity costs (and therefore beneficial to both), they will both be able to consume beyond their own production capabilities. Beneficial terms for this example could be 1 ton of wheat for 2 tons of lumber. If Wenby produces 500 tons of wheat, and trades away 100 tons of wheat, they will receive 200 tons of lumber. As a result, they will be able to consume at point A below, which is a point they could not produce on their own (400 tons of wheat and 200 tons of lumber) as it is outside of their production possibilities curve. With the same trade, Yia also consumes outside of their production capabilities at point B (100 tons of wheat and 250 tons of lumber), which is not possible for them one their own.
Specialization and Trade Increases in Combined Output

<table>
<thead>
<tr>
<th>Total Combined Output Before Trade</th>
<th>Total Combined Output After Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If each nation used half their resources to produce each)</td>
<td>(If each nation specializes based on their comparative advantage)</td>
</tr>
<tr>
<td>325 Tons of Wheat</td>
<td>500 Tons of Wheat</td>
</tr>
<tr>
<td>475 Tons of Lumber</td>
<td>450 Tons of Lumber</td>
</tr>
<tr>
<td><strong>Total: 800 Tons</strong></td>
<td><strong>Total: 950 Tons</strong></td>
</tr>
</tbody>
</table>

It is easy to see that the **gains from trade** are two fold: the total combined output between the two economies has increased, and the consumption point for both is beyond their own production possibilities without trade. This works regardless of which point you start with on the line as long as the trade is mutually beneficial. This increased output and consumption is the main benefit of international trade. Trade barriers distort opportunity costs and lead to less trade, and therefore limit the gains from trade.

Resources:

CrashCourse Economics has overview videos on many of the topics in economics including specialization and comparative advantage. Specialization and Trade: Crash Course Economics #2: https://www.youtube.com/watch?v=NI9TLDIPVcs&t=7s

Khan Academy has entire courses full of free videos explaining concepts in economics. This video works through an example of comparative advantage if a teacher needs help understanding how it works or creating their own example. https://www.khanacademy.org/economics-finance-domain/ap-macroeconomics/basic-economics-concepts-macro/scarcity-and-growth/v/comparative-advantage-specialization-and-gains-from-trade

**SSEIN1 Explain the benefits of international trade and the role of trade barriers.**

b. Explain how trade barriers create costs and benefits to consumers and producers over time.

Trade Barriers limit the flow of goods, services, and productive resources between countries. **Free trade** refers to the unrestricted flow of goods, services, and productive resources between countries. While the field of economics generally regards free trade as positive for countries, specific political, ideological, and economic factors affecting a country may incentivize the erection of trade barriers. **Protectionism** is a policy of establishing trade barriers.
**Trade Barriers** are laws passed or actions taken by the government of a country with the intention of restricting the flow of goods and services between itself and another country or countries. The most common trade barriers are:

- **Tariffs** – a tax placed on goods imported into a country
- **Quotas** – limits on the quantity of goods that can be imported into a country
- **Embargoes** – a complete ban on trade with a country (usually due to political disputes)
- **Standards** – requirements a good must meet before it can be imported
- **Subsidies** – government payments to domestic producers that help the domestic companies compete with producers in other nations

Protectionism can have multiple goals. Economic sanctions or embargoes for political reasons seek to get a specific nation to change their behavior. Trade barriers may be enacted to protect the domestic economy from foreign competition to increase domestic employment, or to help an infant industry. Some industries may be protected based on national security implications if the goods produced would be essential to a war effort.

When a country imposes trade barriers, some people benefit and others incur costs. A general concern about using any trade barrier is the possible retaliation of the other country, which could cause a **trade war**. If a country decides to use a tariff, the benefits include providing revenue to the importing country’s government as it collects the tax and protecting the domestic producers of the good by effectively increasing the price of imported goods. Costs of tariffs include higher prices for consumers.

**Quotas** benefit domestic producers by limiting the number of foreign goods with which they must compete. The cost is that consumers who want the imported good cannot get it once the quota is met no matter how high a price they are willing to pay. Quotas and tariffs cause a country’s resources to be allocated toward goods for which it does not have a comparative advantage.

Embargoes are politically motivated. An **embargo** could successfully influence another country to behave according to the embargoing country’s wishes, benefiting the embargoing country. However, the individuals and firms in the embargoing country can no longer enjoy the goods the embargoed country produces and may encounter higher prices from less competition in the market. The individuals and firms in the embargoed country will incur significant costs without the economic activity with customers in the embargoing country.

By placing **standards** on a good, a country can exclude the goods of foreign producers who are unable to meet the importing country’s requirements. When used appropriately, standards can benefit domestic consumers by protecting them from substandard or dangerous products. Some countries impose unattainable standards for foreign producers simply to force them out of the domestic market despite the products not posing any threat to domestic consumers. This hurts domestic consumers by increasing prices and hurts the foreign producer who has lost a market for the product.
**Subsidies** benefit domestic producers by allowing them to compete at the lower market price established by their foreign competition. This keeps prices low for domestic and foreign consumers, protects domestic jobs, and helps firms stay profitable, but it comes at a cost to domestic taxpayers. Subsidies damage industries and workers in other countries that would have a comparative advantage in production if the subsidy were not in place.

In general, students need to understand that trade barriers are instituted to benefit domestic producers and workers at the cost of domestic consumers. Since trade barriers distort markets, increase prices, limit the quantity in the market, and decrease the overall gain from trade, from an economic perspective, they need to be carefully considered before they are instituted. In practice, trade barriers are often instituted for political reasons rather than economic ones.

In the chart below, some examples go beyond the standard. Choose examples that would benefit your students.

<table>
<thead>
<tr>
<th>Impact of Trade Barriers on Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs</strong></td>
</tr>
<tr>
<td>Increase prices for consumers and decrease the overall quantity in the market. Could cause shortages.</td>
</tr>
<tr>
<td>Decrease access to certain imported goods and limit the diversity of goods available.</td>
</tr>
<tr>
<td>Decrease purchasing power (due to higher prices) and reduce overall standard of living</td>
</tr>
<tr>
<td>Decrease the overall consumer surplus in the markets affected, and limit the gain from trade.</td>
</tr>
</tbody>
</table>
### Impact of Trade Barriers on Producers

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit foreign competition which can stifle innovation in the domestic market</td>
<td>Limit foreign competition and increase domestic prices.</td>
</tr>
<tr>
<td>Could increase input costs for other domestic industries that purchase the goods/resources affected by tariffs.</td>
<td>Increase the quantity produced by domestic producers.</td>
</tr>
<tr>
<td>Could cause domestic resources to be used inefficiently to produce goods which the domestic country does not have the comparative advantage.</td>
<td>Increase domestic producer revenue.</td>
</tr>
<tr>
<td>Increase the deadweight loss and limit productive efficiency in the markets on which they are imposed.</td>
<td>Increase domestic employment and wages for workers in industries affected by the tariffs.</td>
</tr>
</tbody>
</table>

A common argument for trade barriers is that high levels of imports put US workers out of a job. While it can be true for individuals, businesses, and specific industries, the idea does not hold in the data overtime. In the graph below, there is a correlation with higher imports and higher GDP and employment since 1975.
Source: The Visual Capitalist, Global Trade Series, the benefits of Free Trade:  

Resources:

According to the World Bank, there is evidence to suggest that the burden of trade barriers varies according to gender:


Video: When Countries Trade, Women Win – video from the World Bank  
https://www.youtube.com/embed/fjje1gzq2Nk
SSEIN1 Explain the benefits of international trade and the role of trade barriers.

c. Analyze Georgia’s role in the international economy (i.e. the ports of Savannah and Brunswick, the Northeast inland port, the presence of multinational corporations in the state, and the impact of trade on the state’s economy).

Georgia has a long history of international business. The state has 68 consular offices that represent an official presence of foreign governments in Georgia. In addition, there are more than 30 binational chambers of commerce located in the state.

Source: https://www.georgia.org/international/investment

In addition, Georgia has international representatives that are located in Brazil, Canada, Chile, China, Colombia, Europe, Israel, Japan, Korea, Mexico, and Peru, and the United Kingdom. These offices are critical to the state’s international economy. In 2021, nearly 60 percent of bilateral trade and 52 percent of exports involved markets where Georgia maintains full-time representation.

https://www.georgia.org/international/trade/annual-trade-report

Georgia benefits when foreign companies invest in facilities in Georgia. **Foreign direct investment** is the purchase of an asset by a company in a different country. Hundreds of foreign owned facilities are located in Georgia.

![Top 10 Countries with Facilities in Georgia](https://www.georgia.org/sites/default/files/2022-06/fdi_1-pager_update_2022.pdf)


These foreign-owned facilities employ a significant number of workers in Georgia.

![Top 10 Countries by Employment in Georgia](https://www.georgia.org/sites/default/files/2022-06/fdi_1-pager_update_2022.pdf)

From 2017-2021, Georgia estimates that international corporations have brought in $11.6 billion in investment and created 33,455 jobs. For example, the KIA Factory in West Point, Georgia employs 2,700 workers in Troup county and created at least 14,000 related jobs in West Georgia.

Over the past decade, the movie industry in Georgia has grown exponentially as a result of both foreign and domestic investment. Significant private and public investment has made our state one of the go-to destinations for filming because it has state-of-the art recording facilities, a large skilled workforce, well-developed technology/support services, and one of the most competitive tax incentive programs in the country. The movie and television industry has brought with it lots of jobs and opportunities.

Resources:

You can learn more about this impact:


GPB created a fun business budgeting game using the movie industry in Georgia:

Lights, Camera, Budget: https://www.gpb.org/lights-camera-budget-game/

Georgia is also the headquarters of several multinational corporations. These firms have a significant impact on the economy in the form of employment, investment, tax revenue, and income. Examples of these corporations that were started and are still headquartered in Georgia include Coca-Cola, United Parcel Service (UPS), Home Depot, Delta, Aflac, and Chick-fi-A. Just like foreign companies
invest in facilities in Georgia, these companies invest in facilities in other countries. For example, Home Depot is a multinational corporation that has stores in the United States, Canada, and Mexico.

One of the reasons that Georgia has been successful in attracting foreign direct investment is the development of significant infrastructure resources. Transportation plays an enormous role in the development of business in the state.

Source: https://www.georgia.org/competitive-advantages/infrastructure
The ports of Savannah and Brunswick play a major role in international commerce. The port of Savannah is the single largest and fastest-growing container terminal in America. Due to a long investment project that was finished in 2022, large stretches of the Savannah river have been dredged to allow for even larger ships to access the port. As one of the major deepwater ports on the eastern coast of the US, it plays a major role in shipping exports to and imports from the rest of the world. The port of Brunswick is the nation's second largest port for the import and export of vehicles and heavy machinery. This is important to the economy of Georgia since vehicles were the number one import in Georgia in 2021.

![The statewide economic impact of Georgia’s ports in Fiscal Year 2019 includes:](https://gaports.com/our-port/economic-impact/)

The inland port model means containers spend less time on trucks and Georgia interstates. The **Northeast inland port** is the newest planned development to link the port of Savannah and the rail lines of northeast Georgia. When they arrive at the port in Gainesville, they can be transferred to trains or barges. In addition, cargo can be staged and loaded into containers to move to the coast to load on ships. From an economic perspective, these investments in infrastructure increase the supply of various products by decreasing the cost of transporting goods. (SSEMI2b).

Resources:

More information about Georgia ports

[https://gaports.com/](https://gaports.com/)

Information about Georgia from the Office of the United States Trade Representative

[https://ustr.gov/map/state-benefits/ga](https://ustr.gov/map/state-benefits/ga)
The Georgia Department of Economic Development has a series of Global Country Connection publications that describe the relationship of 27 foreign governments with Georgia. These publications are updated annually and would provide a good resource for students to explore this standard. They are available at:

https://www.georgia.org/international/relations-protocol/global-country-connections

SSEIN2 Analyze how changes in exchange rates can have an impact on groups in the United States and in other countries.

An Exchange Rate refers to the price of one country’s currency expressed in terms of another country’s currency. For example, on June 7, 2022, the price of one dollar expressed in euros was .93 euros.

A wide variety of economic agents are affected by fluctuations in exchange rates, including:

- Importers and exporters are buying and selling goods and services around the world;
- Investors are investing in real assets (such as facilities or properties) and financial assets (such as stocks or bonds);
- Speculators are seeking to make a profit as the value of certain currencies rises or falls;
- Central banks are acting to affect the international value of their currency.

SSEIN2 Analyze how changes in exchange rates can have an impact on groups in the United States and in other countries.

a. Describe factors that cause changes in exchange rates.

Most exchange rates fluctuate based on supply and demand. Appreciation and depreciation describe changes in the value of one currency in terms of another.

- Appreciation refers to an increase in the value of a currency relative to another.
- Depreciation refers to a decrease in the value of one currency relative to the other.

The table below shows the price of the U.S. dollar expressed in terms of other currencies for two years.

In Year 1, a dollar cost .49 pounds. In Year 2, a dollar cost .52 pounds. Since the dollar was more expensive for people holding British pounds in Year 2 than in Year 1, the dollar appreciated against the pound.
In Year 1, a dollar cost 5.17 Danish krone. In Year 2, a dollar cost 4.83 krone. Since the dollar cost less for people holding the Danish krone in Year 2 than in Year 1, the dollar depreciated against the krone.

### Dollar Exchange Rates

<table>
<thead>
<tr>
<th>Currency</th>
<th>U.S. dollar at the end of Year 1</th>
<th>U.S. dollar at the end of Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>British pound</td>
<td>0.49</td>
<td>2.06</td>
</tr>
<tr>
<td>Danish krone</td>
<td>5.17</td>
<td>0.19</td>
</tr>
<tr>
<td>Euro</td>
<td>0.69</td>
<td>1.44</td>
</tr>
<tr>
<td>Japanese yen</td>
<td>114.69</td>
<td>0.0087</td>
</tr>
<tr>
<td>Mexican peso</td>
<td>10.71</td>
<td>0.093</td>
</tr>
<tr>
<td>Swiss franc</td>
<td>1.17</td>
<td>0.86</td>
</tr>
<tr>
<td>Thai baht</td>
<td>31.7</td>
<td>0.03</td>
</tr>
</tbody>
</table>

As currencies appreciate and depreciate, individuals who exchange currencies benefit or are harmed. In the two graphics below, the impacts of a changing exchange rate are shown for an American visiting Paris and a European visiting New York.
Most currencies today are called floating or flexible. The price moves freely based on market forces. This course does not require students to graph exchange rates, but factors that influence the price of a currency in terms of another can be thought of as determinants of the supply and demand for the currency.

<table>
<thead>
<tr>
<th>Determinants of Exchange Rates</th>
<th>Explanation and Example</th>
</tr>
</thead>
</table>
| Change in demand for          | • Increased demand for the Nintendo Switch in the U.S. leads to increased demand for the Japanese yen to pay for the product.  
                                                                         a. Japanese yen appreciates and U.S. dollar depreciates |

Source: Dallas Fed publication Everyday Economics: Globalization

https://www.dallasfed.org/educate/everyday
<table>
<thead>
<tr>
<th>imports or exports.</th>
<th>● Increased demand for U.S. machinery in China leads to increased demand for U.S. dollars ○ U.S. dollar appreciates and the Chinese yuan depreciates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in relative incomes.</td>
<td>If U.S. incomes increase, Americans buy more imports AND more domestic products. The increase in imports increases the demand for the currency of the exporting country. The dollar will depreciate relative to the other country’s currency. If incomes increase in South Africa, their consumers will buy more American imports and the relative value of the dollar will increase compared to the South African rand.</td>
</tr>
<tr>
<td>Changes in relative inflation rates.</td>
<td>If prices in the U.S. are increasing relatively more quickly than prices in other countries (high inflation), consumers will buy more imports as substitutes, increasing the demand for the other currencies, and depreciating the dollar.</td>
</tr>
<tr>
<td>Changes in relative interest rates or expected return on investment.</td>
<td>If Canadian interest rates are higher than interest rates in the U.S. interest rates, Americans will see Canadian bonds as an attractive investment and increase demand for the Canadian dollar to purchase them. If US investors expect a greater return on their investment in German stocks, real estate, or other investments, Americans will increase their demand for euros, increasing the supply of dollars in international markets to pay for euros, so the euro will appreciate while the dollar will depreciate.</td>
</tr>
</tbody>
</table>

**Students do not need to be able to draw the currency exchange graphs depicted here.** However, this is a great opportunity to reinforce the supply and demand model that was introduced in **SSEM12**.

Currencies can only be compared to one other currency at a time. Since one transaction impacts both markets, changes are reflected on both graphs. In other words, a change in demand for one currency will impact the supply of the other.
If a store in Georgia imports more dresses from a supplier in China, they will use yuan to purchase them. They will have to trade dollars to get the yuan to pay for the dresses. Therefore, the supply of dollars in the foreign exchange market increases, and the demand for yuan increases. This would be shown as a shift right in the supply for the Market for USD in China and a shift right in demand for the Market for Yuan in the USA. These shifts have the same impact, the yuan appreciates while the dollar depreciates.

SSEIN2 Analyze how changes in exchange rates can have an impact on groups in the United States and in other countries.

b. Explain how appreciation and depreciation of currency affects net exports and benefits some groups and hurts others
When a country’s currency *appreciates* against another currency, it means those who hold the appreciated currency can buy more of the other country’s currency. If a country’s currency *depreciates*, those who hold the depreciated currency can buy less of the other country’s currency.

Changes in the strength, or value, of a currency, affect different sectors of the economy in different ways. Some sectors benefit, while others are harmed.

When a single dollar will buy more foreign currency (or it takes more foreign currency to buy a dollar), the dollar is described as strengthening, or appreciating. **A stronger U.S. dollar means that:**

- Americans can buy foreign goods, services, and resources more cheaply and **U.S. imports will increase**. This will benefit foreign producers.
- Americans can travel abroad less expensively.
- Foreigners find U.S. goods, services, and resources more expensive and **U.S. exports will decrease**. This impact could mean lost production and jobs in affected industries.

The U.S. trade deficit will tend to increase as the dollar strengthens.

When a single dollar will buy less foreign currency (or it takes less foreign currency to buy a dollar), the dollar is said to be weakening, or depreciating. **A weaker U.S. dollar implies that:**

- Foreigners can buy American goods more cheaply and **U.S. exports will increase**. This could mean more production and employment in exporting industries.
- Foreigners can travel to the U.S. less expensively.
- Foreign goods become more expensive for U.S. residents and **demand for imports will fall**. This will harm foreign producers.

The U.S. trade deficit will tend to decrease as the dollar weakens.

While the aggregate demand and aggregate supply graph is not required in the standards, it is a helpful way to explain the broad impact of currency fluctuations on the domestic economy.

When the U.S. dollar *appreciates* (strengthens)

| Net exports decrease (imports up and exports down) | Aggregate demand decreases | • Real GDP decreases  
|---------------------------------------------------|----------------------------|-----------------------------|
When the U.S. dollar **depreciates** (weakens)

| Net exports **increase** (imports down and exports up) | Aggregate demand **increases** | ● Real GDP **increases**  
● Price level **increases**  
● Unemployment **decreases** |
In the chart below, some examples go beyond the standard. Choose examples that would benefit your students.
### If the U.S. Dollar Depreciates:

<table>
<thead>
<tr>
<th>Groups who Benefit</th>
<th>Groups Hurt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. Producers who export</strong></td>
<td><strong>U.S. Consumers</strong></td>
</tr>
<tr>
<td>When the USD depreciates, the other currency has</td>
<td>Since the USD is weaker, imports will become more expensive and U.S.</td>
</tr>
<tr>
<td>appreciated. Foreign consumers will find that goods</td>
<td>consumers will buy less foreign goods. In general, higher prices will</td>
</tr>
<tr>
<td>and services from the U.S. are now cheaper, so the</td>
<td>decrease their purchasing power, real income, and standard of living.</td>
</tr>
<tr>
<td>quantity demanded will increase, increasing U.S.</td>
<td>American tourists traveling abroad will find that their USD doesn’t</td>
</tr>
<tr>
<td>producer exporting revenue.</td>
<td>purchase as much as it used to.</td>
</tr>
<tr>
<td><strong>Workers</strong> from the impacted industries may be helped</td>
<td></td>
</tr>
<tr>
<td>as well. The exporting companies may need to hire</td>
<td></td>
</tr>
<tr>
<td>more workers to produce the increased output and may</td>
<td></td>
</tr>
<tr>
<td>need to raise wages to attract them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foreign Consumers</strong></td>
<td><strong>Foreign Producers</strong></td>
</tr>
<tr>
<td>The foreign currency can now buy more dollars, so the</td>
<td>U.S. consumers will buy less foreign goods and services, decreasing</td>
</tr>
<tr>
<td>foreign consumers will find the U.S. goods are cheaper</td>
<td>foreign producer revenue.</td>
</tr>
<tr>
<td>and will purchase more. Tourists to the U.S. will</td>
<td></td>
</tr>
<tr>
<td>find that their money can buy more than it did before.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foreign Producers who buy U.S. resources</strong></td>
<td><strong>U.S. producers who import resources</strong></td>
</tr>
<tr>
<td>Since the USD has depreciated, the cost of purchasing</td>
<td>Since the USD is weaker, the cost of purchasing foreign resources in</td>
</tr>
<tr>
<td>U.S. resources with the foreign currency has</td>
<td>dollars has increased. Ceteris Paribus, increased costs lead to lower</td>
</tr>
<tr>
<td>decreased.</td>
<td>profits.</td>
</tr>
<tr>
<td></td>
<td><strong>Workers</strong> in these industries may be hurt if the businesses have to</td>
</tr>
<tr>
<td></td>
<td>lay off workers due to increased costs.</td>
</tr>
</tbody>
</table>
If the U.S. Dollar Appreciates:

<table>
<thead>
<tr>
<th>Groups who Benefit</th>
<th>Groups Hurt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. Consumers</strong></td>
<td><strong>U.S. Producers who export</strong></td>
</tr>
<tr>
<td>Since the USD is stronger, U.S. consumers can afford to buy more imports.</td>
<td>When the USD appreciates, the other currency has depreciated. Foreign</td>
</tr>
<tr>
<td>USD will go further for U.S. travelers as well.</td>
<td>consumers will find that goods and services from the U.S. are now more</td>
</tr>
<tr>
<td>Domestic companies may have to lower prices, (or improve quality) to compete with</td>
<td>expensive, decreasing U.S. producer exporting revenue.</td>
</tr>
<tr>
<td>cheaper imports, making goods more affordable for consumers, and increasing</td>
<td>Even if they don’t export, domestic companies may have to lower prices to</td>
</tr>
<tr>
<td>their real income and standard of living.</td>
<td>compete with cheaper imports, decreasing revenue.</td>
</tr>
<tr>
<td><strong>Foreign Producers</strong></td>
<td><strong>Workers</strong> from the impacted industries may be hurt as well if the</td>
</tr>
<tr>
<td>U.S. consumers can afford to buy more foreign goods and services, increasing</td>
<td>companies lay off workers, decrease wages, or are forced to shut down.</td>
</tr>
<tr>
<td>foreign producer revenue.</td>
<td></td>
</tr>
<tr>
<td><strong>U.S. producers who import resources</strong></td>
<td><strong>Foreign Producers who buy U.S. resources</strong></td>
</tr>
<tr>
<td>Since the USD is stronger, the cost of purchasing foreign resources in dollars</td>
<td>Since the USD is stronger, the cost of purchasing U.S. resources in dollars</td>
</tr>
<tr>
<td>has decreased. Ceteris Paribus, lower costs can lead to higher profits.</td>
<td>has increased.</td>
</tr>
<tr>
<td><strong>Workers</strong> in these industries may be helped if the businesses can afford to</td>
<td></td>
</tr>
<tr>
<td>grow and hire more workers as a result of the lower costs.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foreign Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now that the U.S. Dollar has increased in value relative to foreign currencies,</td>
</tr>
<tr>
<td>the foreign consumers will find the U.S. goods are more expensive and won’t</td>
</tr>
<tr>
<td>purchase as many. Tourists to the U.S. will find that their money doesn’t go as</td>
</tr>
<tr>
<td>far.</td>
</tr>
</tbody>
</table>
For example, assume the United States and Japan are trading partners. Due to the popularity of Japanese Anime in the United States, people in the U.S. demand for yen because they need Japanese currency to buy Japanese goods. As the demand for the yen rises, the yen appreciates in the foreign exchange market. The higher price of the yen will make Japanese goods more expensive for U.S. consumers and Japanese exports to the United States will decrease. However, the higher value of the yen will allow people in Japan to import more goods, more cheaply from the United States. Therefore, while the appreciation of the yen hurts Japanese exporters, U.S. exporters to Japan benefit from the increased Japanese consumption of U.S. goods. U.S. tourists visiting Japan are harmed by the increased price of the yen, but Japanese tourists coming to the U.S. are helped because they can buy more.

Because currencies are reciprocals of one another, if one currency appreciates, the other currency always depreciates. In the example below, 1 USD = 109.27 JPY, so 1 JPY = (1/109.27) USD.

Eg. United States Dollar (USD) versus Japanese Yen (JPY)

<table>
<thead>
<tr>
<th>June 2021</th>
<th>June 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 USD = 109.27 JPY</td>
<td>1 USD = 132.55 JPY</td>
</tr>
<tr>
<td>1 JPY = 0.00915 USD</td>
<td>1 JPY = 0.00754 USD</td>
</tr>
</tbody>
</table>

Between June 2021 and June 2022, the U.S. Dollar appreciated and the Japanese Yen depreciated. As a result, a person or business from the U.S. can exchange 1 U.S. Dollar for more Yen, and therefore can afford more Japanese goods, increasing imports from Japan. Since 1 Japanese Yen doesn’t buy as much of a U.S. Dollar, Japanese citizens can’t afford to purchase as many U.S. goods, decreasing U.S. exports to Japan. All other things held equal, if the US exports less and imports more, then overall net exports will decrease (Net Exports = Exports - Imports).
SSEMA1 Explain the methods by which economic activity is measured.

A nation’s economic activity and health are measured using a collection of economic indicators. These economic indicators measure progress in various areas, including production, prices, employment, and more. The business cycle is a stylized way to look at changing economic activity over time. Periods of contraction and growth are defined by the performance of the economy on the indicators. This information is used by fiscal and monetary policy decision-makers to guide policy actions.

SSEMA1 Explain the methods by which economic activity is measured.

a. Describe key economic outcomes and how they are measured including economic growth using Gross Domestic Product (GDP) and real GDP; price stability using the Consumer Price Index (CPI); and full employment using the unemployment rate.

<table>
<thead>
<tr>
<th>Key Economic Outcomes (Major Macroeconomic Goals)</th>
<th>Measured By:</th>
<th>U.S. Goal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Steady Economic Growth</td>
<td>Real GDP Growth Rate</td>
<td>Average of 2-3% per year</td>
</tr>
<tr>
<td>2. Price Stability</td>
<td>Inflation Rate</td>
<td>Average of 2% per year</td>
</tr>
<tr>
<td>3. Full Employment</td>
<td>Unemployment Rate</td>
<td>3.5-4.5% per year</td>
</tr>
</tbody>
</table>

Economic growth is measured by the percentage change in real GDP over time. SSEF3a identifies growth as one social and economic goal that a nation can choose to pursue. SSEF4 explores the connection between economic growth and standard of living, along with the determinants of economic growth.

Gross Domestic Product (GDP) is the total dollar value of all final goods and services produced in the country in a given time period. For the United States, it is computed as part of the National Income Accounts by the U.S. Bureau of Economic Analysis (BEA) (https://www.bea.gov/data/gdp/gross-domestic-product).
The GDP can be thought of as the sum of consumer spending, investment spending, government spending, and net exports. **Consumer spending** refers to the monetary value of what households spend on final goods and services in the product market in a given time period. **Investment** includes the monetary value of final capital goods businesses purchase in a given time period, the value of inventories produced by businesses, but not yet sold, by the end of the measurement time period, and the value of new home construction produced in the given time period. (Note that this economic definition of investment does *not* include purchasing stocks, bonds, and other types of financial assets.) **Government spending** is the monetary value of any spending on final goods and services by a local, state, or national government in a given time period. **Net exports** refer to the monetary value of all final goods and services produced in one country, but sold outside the country’s borders minus the monetary value of all final goods and services produced outside the country’s borders, but sold within the country in a given time period. In other words, the value of a country’s exports minus the value of a country’s imports in a given time period. This method of calculating a country’s GDP is the **Output Expenditure Model** which is commonly shortened to $C + I + G + NX$.

$NX = \text{Exports-Imports}$, so in the U.S. the amount for Net Exports is usually subtracted from the formula due to our consistent trade deficits in recent history.
Real GDP is the value of gross domestic product adjusted for inflation (using constant prices from a base year). Nominal GDP is the value of the GDP at current prices. Because prices change over time, comparing nominal GDP from year-to-year does not provide an accurate picture of growth in the economy. Before adjusting for price changes, an increase in GDP could be due to an increase in the prices of the final goods and services OR an increase in the quantity of goods and services produced. When nominal GDP is adjusted for inflation to find real GDP, it removes the effects of price changes, so it is a better measure of economic growth. The graph below was created on the World Bank website, https://data.worldbank.org/. The graph can be modified and updated with different countries.

A current version of the graph can be found here, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2021&locations=CN-GB-IN-ZA-EU&start=1960&view=chart

Note that comparisons between countries involve adjustment with exchange rates. While it is important to compare similar GDP statistics, real GDP to real GDP or nominal GDP to nominal GDP, international comparisons can and will be affected by changes in the exchange rates, differences in how GDP is calculated, and differences in price levels between the nations.

Resources:

Visual Capitalist has lots of interesting infographics based on current issues in economics: https://www.visualcapitalist.com/.

Gapminder has useful, current statistical data on growth, the standard of living, etc., presented in a very visual way. Create your own graphs as well, www.gapminder.org/resources/
DollarStreet, a part of Gapminder, uses images and videos from all over the world showing living conditions for many different income levels. [www.gapminder.org/dollar-street](http://www.gapminder.org/dollar-street)

Federal Reserve Bank of Atlanta - Gross Domestic Product
To download the infographic, order copies of the poster, and preview related activities, visit: [www.atlantafed.org/education/teach/infographic-posters/gross-domestic-product.aspx](http://www.atlantafed.org/education/teach/infographic-posters/gross-domestic-product.aspx)

This graph was created on FRED, a resource from the Federal Reserve Bank of St. Louis. The gray
bars indicate periods of official recessions, showing a decrease in real GDP. A current graph or one with a different time range can be created here, [https://fred.stlouisfed.org/series/GDPC1](https://fred.stlouisfed.org/series/GDPC1).

**Price stability** refers to stabilizing increases in the price level over time so that a country’s money will retain its purchasing power over time. Price stability is identified as an economic goal in SSEF3(a). Changes to the overall price level in an economy are measured using price indexes that measure the change in the price of a basket of goods over time.

Federal Reserve Bank of Atlanta infographic – Price Stability
To download the infographic, order copies of the poster, and preview related activities, visit: [https://www.atlantafed.org/education/teach/infographic-posters/price-stability.aspx](https://www.atlantafed.org/education/teach/infographic-posters/price-stability.aspx)

The **Consumer Price Index (CPI)** is computed by the U.S. Bureau of Labor Statistics (BLS) ([https://www.bls.gov/cpi/](https://www.bls.gov/cpi/)). New data is released each month. The CPI is a measure of the average change over time in the prices paid by urban consumers for a specific market basket of consumer goods and services. To compare over time, the basket must remain consistent, so new items are incorporated slowly. Since the CPI is an average for all urban consumers, the price level in different regions of the country can vary greatly.
Inflation is an increase in the price level in an economy over time. Inflation is measured as a percentage change in a broad price level index, such as the CPI. Deflation is a decrease in the overall price level. Deflation is not very common in the U.S. Sustained deflation occurred during the Great Depression in the 1930s. It was also observed for a far shorter period in the recession that accompanied the 2008 financial crisis. Disinflation is when the inflation rate decreases, and is much more common. Prices are still increasing, but at a slower rate. Most economists agree that rapid inflation and deflation are both harmful to an economy. In the United States, the Federal Reserve targets an average inflation rate of 2% over time. This allows households and firms to plan for the future. Deviations from this target rate of inflation will trigger the Federal Reserve to use monetary policy to attempt to return inflation to the target rate, which is further discussed in SSEMA2(c).
This graph was created on FRED, a resource from the Federal Reserve Bank of St. Louis. It was modified to show percentage change from a year ago, so that it shows the inflation rate over time. A current graph, or one with a different time range can be accessed at https://fred.stlouisfed.org/series/CPIAUCSL#

The unemployment rate is also calculated by the BLS (https://www.bls.gov/cps/). The BLS calculates the unemployment rate from data derived from a sample of 60,000 households as part of the Census Bureau’s Current Population Survey. The BLS reports the statistics monthly.

The unemployment rate is calculated as a percentage of the labor force that is not employed and is actively seeking work. The labor force includes both the employed and unemployed. To be counted as unemployed, a person must meet several criteria.

- Be at least 16 years old
- Not institutionalized (e.g. prison, mental institution, or long-term care facility)
- Not in the military
- Not worked for pay in the measurement time-period
- Actively seeking a job.

Full employment refers to an economic state in which virtually all who are willing and able to work have the opportunity to do so. The unemployment rate is a primary measure of this economic goal, but there are a variety of related indicators, including job creation, labor force participation rate, and more. The unemployment rate is never expected to be zero. Economists estimate that the U.S. economy is operating at full employment when the unemployment rate is between 3.5% and 4.5%. This level of unemployment is called the natural rate of unemployment because it does not include any unemployment related to a downturn in the business cycle. At this rate, there is only unemployment from natural causes like frictional, structural and seasonal unemployment. These types of unemployment exist whether the economy is doing well or poorly. See SSEMA1(b) for more information about the various types of unemployment. When the unemployment rate is above 4.5%, it is a signal that there is some cyclical unemployment from an economic downturn. When the overall level of economic output decreases, less workers are needed to produce and unemployment increases. When the unemployment rate is below 3.5%, it is a sign that the economy may be overheated, and may have a shortage of labor needed to produce the higher output that is demanded.
Note: In the past, the estimate of the natural rate of unemployment has been higher. It was estimated at 5%–7%, then that estimate dropped to 4%–6%. Economists are always studying the many dynamics of the labor force. Estimates of frictional and structural unemployment change based on a variety of conditions, including technological innovation, workforce participation rates, and more. The natural rate of unemployment is derived from the Summary of Economic Projections that is released by the Federal Open Market Committee on a quarterly basis. [https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm](https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm).

This graph was created on FRED, a resource from the Federal Reserve Bank of St. Louis. A current graph or one with a different time range can be accessed at [https://fred.stlouisfed.org/series/UNRATE](https://fred.stlouisfed.org/series/UNRATE).

In the graph above, notice that during periods of recession (marked in gray), the unemployment rate (blue) increases sharply, and then recovers over time to return to near the natural rate (red) during periods of recovery and expansion. The unemployment rate has an inverse relationship with the business cycle and real GDP which is discussed further in SSEMA1(b).

Teaching Note: Use concentric circles or squares to show the relationship between the population, the labor force, the unemployed, and the employed. (See below.) Then, ask students to come up with the groups that would be part of the population, but not part of the labor force and add them to your drawing (blue examples given below). Emphasize that anyone who is over the age of 15 and either has a job or is looking for one is part of the labor force (unemployed or employed). Everyone who has a job (even if it is part-time and they can’t find a full-time job) is considered fully employed. In this way, the unemployment statistic alone isn’t enough to judge the state of the economy.
Then, as an extension beyond the standard, give the students easy numbers (like the chart below) to use to find the labor force participation rate and the unemployment rate to check their understanding.

<table>
<thead>
<tr>
<th>Population</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Force</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>190</td>
</tr>
<tr>
<td>Unemployed</td>
<td>10</td>
</tr>
</tbody>
</table>

**Answers**

| Labor Force Participation Rate | (200/300) * 100 = 66.7% |
| Unemployment Rate              | (10/200) * 100 = 5%    |
### Macroeconomic Formulas

<table>
<thead>
<tr>
<th>Formula</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP</td>
<td>Real GDP * (CPI/100)</td>
</tr>
<tr>
<td>Real GDP</td>
<td>Nominal GDP / (CPI/100)</td>
</tr>
<tr>
<td>Real GDP per Capita</td>
<td>Real GDP / Population</td>
</tr>
<tr>
<td>Economic Growth Rate</td>
<td>(Change in real GDP/Initial GDP) * 100 or [(New real GDP-Initial real GDP)/Initial GDP] * 100</td>
</tr>
<tr>
<td>Consumer Price Index</td>
<td>(Price of market basket/price of market basket in the base year) * 100</td>
</tr>
<tr>
<td>Inflation Rate</td>
<td>(Change in CPI/Initial CPI) * 100 or [(New CPI - Initial CPI)/ Initial CPI] * 100</td>
</tr>
<tr>
<td>Labor Force</td>
<td>Employed Workers + Unemployed Workers</td>
</tr>
<tr>
<td>Labor Force Participation Rate</td>
<td>(Labor force/Population) * 100</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>(Unemployed/Labor Force) * 100</td>
</tr>
<tr>
<td>Natural Rate of Unemployment</td>
<td>Structural + Frictional + Seasonal Unemployment (Usually 3.5 - 4.5%) (No cyclical unemployment)</td>
</tr>
</tbody>
</table>

Resource:
St. Louis Fed Lesson Plan: How Do We Measure Unemployment?
https://www.stlouisfed.org/education/how-do-we-measure-unemployment

**SSEMA1** Explain the methods by which economic activity is measured.

b. Explain the differences between seasonal, structural, cyclical, and frictional unemployment.

As noted above, full employment (or maximum employment) does not mean the country’s unemployment rate is zero percent. Unemployment can be attributed to four different economic causes. Certain types of unemployment are “natural” and always exist in a dynamic economy.
<table>
<thead>
<tr>
<th>Type of Unemployment and Description</th>
<th>Examples</th>
</tr>
</thead>
</table>
| **Cyclical unemployment** is caused by a downturn in overall economic activity. As the economy recovers, the jobs will return. | • Restaurant workers lost their jobs during a recession when consumers dined out less frequently.  
• When orders for the factory’s product fell during a recession, the factory laid off one shift of workers. |
| **Frictional unemployment** results from workers moving between jobs or waiting for jobs to start. | • In May, thousands of college graduates enter the labor market looking for their first professional job. This happens every May, year after year.  
• When many jobs are available in an industry, workers might be willing to quit one job, confident that they can find another job quickly. |
| **Structural unemployment** results from a mismatch of the labor supply and the labor market. Workers don’t have the right skills or are located in the wrong place. | • Jobs are available in one state, while another state has a high unemployment rate. Workers might not be able to move.  
• As the economy develops and changes, some jobs and the associated training become outdated. Technology may replace certain jobs and workers would have to retrain to fill available jobs. |
| **Seasonal unemployment** is related to the irregular demand for some types of workers. | • Agricultural jobs are often only available during peak growing season.  
• Some jobs in tourist towns are seasonal. Workers do not have opportunities in the off-season. |
Resource:
Federal Reserve Bank of Atlanta infographic – Maximum Employment
To download the infographic, order copies of the poster, and preview related activities, visit: [https://www.atlantafed.org/education/teach/infographic-posters/maximum-employment.aspx](https://www.atlantafed.org/education/teach/infographic-posters/maximum-employment.aspx)

**SSEMA1 Explain the methods by which economic activity is measured.**
c. Describe the stages of the business cycle and its relation to economic measurement, including: peak, contraction, trough, recovery/expansion as well as recession.

### The Business Cycle

![The Business Cycle Diagram](image-url)

- **Real GDP**
- **Time**
- **Peak**
- **Trough**
- **Recession**
- **Expansion**
- **Growth Trend**
The **business cycle** is an economic model illustrating how economic activity fluctuates over time. It is called a cycle because it repeats over time and is a natural process in the economy. The stylized business cycle is shown in the graph above. The vertical axis in the model is real GDP and the horizontal axis is time. The period of time when real GDP is rising is called **recovery** or **expansion**. Eventually, the economy reaches a **peak** and the real GDP begins to fall. This period when real GDP falls is called a **contraction** or a **recession**. When the economy reaches its lowest point, it is called a **trough**.

Depression does not have a technical definition, but it is described as a prolonged, particularly deep recession with high unemployment.

**Note:** While a **recession** is often defined as a decline in GDP that lasts for at least two quarters, the official peaks and troughs of the economy are defined by a committee of economists called the Business Cycle Dating Committee at the National Bureau of Economic Research. The Committee assesses the month that the economy reaches its peak and its trough. The time period in between the peak and the trough are defined as a recession. While real GDP growth is an important part of this calculation, in reality a broad measure of economic activity is considered, including labor force data, employment information, and prices.

More information about the business cycle and the Business Cycle Dating Committee can be found at [https://www.nber.org/research/business-cycle-dating#:~:text=The%20NBER's%20Business%20Cycle%20Dating%20Committee%20maintains%20a%20chronology%20of%20subsequent%20trough%2C%20or%20lowest%20point](https://www.nber.org/research/business-cycle-dating#:~:text=The%20NBER's%20Business%20Cycle%20Dating%20Committee%20maintains%20a%20chronology%20of%20subsequent%20trough%2C%20or%20lowest%20point).

### Macro Measures in a Typical Business Cycle

<table>
<thead>
<tr>
<th></th>
<th>Peak</th>
<th>Contraction</th>
<th>Trough</th>
<th>Expansion/Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Real GDP</strong></td>
<td>Highest point</td>
<td>Decreasing (Negative or slowing</td>
<td>Lowest point</td>
<td>Increasing (Positive real</td>
</tr>
<tr>
<td></td>
<td></td>
<td>real GDP growth rate)</td>
<td></td>
<td>GDP growth rate)</td>
</tr>
<tr>
<td><strong>Unemployment</strong></td>
<td>Low</td>
<td>Increasing</td>
<td>High</td>
<td>Decreasing</td>
</tr>
<tr>
<td><strong>Inflation</strong></td>
<td>High</td>
<td>Decreasing</td>
<td>Low</td>
<td>Increasing</td>
</tr>
</tbody>
</table>

Teaching Note: Before you have them fill out a chart like the one above, draw a business cycle graph on the board and ask the students to predict what is happening to real GDP, inflation and unemployment at each phase of the cycle and label them as you go (different colors are helpful!). You can also add a recession to the graph by showing a longer, deeper contraction, or a bubble by drawing a higher peak. When you cover fiscal **SSEMA3a** and monetary policy **SSEMA2c**, come back to the...
business cycle and show on a graph how those policies are trying to smooth out the business cycle, reducing the magnitude of peaks and troughs.

It is important to note that the assumptions in the chart above are based on the Keynesian model of the business cycle that relies on major demand shifts for its assumptions. While these are the general rule of thumb and the basic idea we want to start with when teaching students, it should be noted that supply shocks are also possible and would create different results. Negative supply shocks would create a situation called stagflation: both high unemployment and high inflation during a recession (eg. the 1970s). Positive supply shocks based on increases in productivity or technology that outpace demand can lead to the best of both worlds, low unemployment, and low inflation during a period of strong economic growth (eg. the 1990s). More information about stagflation and how to fix it is listed under SSEMA2c.

While the stylized graph of the business cycle above shows smooth and even expansions and contractions of real GDP, most economists look at the rate of change over time. The two graphs below show periods when the economy is growing (the percent change is positive—above the zero line) and shrinking (the percent change is negative—below the zero line). In these graphs, official recession periods are marked with gray bars.

Notice on the graph above that the percent change in Real GDP is tracked from 2000–2019. During most of these years, the economy grew between 1% and 5%. However, in the recession following the financial crisis of 2008, real GDP shrank by almost 10%. During the recession caused by the COVID pandemic (shown in the graph below), real GDP shrank by 30%, but then recovered relatively quickly. In both recessions, monetary and fiscal policies were used to help the economy stabilize. One of the goals of government interventions in the economy is often to help smooth out the business cycle when either unemployment or inflation strays from the stated targets.
These graphs were both created on FRED, a resource from the Federal Reserve Bank of St. Louis. A current graph or one with a different time range can be accessed at https://fred.stlouisfed.org/series/A191RL1Q225SBEA.

Teaching Note: Connect the business cycle back to circular flow from SSEMI1a. Any disruption in one of the arrows, or if the rate of the flows between households and businesses slow down, it may cause a contraction. If there is an injection into one of the arrows, or if the rate of the flows between households and businesses speed up, it may result in an expansion. If it goes too fast and the supply can’t keep up with the demand, it will cause inflation.

Resources:
Business Cycles video – Council for Economic Education
https://vimeo.com/331315734

Very artistic video explaining how a recession develops from WeTheEconomy:
https://www.wetheeconomy.com/films/recession/

Economists debate about the causes of the business cycle. Mainstream theory bases it on changes in overall (or aggregate) demand, but there are other ideas as well. This video explains some theories of the business cycle in the context of the 2008 Great Recession. https://mru.org/courses/principles-economics-macroeconomics/business-cycles-great-recession

This article from the Center on Budget and Policy Priorities has a very detailed explanation of how the Great Recession happened with lots of useful graphs. Chart Book: The Legacy of the Great Recession: https://www.cbpp.org/research/economy/the-legacy-of-the-great-recession
**SSEMA2 Explain the role and functions of the Federal Reserve System.**

The Federal Reserve System is the central bank for the United States. Congress created the Federal Reserve in 1913 to provide stability for the U.S. financial system after the country experienced a series of severe financial crises. The Federal Reserve’s role in the economy includes conducting monetary policy, maintaining the stability of the financial system, supervising and regulating financial institutions, fostering a safe and efficient payments system, and promoting consumer protection and community development.

**SSEMA2 Explain the role and functions of the Federal Reserve System.**

a. Describe the organization of the Federal Reserve System (12 Districts, Federal Open Market Committee (FOMC), and Board of Governors).

The Federal Reserve System (also called “The Fed”) is unique among the world’s central banks for its structure and its public/private nature. In the Federal Reserve Act of 1913, Congress called for a decentralized structure with a maximum of 12 district banks located throughout the country, along with a Board of Governors located in Washington, D.C., to oversee the system. The district banks are the private part of the system and the Board of Governors is the public part.

In the Federal Reserve Act, certain commercial banks were required by law to pledge capital to the Federal Reserve. This capital was used to start the twelve Federal Reserve banks across the nation. Regional banks are chartered by the U.S. government, but they are structured like private corporations. They operate under the direction of a board of directors representing banking, business, and community organizations throughout the district, and a selection committee of non-banker board members selects the president of each regional bank. The president and his or her professional staff are employees of the district and run the day-to-day operations of the district banks.

The Board of Governors is a federal agency that oversees the regional Reserve Banks. The President of the United States nominates seven members of the Board of Governors and the U.S. Senate confirms them.
The Federal Open Market Committee (FOMC) is the monetary policy-making body of the Federal Reserve System. When fully staffed, the FOMC includes the seven members of the Board of Governors and the 12 district bank presidents. Only five of the twelve district bank presidents are voting members of the FOMC at any one time. The New York District president always votes. The other four voting spots rotate among the remaining eleven district presidents.

Resource:
The Federal Reserve and You – video series from the Philadelphia Fed
Segment 102: Structure of the Federal Reserve. [https://www.youtube.com/watch?v=SJ-AX6PSPXw](https://www.youtube.com/watch?v=SJ-AX6PSPXw)

**SSEMA2 Explain the role and functions of the Federal Reserve System.**
b. Describe the Federal Reserve Bank’s roles in payment processing, bank supervision, and monetary policy including the dual mandate of price stability and full employment.

The Federal Reserve is the central bank of the United States, and it oversees the monetary system of the country.
In its role in **payment processing**, the Fed maintains accounts for commercial banks and the Federal government, process checks, and electronically transfer funds. The Fed also distributes and receives currency and coin, and keeps currency in good condition and in circulation. The U.S. economy has trillions of dollars in transactions every year. Those transactions include wholesale payments that transfer large sums of money between banks and businesses, Treasury payments that include government payments like social security and U.S. savings bonds, and retail payments that transfer smaller value funds between consumers and businesses.

In its role in **banking supervision** and regulation, the Fed writes regulations that govern the operations and business of banks and other financial institutions. It also supervises certain financial institutions to make sure they comply with those regulations. The primary goals of bank supervision are to make sure that banks operate safely and soundly, to make sure that they treat all customers equitably and fairly, and to make sure that the overall financial system is protected from systemic risk.

In its role of **conducting monetary policy**, the Federal Reserve influences the availability and cost of money and credit to achieve maximum employment and stable prices. These goals were set by the U.S. Congress in legislation in 1977 and 1978. By influencing interest rates (the availability and cost of money and credit), the Federal Reserve can influence the decisions of investors and consumers by making credit more or less expensive.

Unlike most central banks whose only mandate is price stability, the Federal Reserve has a **dual mandate** to use its tools to maintain both **price stability** and **maximum employment**.

Federal Reserve Bank of Atlanta infographic – The Fed Explained
To download the infographic, order copies of the poster, and preview related activities, visit: [https://www.atlantafed.org/education/teach/infographic-posters/the-fed-explained.aspx](https://www.atlantafed.org/education/teach/infographic-posters/the-fed-explained.aspx).

These goals are related to the business cycle that was described in **SSEMA1c**. By implementing policies to reduce unemployment and achieve price stability, the FOMC seeks to smooth the business
cycle. Both fiscal (SSEMA3) and monetary policy share the goal of reducing the magnitude of peaks and troughs like the blue lines below.

Resources:
Short animated videos about the Federal Reserve System are available from the Atlanta Fed and can be accessed at https://www.atlantafed.org/education/teach/multimedia?panel=3.

Detailed descriptions of and videos about each of the functions of the Federal Reserve System are available at https://www.federalreserve.gov/aboutthefed/the-fed-explained.htm

SSEMA2 Explain the role and functions of the Federal Reserve System.

   c. Describe how the Federal Reserve uses various tools of monetary policy to target the federal funds rate and how this rate influences other interest rates in the economy.

As the Federal Reserve conducts monetary policy, it communicates that policy to the public through an announcement of a federal funds rate target. The federal funds rate is the interest rate on overnight loans between banks and other entities that have reserve deposits at the Federal Reserve. In the U.S., the Federal Reserve does not directly set the federal funds rate, but it is very successful at targeting it with several other interest rate tools. Monetary policy is conducted by the Federal Open Market Committee (FOMC). The group meets at least eight times per year (about every six weeks) to assess the health of the economy in relation to the dual mandate of maximum employment and stable prices.

Since the Federal Reserve has a dual mandate to use their tools to maintain both price stability and maximum employment. When the FOMC sees that the economy is slowing, and the goal of maximum employment is at risk, the committee is likely to lower the target federal funds rate (an expansionary monetary policy). When the FOMC observes that the economy is overheating, and the goal of price stability is at risk, the committee is likely to raise the target federal funds rate (a contractionary monetary policy).
The most important understanding for this element is that decisions by the FOMC affect interest rates across the economy, and those interest rates affect decisions by consumers and investors (or businesses). Important interest rates, such as the Wall Street Journal Prime Rate (labeled Bank Prime Loan Rate in graph below), are tied directly to the announced Federal Funds Rate target. A variety of adjustable-rate credit cards, home-equity loans, and other loans are tied directly to the prime rate. Other long run interest rates, such as mortgage rates, are influenced by monetary policy less directly, but they tend to move with the announced federal funds rate. In the graph of the federal funds rate below, periods of recession are marked with vertical gray bars. In those periods, the Federal Reserve targets a lower federal funds rate. This policy action is designed to stimulate the economy and reduce unemployment.

This graph was created on FRED, a resource from the Federal Reserve Bank of St. Louis. A current graph, or one with a different time range can be accessed at https://fred.stlouisfed.org/graph/?g=S21Y. Federal Funds Rate Only: https://fred.stlouisfed.org/series/DFF#.
Impact on other interest rates: https://fred.stlouisfed.org/graph/?g=S2L2.

Resources:
This new standard does not require the student to understand or name the tools of monetary policy. If the teacher is interested in additional information about current policy tools, the St. Louis Fed has developed a micro-credential program about monetary policy. It is available at no cost at https://www.stlouisfed.org/education/digital-badges/educators-guide-monetary-policy.

A more in-depth article about the new monetary policy framework--ample reserves--can be from the St. Louis Fed. It would be useful for the AP Macro course. PageOne Economics: The Fed’s New Monetary Policy Tools https://www.stlouisfed.org/education/page-one-economics-classroom-edition/feds-new-monetary-policy-tools

**SSEMA3 Analyze how the government uses fiscal policy and its effects on national debt.**

The term fiscal policy refers to legislation or policies at all levels of governments (federal, state and local) that relate to expenditures and taxation. By changing the amount of taxes people pay or the amount of spending by the government, fiscal policy influences economic activity. Throughout most of the 20th century and into the 21st century, the United States federal government has operated at a deficit, where government expenditures have exceeded government revenues. Each year that the federal government runs a deficit, it adds to the national debt. When the government runs a surplus, where government revenues exceed government expenditure, it can reduce the national debt.

**SSEMA3 Analyze how the government uses fiscal policy and its effects on national debt.**

a. Explain the effect on the economy of the government’s taxing and spending decisions in promoting price stability, full employment, and economic growth.

Since the Great Depression in the 1930's, many individuals and businesses expect the government to provide the foundation for a healthy economy and take policy action to stabilize the economy in difficult times. In the United States, the government can use fiscal policy to promote price stability during times of inflation and full employment during times of contraction. The fiscal policy tools available to the government are changes in government spending and changes in taxes.

During a time of inflation (or increasing overall price level), the government may decide to pursue contractionary fiscal policy to curtail economic activity and curb inflation. The fiscal policy tools used to combat inflation include lowering government spending or increasing taxes. By reducing government spending, fewer firms and workers are earning money from government contracts and jobs. In addition, higher taxes reduce the discretionary income of consumers and disincentive business investment. As spending falls and puts downward pressure on prices, inflationary pressure is relieved. Contractionary fiscal policy is rarely implemented by policymakers because it is politically very difficult. Higher taxes and reduced spending are likely to be opposed by some groups of voters who will be negatively impacted by the policy. Election cycles are not usually times when politicians promote contractionary policy.

When the government wishes to promote full employment and economic growth at a time when the economy is in a period of recession, it can use fiscal policy tools designed to increase consumption and investment spending in the economy. By lowering taxes, the government allows people to keep...
more of their income for spending on goods and services. By increasing government spending, more firms and workers can earn money from government contracts and jobs. Households spend some of this additional income on goods and services, increasing other economic activity. Increased economic activity tends to lower the unemployment rate, even though it tends to put upward pressure on prices. This is often politically popular for politicians of both parties. In fact, sometimes expansionary fiscal policies are created during times of economic expansion and could increase inflationary pressures.

It is important for students to recognize the difference between fiscal and monetary policy. Fiscal policy involves policies related to taxes and government spending. Monetary policy involves the availability and cost of money and credit and interest rates. The political independence of the Federal Reserve allows it to pursue contractionary monetary policy when the fiscal policymakers are less willing. See **SSEMA2c** for information about monetary policy.

Both fiscal and monetary policy operates with a lag. Economic conditions develop slowly and the measurement of economic indicators takes time. Most economic data is released monthly or quarterly, and that data is subject to revision. Policymakers must wait for these measures to be available before they can decide on a policy and even then, they may disagree on whether to change government spending and transfer payments or taxes.

It is **not required** in this course to teach the aggregate supply and demand model. It is here as a possible extension and content connection. In general, the model is something that economics teachers should have a basic understanding of. The following graphs are useful to connect back to the business cycle. The vertical line down the middle is the Long-Run Aggregate Supply which marks the potential real GDP for the economy at full employment (QF= 3.5-4.5% unemployment). If the economy is to the left of the vertical line, it is underproducing (either in a contraction or recession) and has higher unemployment. If this is the case, expansionary fiscal or monetary policy could be used to attempt to return the economy to full employment at the long-run potential output level. If
the economy is to the right of the vertical line, it is producing at an unsustainable level (a “bubble”) with high inflation during an expansion or at a peak in the business cycle. Contractionary fiscal or monetary policy could be used to attempt to return the economy to a stable level of inflation at the full employment output.

SSEMA3 Analyze how the government uses fiscal policy and its effects on national debt.
b. Explain how government budget deficits or surpluses impact national debt.

All budgets include sources of income and a list of expenses. Income for a government primarily comes from taxes, but can also include some fees. Expenses include public goods and services provided by the government, transfer payments to individuals, interest payments on debt, and other spending categories.

The total amount of income the government receives minus the total amount of expenses it pays determines whether a government runs a surplus or a deficit. A surplus exists when the amount of revenue received exceeds the amount of governmental expenses. A deficit exists when the amount of revenue received is less than the amount of government expenses. Governments running a deficit must borrow funds by selling bonds. Anyone who owns a government bond is a lender to the government and is paid interest by the government for the use of their money. U.S. Treasury securities are held by individuals, businesses, banks, and foreign governments.
Federal Reserve Bank of Atlanta infographic – Taxes-Economics
To download the infographic, order copies of the poster, and preview related activities, visit: 
Current information about the U.S. government’s revenue and expenditures, as well as the resulting deficits can be found on the Treasury’s department DataLab site: 
https://datalab.usaspending.gov/americas-finance-guide/

The government debt is the sum of all government deficits minus the sum of all government surpluses. Each year, any deficit in the federal government’s budget adds to the country’s national debt. If a government runs a surplus in its budget, it can pay down its debt with the surplus funds to reduce the national debt.

Source: https://fiscaldata.treasury.gov/national-debt/

Discussing deficits and debt with students will inevitably lead to discussions about whether we “should” be borrowing so much each year, and “How much debt is too much?” and “Will we ever pay
“it all back?” While it is not required by the standard, this is an opportunity for informed class discussion (debates, seminars) or enrichment research assignments trying to answer one of these big questions. These questions are debated by economists and there are varying opinions on the sustainability of the federal debt. Most economists believe that there is not a specific level of sustainable debt, but they examine the ratio of the total debt to the GDP of the nation. The debt to GDP ratio in the US in 2021 was 124% (see the graph below). Some economists are worried about the impact of the interest payments on the debt as they become a larger portion of the budget and create opportunity costs as other programs must be cut to afford it.

This graph was created on FRED, a resource from the Federal Reserve Bank of St. Louis. A current graph, or one with a different time range can be accessed at [Fred St. Louis Fed](https://fred.stlouisfed.org).

Resources and articles to find differing viewpoints:
*The VOTE Textbook* has outlined modern conservative, liberal, and democratic socialist viewpoints on most of the highly debated topics in economics including the National Debt:
[http://www.thevotetextbook.org/chapter18/](http://www.thevotetextbook.org/chapter18/)

St. Louis Fed: PageOne Economics – *Making Sense of the National Debt*


**Fiscal Policy Formulas**

<p>| National Budget | Tax revenue - government expenditures |</p>
<table>
<thead>
<tr>
<th><strong>Budget Deficit</strong></th>
<th>Tax revenue &lt; government expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Budget Surplus</strong></td>
<td>Tax revenue &gt; government expenditures</td>
</tr>
<tr>
<td><strong>National Debt</strong></td>
<td>The sum of all budget deficits (-) and surpluses (+) over all time plus interest paid on borrowed money.</td>
</tr>
</tbody>
</table>

**Resources:**
The U.S. Treasury Department has a website with historical and current data on debt, spending, and savings bonds. [https://fiscaldata.treasury.gov/](https://fiscaldata.treasury.gov/)

The Congressional Budget Office at [https://www.cbo.gov/](https://www.cbo.gov/) has information about current and future debt levels for the United States.

Two online fiscal policy simulations/games are very engaging and emphasize the competing goals of policymakers who attempt to balance the federal budget.
The Federal Budget Challenge, [https://www.federalbudgetchallenge.org/pages/overview](https://www.federalbudgetchallenge.org/pages/overview)
The Fiscal Ship, [https://fiscalship.org/](https://fiscalship.org/)

In addition, several online tools with real-time data illustrate current federal and state debt levels. Search for a “debt clock” and you will find various options.
SSEPF1 Analyze major life decisions using economics-based decision-making skills.

A central theme in this course is rational decision-making. The idea of rational decision-making is at the heart of economics. Many of the models taught in this course assume a rational person or firm is making a choice. While that is a fundamental assumption in the discipline of economics, students in this course will be exposed to alternatives and considerations about many personal finance decisions.

SSEPF1 Analyze major life decisions using economics-based decision-making skills.

a. Apply a rational decision-making model to evaluate the costs and benefits of post-high school life choices (i.e., college, technical school, military enlistment, workforce participation, or other option).

This standard exists for the purpose of getting students to honestly and thoroughly consider options after high school. Many students feel they are “expected” to go to college after high school. They may feel this way due to home, peer, societal, or career choice pressures. The graphic below shows that more and more people enrolled in college immediately after high school, even beyond the graph through 2022.

![Graph showing college enrollment rates of 18- to 24-year-olds increased from 26% to 41% over the past 3 decades.]

While furthering their education in a traditional way makes a lot of sense for many students, the reality is it is not the best course of action for everyone. There is a strong correlation between increased education and increased lifetime earnings. This element is by no means designed to convince students to go to college or not to go to college. Students should critically weigh these options and discuss the positives and negatives and, ultimately, make a choice. The elements that follow are presented to give students tools to make the best lifelong decisions for them.

Before getting to the elements, understand that students may present options not listed in the standard (hence the “other options” component). These may include internships or religious responsibilities or any number of things that are unique to each student. Allow for this flexibility as
students work through the elements of this standard. In terms of a true evaluation, the maximum benefit and greatest potential for future learning will occur if students are able to relate in a strong way.

The rational decision-making model is essentially a cost-benefit analysis, but with a bit more depth. The model basically has 3 components: alternatives, criteria, and a rating system. When placed on a chart, the rational decision-making model can look like the example below:

<table>
<thead>
<tr>
<th>Name:_____________</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alternatives for (insert problem/decision)</strong></td>
<td>Criteria 1</td>
</tr>
<tr>
<td>Alternative 1</td>
<td></td>
</tr>
<tr>
<td>Alternative 2</td>
<td></td>
</tr>
<tr>
<td>Alternative 3</td>
<td></td>
</tr>
</tbody>
</table>

Alternatives are the various options a person has for a given problem or situation. In this case, the standard clearly lays out the alternatives and a sample chart can be seen below. When teaching this to students, make the case that the alternatives need to be honest, legitimate options that could actually happen. For example, a student can’t say that after high school, they plan to immediately join the Atlanta Falcons and play professional football. Even if they are a fantastic player, NFL rules prevent that from happening currently so that is not a viable alternative. The rational decision-making model works best when students narrow down their alternatives to three or four things they are actually considering, but may not have worked out all the details yet.

The criteria are the things the students will use to distinguish their alternatives. In the model, these should be the critical things that are important to an individual regarding the problem. There are no universally accepted criteria. These can and should be unique to the individual. The two examples below demonstrate this concept. Notice how both of the students have college listed as one of their alternatives. Their criteria for what they want after high school is completely different and leads to two very different choices.

Finally, a rating system is needed to distinguish the “best” alternative. The three common rating systems used with the Rational Decision-Making Model are:
- Yes/no/maybe: If the alternative achieves the criteria, place a yes in the box. If it does not, write no. If not sure or if it’s complicated, answer maybe. The alternative with the most YES answers is the one the student should choose. A +/-? system works the same way.
- Rating system: Rate each alternative on a scale from zero to two. A two is most beneficial (or best answers the question), a zero is least beneficial and a 1 is neutral. The alternative with the highest score wins.
- Ranking system: Rank each alternative against each other. For example, if students are looking at college and the criteria is price, then the most expensive might get a zero, the second most gets a one, and the cheapest gets a two. The alternative with the highest score is the one the student should choose.

Two example students are provided below. Please note these are samples and the alternatives and criteria provided are not the only options. Similarly, two different students may answer these questions differently.

<table>
<thead>
<tr>
<th>Name: Student A</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternatives for after high school</td>
<td>Will this further my education?</td>
</tr>
<tr>
<td>Go to college</td>
<td>yes</td>
</tr>
<tr>
<td>Work a full-time job</td>
<td>maybe</td>
</tr>
<tr>
<td>Take a gap year with no specific plan</td>
<td>no</td>
</tr>
</tbody>
</table>

Decision: Go to college.
### Alternatives for after high school

<table>
<thead>
<tr>
<th>Alternatives for after high school</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will this help me get an industry-accepted certificate for work?</td>
<td>Will this be affordable without loans?</td>
</tr>
<tr>
<td>Go to traditional college</td>
<td>no</td>
</tr>
<tr>
<td>Join Military</td>
<td>maybe</td>
</tr>
<tr>
<td>Go to specialized tech school</td>
<td>yes</td>
</tr>
</tbody>
</table>

#### Decision:
Go to specialized tech school.

What if there is a tie? Sometimes, the way a student chooses criteria and answers the questions they will end up with the same number of “yes” answers for two different alternatives. There are two options in this case. The first is to add a criterion. The second is to weigh the criteria. It may be the case that, while all the criteria are important, one may be slightly more important than the others and that criteria should be weighted 1.5x or 2x, etc.

Opportunity Occupations in Georgia
The Atlanta Fed has identified opportunity occupations for states across the southeast like the infographic above. You can order these posters for free, www.atlantafed.org/education/teach/infographic-posters/opportunity-occupations/Georgia.pdf

Resources:

The Dallas Fed’s Navigate Resource for research on post-secondary options: www.dallasfed.org/educate/navigate
**SSEPF1 Analyze major life decisions using economics-based decision-making skills.**

b. Evaluate costs and benefits of various ways to pay for post-high school life including scholarships, the HOPE scholarship, employment, work-study programs, loans, grants, savings, prior investments, and other options.

At the heart of this element are the growing concerns over the skyrocketing number and dollar amount of student loans being issued in the United States. For more about the specific costs of college, the Dallas Fed’s Navigate materials have a lesson on the true costs of college and can be found here (click on Unit 4): [https://www.dallasfed.org/educate/navigate](https://www.dallasfed.org/educate/navigate)

Students should be presented with opportunities to make value judgments about the different payment options. In terms of which costs and benefits you should teach, remember that, as with most elements in this course, the specifics are not as important as the bigger idea. Students should understand that some of these payment types have some upfront costs in terms of dollars and time (scholarship applications, saving money instead of spending) whereas other types have little upfront costs, but larger long-term costs (loans with interest, work-study programs that require a time commitment after graduation for example).

If students plan to take out loans, it is important that they consider whether the income they will make from the career they have chosen will be enough to pay for typical expenses AND make the monthly student loan payments that they have to start paying back typically six months after they graduate. Students will need to calculate the cost of college for the program/school they want to attend and then plug it into a payment calculator like this one: [https://www.bankrate.com/loans/student-loans/student-loan-calculator/](https://www.bankrate.com/loans/student-loans/student-loan-calculator/). Next, they will need to compare that monthly payment to the typical monthly starting salary after taxes for someone with this degree/career to make sure the amount is affordable. They can use [https://www.bls.gov/ooh/](https://www.bls.gov/ooh/) to search for their career and find the starting salary (lower 10%) under the “Pay” tab. Then, they need to calculate their taxes to find their disposable income after federal, state, local, and FICA taxes, and then divide by twelve to find the monthly amount. Here is a Federal Tax calculator students can use to get an estimate: [https://www.nerdwallet.com/taxes/tax-calculator](https://www.nerdwallet.com/taxes/tax-calculator). The student loan payment amount should typically be less than 1/3 or (1/4) of their monthly disposable income to be considered affordable.

Whatever costs or benefits you discuss with students, tie the element back to the standard by discussing which payment options make the most sense for various post-high school choices.

Teacher Note: Consider bringing in a school counselor to give students (and yourself) a resource to ask post-graduation questions.

Resources:


Information for the HOPE Scholarship and Zell Miller programs can be found on the GAFutures website. Students can check their “HOPE GPA” and more on the site, [www.gafutures.org/hope-state-aid-programs/](https://www.gafutures.org/hope-state-aid-programs/)
CollegeBoard has a search engine for over 6,000 scholarships, https://www.scholarships.com/; bigfuture.collegeboard.org/pay-for-college/scholarship-search

The Dallas Fed's Navigate shares materials on choices related to post-high school life, https://www.dallasfed.org/educate/navigate

**SSEP F1 Analyze major life decisions using economics-based decision-making skills.**

c. Identify necessary documents needed to complete forms like the FAFSA or scholarship applications.

This is a great opportunity to expose students to the FAFSA form. Students should not fill in a FAFSA form with their real information. The sample form found in the resources below also includes paragraphs for what to put in each section. According to the office for Federal Student Aid, the following documents are needed to fill out and file a FAFSA.

- Your Social Security Number
- Your Alien Registration Number (if you are not a U.S. citizen)
- Your federal income tax returns, W-2s, and other records of money earned. (Note: You may be able to transfer your federal tax return information into your FAFSA using the IRS Data Retrieval Tool.)
- Bank statements and records of investments (if applicable)
- Records of untaxed income (if applicable)
- An FSA ID to sign electronically

This document from the Georgia Student Finance Commission is directly correlated to this standard and provides a ready-made checklist for students and or teachers.

Teacher Note: To extend the activity, consider having students fill out the form for a fictitious person. What may also be useful (although this goes beyond the element) is to look at what a letter from the university may look like after the FAFSA has been completed. A sample below shows the different types of grants, loans, and scholarships a person may be eligible for. This would be an effective tie-back to this element.
For scholarships, students may need their school transcript or other documentation of completion of the requirements to apply for the specific scholarship. For a needs-based scholarship, they may need many of the items listed for the FAFSA to prove their income.

Resources:
Georgia Student Finance Commission Georgia Futures Page: https://www.gafutures.org/federal-aid-scholarships/fafsa/getting-started/


FAFSA page from the Office of the U.S. Department of Education https://studentaid.gov/help/info-needed
**SSEPF1 Analyze major life decisions using economics-based decision-making skills.**

d. Apply a rational decision-making model to evaluate other major life choices like employment opportunities, renting a home vs. buying, selecting a mortgage, and buying a car.

Students can use the same model as **SSEPF1a** to evaluate a plethora of choices. Each of the life choices listed in this standard can fit in the model with different criteria. The criteria would vary depending on the individual’s preferences and priorities.

When comparing employment opportunities, a person might want to consider the pay, stability, upward mobility, expectations of the job, benefits, work-life balance/family friendliness, flexible work hours, vacations, their potential commute, their potential coworkers/boss, ability to work virtually, etc.

When trying to decide whether they should rent or own, they should consider how much time they plan on staying in their next home, current interest rates, home prices, rent prices, the qualifications needed for a loan versus approval for a lease, etc. If they aren’t going to stay in the home for an extended period, there could be an argument for renting. When you rent, if the fridge breaks or the sink starts leaking, it is not your responsibility to pay to fix it - it is your landlord’s responsibility. You also don’t have to worry about property taxes. If you own, you would be responsible for these things, but there are other upsides. If you own, you have the ability to change whatever you want in the home without asking for permission to paint a different color. The biggest advantage of owning is that you get to recoup most of your investment when you sell the house, and hopefully make money on the equity built by housing prices increasing since you moved in, but that is not a guarantee. Owning a home can help you build wealth over the course of your life in this way.

If a person decides that it is in their best interest to purchase a home instead of renting, they should select their mortgage carefully. They will want to look into what loan amount they can qualify for versus what mortgage they can afford. The typical rule of thumb is to choose a home where the monthly payment on a mortgage is less than ⅓ of their total monthly income (including the items that are in their escrow payment like property taxes and home insurance). Oftentimes, people will be approved for a much larger loan than they can reasonably afford, so it is important to do your own calculations. Next, they need to decide whether they should choose a fixed or variable interest rate. In general, it is usually preferable to find a fixed-rate mortgage, especially when interest rates are low. However, there are some situations when a variable rate might be preferable. If the variable rate were below the fixed rate and you knew you were going to move again before the timeframe for the rate change, this could be the logical choice. If interest rates and inflation are both quite high and you expect them to come down in the next couple of years, it can make sense to get a variable rate that will be adjusted down with inflation. Another thing to consider with mortgages is which company or bank to work with based on their service, responsiveness, and fee structure.

When buying a car, students should consider how many seats they need based on their family structure (or family plan), the safety features, reliability, cost of repairs and access to parts, the
warranty, cargo space, style (make and model), and any other features that are important to them. If it is a used car, they should also consider its driving history, mileage, and condition. When deciding where to purchase a car, they should consider dealership offers, how much of a down payment would be required, the financing options offered, interest rates on the auto loan, and the reviews or trustworthiness of the dealership or broker.

Resources:
Bankrate has a great resource to walk someone through finding out how much they can afford for a mortgage. Please note this is not a required to meet the needs of the standard but helpful information to support teacher background, www.bankrate.com/mortgages/mortgage-calculator/#how-mortgage-calculator-help

Bankrate also has a simple payment calculator that can be used to find the base of the monthly payment for a fixed rate mortgage (not including taxes and home insurance premiums) www.bankrate.com/loans/simple-loan-payment-calculator/

Calculating an estimated monthly payment for an auto loan, www.calculator.net/auto-loan-calculator.html

**SSEPFI Analyze major life decisions using economics-based decision-making skills.**

**e. Describe how individual financial decisions can help create generational wealth.**

The primary focus of this element is the “individual financial decisions” component. The element is presented after multiple examples of decision-making in a variety of important life decisions. The main idea is that if creating generational wealth is a goal for someone (and it’s not for everyone) then that person needs to make individual decisions that put them on the path to create that wealth. For a high schooler, this can be as simple as saving very small amounts of money and possibly investing that money in mutual funds and exchange traded funds through the plethora of low-cost/free apps available.

Generational wealth refers to assets that are passed down from one generation to the next. This often looks like property or investments, but it can also refer to businesses, family farms, or collectible items. Wealth-building practices can begin at a young age and there are different avenues that can be taken towards building wealth. Financial planning, financial literacy, and investing are all excellent ways to begin building wealth. Individual financial decisions like creating and sticking to a budget, budgeting for future goals and investments, identifying costs, and making necessary trade-offs can help create generational wealth.

Pedagogy-wise, this element is probably best handled through a simple class discussion starting with asking the class what they think generational wealth means. After hearing their thoughts and describing it based on the preceding paragraph, discuss some of the ways people can achieve it while acknowledging that it is not easy nor is it a simple matter of just following a few steps to guarantee success. In some ways, this element provides a nice transition to many of the other topics in the personal finance section that help put people on the path to long term financial health.
SSEPF2 Analyze income as a scarce resource that can be allocated effectively through budgeting.

*Scarcity is a basic economic condition that exists when limited resources must be used to meet unlimited wants and needs. This, of course, is the fundamental problem in all of economics and applies to income the same way it applies to the factors of production or most goods and services. When teaching this element to students, the word “analyze” should be taken to mean that students need to be given opportunities to answer “why” questions about income and its relative scarcity. For example, why is income scarce to begin with? Well, most people, don’t have enough at any given time to get everything they want. Therefore, choices have to be made about what to do with income. The word “allocated” in the element refers to the practice of distributing income among several competing options. You may want to discuss with students other ways they allocate income in their own lives but return to the broader concept that income must be allocated because it is limited (especially short term) and our wants and needs are unlimited. As an option for introducing the concept of scarce income, the picture below shows various countries of the world and what percentage live with “high incomes,” defined here as living on $50 or more a day. Note that even in the United States, only 56% of the population is living on that amount. For most countries around the world, income is extremely scarce and managing that income is important to a person’s livelihood.*

![World Population by Income](https://www.pewresearch.org/global/interactives/global-population-by-income/)

Source: Visit the site to manipulate the graph above to see other income categories. “High income” is considered more than $50 per day. [https://www.pewresearch.org/global/interactives/global-population-by-income/](https://www.pewresearch.org/global/interactives/global-population-by-income/)
**SSEPF2 Analyze major life decisions using economics-based decision-making skills.**

a. Compare different types of income including hourly wages, salary, tips, independent contractor services (Form 1099), dividends, and capital gains.

In order to effectively compare (and contrast) these types of income, you will need a set of criteria. A suggested set of criteria is presented in the table below including how the income is earned, frequency of receiving income, and potential for increases/decreases. After comparing these types, a suggested activity would be to present a list of jobs and activities to students and have them decide the best way to pay someone to complete those activities.

<table>
<thead>
<tr>
<th>Income Type</th>
<th>How earned?</th>
<th>Frequency</th>
<th>Potential for increases/decreases</th>
</tr>
</thead>
</table>
| **Hourly wages** | • Guaranteed pay for every hour worked  
• Agreed to by employer/employee | • Varies, but typical hourly jobs pay every week or every two weeks  
• Some hourly jobs pay in cash at the time of the job | • Usually hourly wages are somewhat tied to minimum wage so when that increases, hourly wages may rise  
• Most jobs that pay hourly wages have starting salaries with potential for increases after performance reviews  
• Hourly wage earners are “nonexempt” according to the Federal Labor Commission, which means there is potential for overtime pay |
| **Salary** | • Guaranteed pay for a job  
• Agreed to by employer/employee  
• Not tied to a specific set of hours worked | • Most salaried jobs pay every two weeks or once every month  
• Some salaried jobs also include bonuses received at selected times of the year | • Salaries are often negotiated so any pay raises usually come as a result of a promotion or the employee asking for a raise  
• Salaried employees are “exempt” and do not get overtime pay |
<table>
<thead>
<tr>
<th>Tips</th>
<th>Independent Contractor (1099)</th>
<th>Dividends</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “Extra” money given as a reward for good service or as a customary show of gratitude&lt;br&gt;• Tips are usually optional and solely at the discretion of the customer</td>
<td>• Income agreed to (via legal contract usually) by a consumer and producer for a specific set of services&lt;br&gt;• This differs salary because the producer is usually not an “employee” of the consumer</td>
<td>• Income earned by holding shares of stock in a company that pays shareholders when profits are earned&lt;br&gt;• Companies that pay them usually have a set schedule with exact dates&lt;br&gt;• Typically, dividend payments are</td>
</tr>
</tbody>
</table>
done every three months (quarterly)
fall. Dividend payments can rise when the company is performing better.

<table>
<thead>
<tr>
<th>Capital Gains</th>
<th>• Income earned when an investment (stock, house, antique, etc) is sold for MORE than it was purchased for</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Typically a one-time transaction that only occurs when the investment is sold</td>
</tr>
<tr>
<td></td>
<td>• No timeline, investments are typically held until the owner needs income or the market for the investment is ripe for selling</td>
</tr>
<tr>
<td></td>
<td>• Some investments are riskier than others</td>
</tr>
<tr>
<td></td>
<td>• Stocks can change value daily while real estate is slower to change, but may be tougher to sell</td>
</tr>
<tr>
<td></td>
<td>• Some investments never increase in value and can make the owner lose money</td>
</tr>
</tbody>
</table>

Note: The chart above is only a suggestion. You can also compare the types of income in broader terms using benefits/drawbacks of how taxes affect the different types. Whichever you choose, remember to return to an analysis of the types to meet the needs of the standard.

Resources:
Learn more about Form 1099, www.irs.gov/uac/about-form-1099misc
Learn more about capital gains, www.investopedia.com/terms/c/capitalgain.asp
Learn more about dividends, www.investopedia.com/terms/d/dividend.asp

SSEPF2 Analyze major life decisions using economics-based decision-making skills.
b. Review and complete a sample federal individual income tax form 1040.

For many high school students, the first form they will ever experience will be 1040. The link to download the 1040 form from the IRS can be found at, www.irs.gov/pub/irs-pdf/f1040.pdf, and the link to get the line-by-line instructions can be found here, www.irs.gov/instructions/i1040gi

The element requires students to review and complete a sample form. To review the form a variety of strategies would work, but one suggestion would be to break the class into 7 groups and have each group read the section of instructions for two of the lines of form 1040 and then report back to the class a quick summary of the lines. To complete the sample form you will obviously need data. To avoid using real student data, create sample scenarios like the one below (or have students do this for homework).

Jill S. is a 20-year-old college student who, in the previous year, made $11,450 in wages, tips, and salary. She paid $299 in federal taxes. Jill has a savings account that earned her $45 in interest this year. She received no unemployment benefits. Jill’s parents claim her as a dependent and she was covered by their health insurance.
Tips for writing the scenarios:

- Keep it simple! This is for practice and initial exposure, not to grant CPA degrees.
- Make varying amounts of income and taxes so students see the impact taxes can have on income.
- You can use the tool from NerdWallet to create scenarios that have accurate tax amounts: [https://www.nerdwallet.com/taxes/tax-calculator](https://www.nerdwallet.com/taxes/tax-calculator). Or consider letting students manipulate the tax calculator themselves for multiple income amounts.
- You can also give students careers to look up a salary on the BLS's Occupational Outlook Handbook ([https://www.bls.gov/ooh/](https://www.bls.gov/ooh/)) and then calculate the taxes with the tax calculator above to find their disposable income.
- Consider letting students choose the careers to look up based on their own interests.

Teacher Note: Consider reaching out to a local CPA that might volunteer to answer some questions for your students.

SSEPF2 Analyze major life decisions using economics-based decision-making skills.

c. Describe the basic components of a paystub including gross pay, net pay, and common deductions (i.e. federal and state income tax, Federal Insurance Contributions Act (FICA which includes Social Security and Medicare), and elective deductions like 401K, insurance and tax-deferred savings).

Deductions from a paycheck may not technically affect a person’s “income” but it has a major impact on tax liabilities and take-home pay which is what many people are concerned about when it comes to income. A teacher’s paycheck is interesting because teachers typically have things like teacher retirement, social security, insurance, professional organization dues, and possibly 403b contributions on our pay stub. If you are not willing to share your own pay stub, however, a simple web search for “sample pay stubs” will provide samples like this one:

<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>EARNINGS STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Company Name, Sample Company Address, 95220</td>
<td></td>
</tr>
<tr>
<td>EMPLOYEE NAME</td>
<td>SOCIAL SEC. ID</td>
</tr>
<tr>
<td>Sample Name</td>
<td>XXX-XX-3412</td>
</tr>
<tr>
<td>INCOME</td>
<td>HOURS</td>
</tr>
<tr>
<td>GROSS WAGES</td>
<td>50</td>
</tr>
<tr>
<td>YTD GROSS</td>
<td>YTD DEDUCTIONS</td>
</tr>
<tr>
<td>112,500.00</td>
<td>43,163.51</td>
</tr>
</tbody>
</table>

Common components of a paystub are

- Gross pay – the total amount of income provided by the employer for the time period
• Net pay – the amount of money left after all deductions are taken out, also known as “take-home” pay or disposable income.
• Federal income tax (FED TAX) – the amount of money given to the IRS for this pay period
• State income tax – the amount of money given to the state government for this pay period
• FICA (Social Security or Medicare) – money given to the federal government specifically for these programs
• Elective deductions – money taken out of a paycheck by the employee for the purpose of reducing taxable income (like a contribution to a 401K, 529 plan, 403B, etc.), meeting insurance premiums, or for convenience (like a monthly contribution to a charity, savings account, or dues payment).

While the element doesn’t require comparing multiple paycheck stubs, it may be helpful to expose students to a variety of layouts and deduction types they may experience as they begin to gain employment.


Resources:
The St. Louis Federal Reserve’s “W is for Wages” lesson,
SSEPF2 Analyze income as a scarce resource that can be allocated effectively through budgeting.

| d. Analyze the basic components of a personal budget including income, expenses (fixed and variable), and the importance of short-term and long-term savings. |

A basic budget should, at the very least, include income, expenses, and savings. Because the element requires students to analyze, students must be given opportunities to break down each part of a budget. The table below gives some examples of various expenses you may wish to discuss with students.
### Sample Types of Expenses

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed</strong></td>
<td>remain the same over an extended period of time</td>
<td>rent, certain bill payments, membership dues or fees</td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td>change frequently – either month to month or week to week</td>
<td>groceries, some utilities, gas for car</td>
</tr>
<tr>
<td><strong>Planned</strong></td>
<td>purposeful, deliberate expenses that are tied to a certain event, date, or good/service</td>
<td>planned vacation, holiday gifts, facility rental, scheduled doctor’s visit</td>
</tr>
<tr>
<td><strong>Unplanned</strong></td>
<td>unexpected events or last minute changes that require more (or less) money than planned</td>
<td>medical emergencies, flight changes, car repairs, late fees, home repairs</td>
</tr>
</tbody>
</table>

### Develop the budget plan

**Follow the Money**

Mapping a budget plan helps you see where you’ve been and takes you where you want to be.

**Income**
- Allowance $100.00
- Financial gifts $50.00
- **Total income** $150.00

**Expenses**
- Savings $25.00

**Fixed Expenses** (same every month)
- School fees $12.00
- Gym membership $15.00
- Cell phone bill $35.00

**Variable Expenses** (may change each month)
- Movies $20.00
- Food $35.00
- **Total expenses** $142.00 for the month
- **Surplus** $8.00

- Pay yourself first “savings”
- Consider your goals
- Cover budget shortfalls
- Know what you owe and when it’s due
- Plan for the unexpected

Source: [www.atlantafed.org/education/teach/infographic-posters/budgeting.aspx](http://www.atlantafed.org/education/teach/infographic-posters/budgeting.aspx)
Finally, in analyzing savings, the goal is to make sure that when budgeting, some income is reserved for future use. The rule of thumb is to save about 10% of disposable income, but each individual should adjust their percentage based on their own goals and situation. Students should save for both the short-term and the long-term for a variety of reasons. In the short term, there are many one-time expenses that are not part of a regular monthly budget, so people have to either save up to pay for expected (planned) expenses or use their emergency fund to pay for unexpected (unplanned) expenses. For the long-term, people save for retirement, children’s education expenses, large purchases like a down payment on a house, or start-up capital for a business venture. It is important that people have both short-term and long-term savings goals and that they routinely allocate a portion of their income for both categories. Most people have separate accounts for short-term and long-term savings to keep them separate and to take advantage of tax benefits for retirement accounts (401k, IRA, 403b) or educational savings accounts (529). Discuss with students that there are a variety of savings options. Consider exposing students to SSEPF3d at this time since it deals with the different savings options.

The activities found in the resources below give students some opportunities to put this new knowledge to work in a couple of different interactive ways.

Resources:

The Dallas Fed’s Building Wealth Online Budget Guide is a comprehensive review of all things budget. There is also a printed version you can order as well, www.dallasfed.org~/media/microsites/cd/wealth/online/ch2.html


**SSEPF2 Analyze income as a scarce resource that can be allocated effectively through budgeting**

e. Explain how to reconcile a checking account, either online or on paper, including how to account for transactions that have not been posted (i.e. checks, weekend debit card transactions, or monthly auto-pay transactions) and how this helps avoid overdraft fees.

Reconciling a checking account involves comparing the records of activity on your bank statement the bank reflects with your own records. You are looking for any differences between the two records, and to update your checking account information to match those reflected by the bank, as well as to spot any errors made by the bank. This helps ensure that your checking account balance is correct.

The sample below is a creative commons sample check register. This would be a good example to have students practice with because it shows what happens when an account is not balanced and gets overdrawn.
Overdraft fees are assessed by a banking institution when a person writes a check or uses a debit card and uses more money than is available in the checking account. They are assessed primarily for two reasons. The first is punitive. The bank wishes to discourage the customer from using more money than they have and assesses this fee as a disincentive to do that. The second reason the bank charges this fee is functional. For the bank, an overdraft causes a technical problem as they have to rearrange some of their assets and liabilities to cover the overage. Think of a simple bank with two customers, both of whom deposit $100. The bank is now liable for $200. Customer A goes shopping and racks up a bill for $150. Since he only deposited $100, the bank is now in a strange situation. They could reject the charge, which might upset the customer or they could go ahead and pay the $150 to the store. Where does the extra $50 come from? Well, possibly from customer B, assuming he doesn’t need it. Possibly from some other investment the bank made or maybe extra profits sitting around. No matter where it comes from, the bank is using money that could be used for some other purpose and the bank wants to be covered for that opportunity cost. Thus, they charge an overdraft fee. The amount they can charge is not currently regulated. Many banks now offer overdraft protection where the customer can pay a small amount every month and the bank won’t charge them a large fee later if they overdraw.

Note: It is not the intention of this element to have students bring in personal or a family member’s real bank account statements. Discourage students from sharing that information and focus on the process. You also have the option to focus on a traditional checkbook (paper) or using online access to checking accounts. Understand, however, that some students may not have access to online checking accounts or not have checking accounts at all.

**SSEPF2** Analyze income as a scarce resource that can be allocated effectively through budgeting.

f. Describe how to determine a person’s net worth.

The concepts of assets and liabilities are key to describing net worth. **Assets** would include the value of anything owned while **liabilities** would include anything that is owed to someone else (debts). Budgeting is great for the here and now – for your monthly income and expenses – but what about the long term? A person’s **net worth** is simply their assets minus their liabilities. When students hear those “world’s richest person” numbers, they are often hearing net-worth numbers.

Resource: The Inventory Game—Net Worth and Cash Flow

**SSEPF3** Explain how the financial system channels funds from savers to investors.

*Banks and other financial institutions are businesses. Like other businesses, banks must be profitable to operate. While banks collect revenue from a variety of activities, their traditional source of revenue comes from their role as financial intermediaries. This means taking the deposits from one group of customers and loaning a portion of deposits to other customers. Many of these loans are made to investors. In this standard, investors are not meant to mean people who put money in the stock market, but rather those who invest in capital: tools, equipment, machinery, factories, business innovation, or new business ventures. These investors borrow money from banks in order to pay for this new capital. Banks make revenue by charging borrowers a higher rate of interest than they are paying to depositors. This is called the “spread”. By charging interest on the loans, banks make money. The more money on deposit, the more loans they can make, which is why some banks offer very generous checking account services. The interest on the loans is always more than the interest paid out to depositors. If banks did not have this “spread” between interest earned and interest charged, they would go out of business very quickly.

As provisions of the Glass-Steagall Act have eroded, commercial banks have increasingly added very lucrative investment banking services to the traditional role of taking deposits and making loans. Banks also earn interest on reserves they deposit with the Federal Reserve.*

Resource:

Infographic: Where Do You Bank? - Katrina’s Classroom,
[https://www.atlantafed.org/education/teach/infographic-posters/banking.aspx](https://www.atlantafed.org/education/teach/infographic-posters/banking.aspx)
SSEPF3 Explain how the financial system channels funds from savers to investors.

a. Explain the roles/functions of money as a medium of exchange, store of value, and unit of account/standard of value.

Throughout history, money has taken many forms. In most economies today, we use a type of money called fiat money. Fiat money is the official money issued by the government of a country. In most cases today, a country’s money works because of trust in the good faith and credit of the country’s government. As long as people are willing to accept a country’s money as a method of payment, the money functions effectively. Maintaining confidence in the U.S. monetary system is an important role of the Federal Reserve. For money to have value, people must believe it has value and it must serve the following three functions: medium of exchange, store of value, and unit of account (standard of value).

Money used as a medium of exchange facilitates transactions between individuals, businesses, financial institutions, and governments in an economy. When a household wants to purchase groceries, it will use the money to facilitate the transaction. The household could use cash, write a check, or swipe a debit card linked to a checking account. All of these methods of payment involve using money as a medium of exchange. The money payment people earn is income. Many people today receive this money payment through direct deposit into a checking account.

After receiving their money payment, most people will designate some of the money for spending and some of the money for saving. When people hold money as savings for purchases sometime in the future, money functions as a store of value. People avoid holding savings if they fear a loss of purchasing power in the future. The belief that money saved today will purchase a similar amount of goods and services in the future is the function store of value.

Money also functions as a guide. In the United States, the dollar is our unit of currency. When we look at our bank account balance or shop for goods and services, we see an amount expressed in dollars. This allows us to compare prices and determine whether we have enough in our account to make a particular purchase. This function of money is the unit of account (or standard of value).

Information in this element also aligns with SSEMA2c.

Resources:

SSEPF3 Explain how the financial system channels funds from savers to investors.

b. Compare services offered by different financial institutions, including banks, credit unions, payday lenders, and title pawn lenders.

There are many types of financial institutions and they offer a variety of services. Potential customers must compare services to determine which option fits their needs. The financial institutions detailed in this course include banks, credit unions, payday lenders, and title pawn lenders.

**Bank**—For most consumers, banks provide a safe means to store earnings. Typically, banks also offer direct deposit (where a person’s paycheck goes directly into his or her account), check-writing services, debit and credit cards, loans of all sorts (personal, home equity, business), and a host of other services.

**Credit Union**—Credit unions provide services similar to a bank; the main difference is that a credit union only provides these services to its members. Members own and control the institution. Credit unions often offer higher interest rates on deposits and lower interest rates on loans than banks.

**Payday Loan Company**—Suppose you need $50 on Wednesday but won’t get paid by your job until Friday. To solve this temporary problem, a payday loan company will give out small loans in return for a portion of the upcoming paycheck. This means the person will get $50 on Wednesday, but come Friday, $55 of his or her paycheck will go to the payday loan company. Payday loan companies generally charge much higher interest on loans than other institutions.

**Title Pawn Lender**—Title pawn lenders provide short-term loans to individuals facing a gap between their income and expenses. Usually, those accessing loans through title pawn lenders lack access to other types of short-term loans like credit cards. Title pawn lenders make loans based on an individual’s collateral. Collateral is an item of value one owns like a car. Lenders can sell the collateral to cover the value of an outstanding loan if the borrower cannot repay. Like payday loans, the fees associated with title pawn loans are usually much higher than those a bank would charge. In the case of title pawn loans, the inability to repay the loan could result in the loss of the vehicle put up as collateral (repossession).

Resource:


SSEPF3 Explain how the financial system channels funds from savers to investors.

c. Compare and contrast cash, debit cards, credit cards, prepaid cards and mobile payment apps in terms of how they work, acceptability, and the costs and benefits associated with each.

The chart below incorporates components of both elements and can be used in a variety of ways. Please note that this is not a comprehensive list and is merely presented as a sample. Students will no doubt come up with other characteristics that are equally relevant.
<table>
<thead>
<tr>
<th>Payment Method</th>
<th>How Does It Work?</th>
<th>Acceptability</th>
<th>Costs?</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>payment is made with legal bills and coins in varying amounts</td>
<td>mostly universal, but in some situations sellers may not have cash for change and may only accept cards</td>
<td>no financial costs, in fact, some places like gas stations sometimes give discounts for using cash</td>
<td>nearly universally accepted, familiar to most people, less likely to spend compulsively</td>
<td>can be lost/misplace/stolen easily, limited to what you physically have on you, no consumer protection</td>
</tr>
<tr>
<td>Checks</td>
<td>you sign a piece of paper (check) allowing someone to receive money out of your account at a later date</td>
<td>mostly universal, but some smaller retailers are limiting their use to streamline payments, also some large purchases won’t allow checks</td>
<td>many banks require the consumer to purchase the actual checks (although some offer free checks)</td>
<td>safer to send in the mail, more likely to record the transaction, essentially work like cash</td>
<td>time-consuming, retailers becoming less accepting, many checks now being run immediately (essentially like a debit card)</td>
</tr>
<tr>
<td>Debit Cards</td>
<td>Plastic card with magnetic stripe or chip that allows the seller to verify funds in a bank account and transfer those funds immediately or at a later date, requires a pin number.</td>
<td>Becoming almost universal, small events and local markets may not accept, occasionally hotels and car rentals won’t accept.</td>
<td>Vast majority of debit card use is free although some banks charge a monthly fee or a fee if used over a certain number of transactions.</td>
<td>Very efficient, can be used online or in person, quicker processing than checks, keeps an electronic record for balancing a checkbook, pin number helps keep security, most banks offer fraud protection.</td>
<td>Pin numbers can be forgotten, card number can be stolen through fraud, card expires, machines can be offline or down at stores. <em>If it is stolen, they can drain your checking account and it may take some time to get the money back.</em></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Credit Cards</td>
<td>Plastic card with magnetic stripe or chip that allows seller to verify funds from a loan and transfer those funds immediately or at a later date.</td>
<td>Similar to debit cards except more likely to be accepted (or even required) at some hotels and car rental facilities.</td>
<td>Credit cards can be subject to a variety of fees including annual fees and usage fees, but most importantly credit cards attach interest to purchases not repaid within a grace period.</td>
<td>Banks typically offer high degrees of fraud protection - if it is stolen, it can be shut off before you lose any money, very efficient, online or in person, keeps a record of transactions, may come with a rewards or cashback program, helps start/develop credit score.</td>
<td>Interest added on to purchases, misuse of them can damage credit score, card expires, system may be offline.</td>
</tr>
<tr>
<td><strong>Prepaid Cards</strong></td>
<td>plastic card with magnetic stripe or chip that allows seller to access funds directly from the card which has a set amount of money on it</td>
<td>depends – some prepaid cards are endorsed by Visa or MasterCard and accepted at many stores, others are “gift cards” and may only be accepted at one or a few locations.</td>
<td>some cards have a fee when purchased, some cards begin charging a fee or reducing their value after a certain period of time or charge to reload</td>
<td>the amount of money on the card is pre-determined to prevent overspending, great as gifts, some cards can report activity to credit agencies, safer than cash</td>
<td>may be limited in usage, fees to use in some cases, sometimes can’t be used for partial payments</td>
</tr>
<tr>
<td><strong>Phone Apps</strong></td>
<td>Can be a digital version of a credit/debit card (like ApplePay or SamsungPay) Or some apps can also send money to others directly (Ex. Venmo, Zelle.) Can also be like a prepaid card, but on the phone.</td>
<td>increasing by the year</td>
<td>for most apps none, for some cards similar fees to physical prepaid cards</td>
<td>extremely convenient, tracks purchases for points or store bonuses, special offers, and receipts sent to phone</td>
<td>relies on phone battery and store infrastructure to work, may have fees, not acceptable everywhere</td>
</tr>
</tbody>
</table>
Online Services (PayPal, AmazonPay, VisaPay)

<table>
<thead>
<tr>
<th>Service</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>buyer sends money to the seller using a special online service</td>
<td>limited largely to online purchases</td>
</tr>
<tr>
<td>typically seller pays the fee but this may cause them to raise prices</td>
<td>very safe, especially when dealing with unknown sellers, convenient</td>
</tr>
<tr>
<td>limited to online use, may be tied to your bank account as a backup funding source</td>
<td></td>
</tr>
</tbody>
</table>

Resources:


Prepaid Card Protections and FAQs from the Consumer Protection Bureau: [www.consumerfinance.gov/askcfpb/search/?selected_facets=category_exact:prepaid-cards](http://www.consumerfinance.gov/askcfpb/search/?selected_facets=category_exact:prepaid-cards)

Explanation from Investopedia on how Mastercard (and Visa similarly) make money by processing payments, but they don’t issue credit themselves: [www.investopedia.com/articles/markets/032615/how-mastercard-makes-its-money-ma.asp](http://www.investopedia.com/articles/markets/032615/how-mastercard-makes-its-money-ma.asp)

**SSEPF3 Explain how the financial system channels funds from savers to investors.**

d. Evaluate the risk and return of a variety of savings and investment options, including: savings accounts, certificates of deposit, retirement accounts (i.e. Roth IRA, 401K, 403b), stocks, bonds, 529 accounts, and mutual funds and explain the importance of diversification when investing.

In order to evaluate the risk and return of a variety of savings and investment options, students need to know the basics about each. The chart below is a great place to start. Above all else, understanding that investments with high risk have the potential for high returns and vice versa with low risk and low returns. It is a direct relationship.

Another type of savings account is a **529 Account**. This type of account is meant to help families save for education expenses for their children by allowing them to put a certain amount in this tax-deferred account. Parents can use these funds for college, private school, or any other approved educational expenses for K-12 through graduate school. They can be assigned or transferred to different children in the family based on needs.
Retirement Accounts:

An Individual Retirement Account (IRA) is a formal method of saving and investing money that comes with specific tax benefits. Specifically, an owner of an IRA is not taxed on the growth of their investment as long as the money stays in the account. There are, obviously, many laws, rules, and regulations surrounding the exact nature of how these work. For the purpose of this element, however, students need to understand that there are traditional IRAs and Roth IRAs. The primary difference is simple. With a traditional IRA, you pay taxes on the money when it comes OUT of the account. If someone contributes $1,000 to their IRA this year, they deduct that $1,000 from their taxable income this year. When they withdraw the $1,000, they will pay taxes on it at that time. With a Roth IRA, the process is basically reversed. The person gets no tax break on the $1,000 they put in this year, but when they withdraw the money, it is not taxed again. The benefits vary and are somewhat of a personal choice. Typically, however, if someone wishes to use their IRA as a method for transferring wealth to other family members, they choose the Roth IRA. It is also important to note that there is a maximum contribution set by the IRS for an IRA based on income level.

Most students will have heard of a 401k, which is an employer-sponsored retirement account where donations are typically made out of each paycheck to a specific investment account. The name 401k comes from the IRS tax code that creates the ability to make these investments. The money is not taxed going in, therefore, a person who donates to a 401k lowers their current tax liability. The money is taxed coming out, although the rate at which it is taxed can get complicated depending on a variety of factors. A 403b works in a very similar manner, except it is only for school employees and employees of some non-profit entities. In general, the maximum annual contribution to either a 401k or 403b is higher than for an IRA.

One thing to definitely mention to students, especially those who are going directly into the workforce, is to always ask if their employer offers matching funds to a 401k or 403b. This is essentially “free” money for a person’s retirement. Emphasize that students should take advantage of this if their company offers it.

The ultimate goal of all of these investment types is to get people to save and invest money so they have money set aside when they are older. The advantage of doing it through these tools is people reduce the amount of money they have to pay in taxes. If these tools did not exist, then the only option for investing would be for people to take their post-tax income, invest, and then pay more taxes on the growth of the investments. That discourages some people from investing so the tax code has been written in such a way that there are various alternatives to encourage investing.

Teacher Note: It can be helpful to give students scenarios and have them plug the m into a retirement calculator to see how much money they would need in retirement and how much they would have to save each month in order to get there.

Retirement income calculators:

https://smartasset.com/retirement/retirement-calculator
https://investor.vanguard.com/tools-calculators/retirement-income-calculator
www.nerdwallet.com/investing/retirement-calculator
Why Diversification Matters:

Students often see stocks as ways to “get rich quick.” As if just making a few wise investments in start-up companies will make all their dreams come true. While there are a few real-life stories where that happens, through this element what you really want to teach students is that it is much more desirable to have investments in a variety of different companies in different sectors of the economy (manufacturing, agriculture, tech, healthcare, etc.). In general, short-term investment strategies are considered riskier than long-term ones, and consolidated investments are riskier than diversified ones. The idea behind diversification investing is that if one part of the economy is struggling, your entire portfolio won’t necessarily lose significant value because you will have other sectors that should be increasing over time. Students are not required to know all of the strategies for diversification below. Choose examples that work for your students.

Strategies for Diversification:

- Buying stocks in a variety of economic sectors to avoid any one sector bringing down a portfolio.
- Diversifying also means placing at least some money in things other than stocks – like bonds, savings accounts, or other investment types.
- Exchange Traded Funds (ETFs), Index Funds, or Mutual Funds – these investments focus less on individual stocks and more on industries or asset classes or on the stocks listed in a given exchange. They are automatically somewhat diversified in one way or another and are typically managed by a fund manager whose interest is aligned with seeing the fund perform well. While they can have day-to-day price changes, typically these investments are less volatile in the short-run and designed for longer-term increases.
- Buying different kinds of stocks – dividend stocks, preferred stocks, small-cap, mid-cap, large-cap. Dividends are payments made by a company to shareholders when the company makes a profit. Not all companies pay dividends. This is typically a long-term strategy because it usually takes time to accumulate enough shares of stock to make dividend payments worthwhile. Furthermore, most companies only pay dividends quarterly and some only pay annually so it takes time for dividend payments to come through.
Resources

Types of Investments: www.nerdwallet.com/article/investing/types-of-investments

Why Diversification Matters: www.fidelity.com/learning-center/investment-products/mutual-funds/diversification with a quick companion video: https://www.youtube.com/watch?v=LU8tubkz_Fg

No Frills Money Skills Video Series from the St. Louis Federal Reserve episode: “Ways to Save - 401(k) and Roth 401(k)” www.stlouisfed.org/education/no-frills-money-skills-video-series/episode-2-ways-to-save-401k-and-roth-401k
SSEPF3 Explain how the financial system channels funds from savers to investors.

e. Describe the role of speculative investments (i.e. cryptocurrency and historical examples like buying on margin in the 1920’s).

Speculation is the purchase of an asset with the hope that it might go up in value in the future. Many investments, like stocks, are speculative in that they expect that companies will increase in value in the future. There is risk involved because businesses can rise and fall for many reasons. As long as the price of the stock or other asset is in line with its fundamental value and based on the company’s usefulness in real life, it is not the type of investment this standard is referring to. This standard is meant to educate students about speculative bubbles. This is a situation when prices go up sharply simply because people expect them to, without fundamental reasoning. People fear missing out on the huge gains others have already made because it has already increased in value a lot, and the cycle perpetuates itself. Eventually, the bubble bursts, and people scramble to sell quickly because they ultimately understand that the investment has no real value unless others are willing to pay for it. Financial institutions that participate in speculative investments may be putting savers’ money at risk.

The 1920s were an era of optimism and prosperity. The war was over, and new technologies like cars and telephones were changing people’s way of life. The stock exchange had existed long before this time, but this was the first time that large amounts of ordinary people invested growing sums in stocks and bonds. People watched the stock market rise and wanted to get in on the action as they expected it to continue to rise. Many stocks were purchased on margin (bought with credit given by banks), so when the market started to fall, many people panicked to sell because they owed more than they had even paid for the stock in the first place.

### The 1929 Stock Market Crash

The Roaring Twenties roared loudest and longest on the New York Stock Exchange. Share prices rose to unprecedented heights. The Dow Jones Industrial Average increased six-fold from sixty-three in August 1921 to 381 in September 1929. After prices peaked, economist Irving Fisher proclaimed, “stock prices have reached ‘what looks like a permanently high plateau.’” The epic boom ended in a cataclysmic bust. On Black Monday, October 28, 1929, the Dow declined nearly 13 percent. On the following day, Black Tuesday, the market dropped nearly 12 percent. By mid-November, the Dow had lost almost half of its value. The slide continued through the summer of 1932, when the Dow closed at 41.22, its lowest value of the twentieth century, 89 percent below its peak. The Dow did not return to its pre-crash heights until November 1954.

Cryptocurrency is a modern example of speculation, but there is debate among economists about whether it is in a bubble or not. Cryptocurrency is a broad term that refers to digital tokens that are created by computer code. There are thousands of cryptocurrencies in the world with a variety of purposes. Many people believe that the underlying code behind cryptocurrency holds potential value for securing information, digitizing things like contracts, or other uses that have yet to be determined. This perceived value is what makes some people desire the currency and want to pay for it. There have been several cryptocurrencies that didn’t have any value connected to the real world that were bid up and then have since crashed. However, there are others that, while very volatile, have stayed well above their initial prices for more than 10 years now. In 2022, more than 1.5 million transactions per day are made on Bitcoin, Etherium, and Litecoin platforms. In 2021, it was considered a $1.6 billion industry with over a trillion dollars invested. There is debate about which kinds of virtual currency are more stable investments depending on their uses (see the graphic below) and which are doomed for the next crash. You should not give your students any kind of specific investment advice about whether they should or should not invest in cryptocurrencies. Rather, just remind them that investments like cryptocurrency are risky and that they can be subject to bubbles. As a result, it would be dangerous to invest more than you could safely risk losing.

**SSEPF4 Explain how interest rates affect various consumer decisions.**

*Interest rates affect all consumers at one point or another. It may be a direct effect in the sense that whether or not a person uses a credit card or takes out a loan may be based on interest rates. Changes in interest rates also affect monthly payments on everything from your home, car, or student loans. Higher interest rates may encourage more savings. Lower interest rates may encourage more buying. Entire industries, like the mortgage industry, can ebb and flow based on changes in interest rates.*
This standard asks students to “explain how” interest rates affect consumer decisions. It is important to understand not only that interest rates exist, but how those rates affect decisions.

Resource:
“Credit Decisions Concept” video from the Council for Economic Education explaining credit decisions based on borrowing with an interest rate, [https://vimeo.com/248484029](https://vimeo.com/248484029)

**SSEPF4 Explain how interest rates affect various consumer decisions.**

a. Compare interest rates on loans and credit cards from different institutions including banks, credit unions, pay-day loan facilities, and title-pawn companies.

This element allows students to discover how interest rates between institutions change. It may also make sense to teach this when you teach SSEPF3b. One should not assume that just because they have been accepted for a loan or credit card that they are receiving the best rate. Individuals should be careful submitting numerous applications which can harm your credit score.

Some resources to use for this type of project are listed below. Interest rates are dynamic and change over time. You may wish to print resources from these sites for more consistent comparisons over time.

Resources:
Teacher Note: Before referring students to any websites, remind students to not enter personal data. These sites are for instructive, comparison data only.

On the website, [www.nerdwallet.com/the-best-credit-cards?trk=nw_gn_4.0](http://www.nerdwallet.com/the-best-credit-cards?trk=nw_gn_4.0) click “I’ll Browse On My Own” instead of “Find the Best Fit.” At the top of the page, there are lots of options for categorizing credit cards.

A list of low interest credit cards. Do not click on “Apply Now.” Simply use to gain information from the cards, [www.creditkarma.com/creditcards/explore?categoryID=45](http://www.creditkarma.com/creditcards/explore?categoryID=45)


b. Define annual percentage rate and describe how different interest rates can affect monthly payments on loans.

An **annual percentage rate (APR)** is the yearly interest rate applied to a loan or credit card. The rate depends on the type of loan, the risk for the lender (i.e. the borrower's credit history, type of loan), and the timing of payments from the borrower (including the loan term). However, certain credit cards, the **APR can often be avoided if purchases are paid for in full within a certain period of time**. Students should know the difference between the credit card or loan balance and the minimum payment. If borrowers pay only the minimum payment, they will owe much more interest over time. Consider showing students a sample bill to illustrate the difference. Credit card bills are now required to show how long it will take to pay off the balance if the borrower only pays the minimum balance every month and how much interest they will pay overall. What’s more, having an APR of 20%, for
example, does not necessarily mean that the consumer will pay 20% on their first bill. The APR is actually divided by 365 and the consumer is charged a daily rate.

Resource:

This payment calculator can be used to help students see how various interest rates can change monthly payments and other loan terms: https://www.calculator.net/payment-calculator.html

**SSEP4 Explain how interest rates affect various consumer decisions.**

- Use an online amortization tool to show how payments on a fixed loan like a mortgage are applied to interest and principal.

Many people assume that when you pay back a loan, you pay equal parts interest and principal on each payment. However, for the lender, the longer it takes to get their profit (interest), the more risky the loan is to them and the more their profit (interest) is devalued by inflation. Because of this, lenders set up the term structure to pay back higher portions of interest at first and have a gradual conversion to principal payments. Another reason for amortization is that it allows lenders to recover a specific amount of principal paid versus interest paid for each scheduled payment. Fixed-rate mortgages, car loans, and personal loans are often amortized, while credit cards are generally not. When borrowing, it is important to look at how the terms and conditions of the loan will affect payments and the total amount of interest paid over the life of the loan. It is also important to point out to students that if they pay their loan down quicker than the term (assuming there is no penalty for doing so), or add extra principal payments, their amortization schedule will change and they will pay a lower amount of interest overall.
Resources:
Basic amortization with easy to read graph: https://www.bankrate.com/mortgages/amortization-calculator/

Amortization tool that includes both graph and table with specific numbers over the life of the loan. https://www.calculator.net/amortization-calculator.html

Amortization tool that includes graph, table and frequently asked questions about types of loans and loan terminology. https://www.amortization-calculator.com/

Article detailing the costs and benefits of paying down a mortgage faster and in which situations it may be helpful. money.usnews.com/loans/mortgages/articles/how-to-pay-off-your-mortgage-faster

Teacher Note: Give the students different scenario loans and ask them to use the online tool to compare and contrast the amortization schedules and total interest paid over the life of the loan. Ask them to test what changes when they change the various factors: Length of term 15-Years v. 30-Years on a mortgage, or 48 v. 60 months on a car loan, 3% v. 6% interest rate, personal loan v. auto loan v. business loan, etc.
SSEPF4 Explain how interest rates affect various consumer decisions.
d. Explain the difference between simple and compound interest and the difference between fixed and variable interest.

Simple and compound interest are usually referred to in the context of savings accounts (although they can apply to paying interest as well). **Simple interest** means that the bank is paying interest only on the money the customer has actually put in the bank. So, if a customer puts in $100.00 and the bank is paying 5% interest quarterly, then after three months, the customer now has $105.00. Three months later, another $5 is added and so on. **Compound interest** means the bank pays the customer on the total amount in the account, meaning they are paying interest on what the customer put in AND what the bank has already given them. You earn interest on your interest. So in this situation, the first interest payment would be $5, but the second payment would be 5% of $105.00, which is $5.25. Most modern banks pay compound interest and it is actually a little unusual to find a bank paying simple interest due to increased competition in the financial sector. Below is a chart that shows two accounts earning 10% interest and how they compare over time:

<table>
<thead>
<tr>
<th>Year</th>
<th>Balance with Simple Interest</th>
<th>Balance with Compound Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$100.00</td>
<td>$100.00</td>
</tr>
<tr>
<td>1</td>
<td>$110.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>2</td>
<td>$120.00</td>
<td>$121.00</td>
</tr>
<tr>
<td>3</td>
<td>$130.00</td>
<td>$133.10</td>
</tr>
<tr>
<td>4</td>
<td>$140.00</td>
<td>$146.41</td>
</tr>
<tr>
<td>5</td>
<td>$150.00</td>
<td>$161.05</td>
</tr>
<tr>
<td>10</td>
<td>$200.00</td>
<td>$259.37</td>
</tr>
<tr>
<td>15</td>
<td>$250.00</td>
<td>$417.72</td>
</tr>
<tr>
<td>20</td>
<td>$300.00</td>
<td>$672.75</td>
</tr>
<tr>
<td>25</td>
<td>$350.00</td>
<td>$1,083.47</td>
</tr>
<tr>
<td>Year</td>
<td>Simple Interest</td>
<td>Compound Interest</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>30</td>
<td>$400.00</td>
<td>$1,744.94</td>
</tr>
<tr>
<td>35</td>
<td>$450.00</td>
<td>$2,810.24</td>
</tr>
<tr>
<td>40</td>
<td>$500.00</td>
<td>$4,525.93</td>
</tr>
</tbody>
</table>

*This graph was created using MicrosoftExcel. It uses the same data as the table above.*

It should be noted that compound interest is preferable to simple interest when earning interest on savings. However, simple interest is preferable if someone is paying interest on a loan. Compound interest grows exponentially while simple interest grows linearly.

Fixed and variable interest are terms more commonly associated with paying interest. They are exactly what they sound like. A **fixed interest rate** means that, during the time of the loan, the interest rate will not change until the money is repaid. These rates are common for mortgages, student and business loans, and some credit cards. A **variable interest rate** means that a certain interest rate is guaranteed for a period of time – NOT the duration of the loan. It may be guaranteed for 6 months, 12 months, a year, 5 years or any other period of time agreed to by the bank and...
customer. Variable interest rates are also found in mortgages, but are much more common with credit cards and consumer finance loans. When teaching this to students, make sure you make the point that fixed interest rates are generally more desirable than variable. Variable might sound good because you might think banks will lower them when overall interest rates are lower, but the reality is variable interest rates almost always start low and then go up. This is what happened to many homeowners during the housing boom of the early 2000’s.

One final note about variable rates is to link back to the idea that monthly payment is very closely tied to your interest rate. If your interest rate goes up, your monthly payment goes up as well in most cases, as the chart below indicates:

<table>
<thead>
<tr>
<th>Monthly Payment Comparison for a $20,000 Car Loan for 60 Months (5 Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Rate (APR)</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Bank 1 3%</td>
</tr>
<tr>
<td>Bank 2 5%</td>
</tr>
<tr>
<td>Bank 3 9%</td>
</tr>
<tr>
<td>Bank 4 18%</td>
</tr>
</tbody>
</table>

Students can try it out for themselves by entering different interest rates and loan terms on a loan calculator, [www.calculator.net/payment-calculator.html](http://www.calculator.net/payment-calculator.html)

**SSEPF4 Explain how interest rates affect various consumer decisions.**

e. Define nominal and real returns and explain how inflation affects interest-earning savings and investment accounts.

Over time, in most economies like the United States, prices tend to rise. This overall rise in the price level of an economy is called inflation. As the price level rises, it becomes a little difficult to compare time periods in terms of prices. For example, a single movie ticket used to cost as little as $.50 for a major motion picture. Now, even a discounted matinee typically runs at least $5 - $7 and it’s not unusual to see tickets for $13 - $20 for some movies. To someone unfamiliar with economics, they might think that no one goes to the movies anymore, right? The reality is there are many other variables that go into this, including the fact that wages are much higher now, complementary and substitute products have changed prices (some higher, some lower), and the quality of the product has changed. To account for all of this economists have developed ways of measuring **inflation** – the rise in the price level of an economy over time.

A nominal value of a good or service is simply the dollar amount. In the example above, the price of the movie ticket is the nominal value in the given time period. The real value is when the price of an item is adjusted for inflation. In essence, the real value helps measure changes in purchasing power. Students in this class do not have to do this calculation.
Impact of Inflation on Savings Example

Assume Raven has $100 in her savings account and she leaves it in the bank for 10 years earning 5% simple interest annually. At the end of the 10 years, Raven now has $150 in her savings account. The $150 in her account is the nominal value of her savings account. However, assume there has been 10% inflation in the economy over the last 10 years (1% per year each year). In REAL terms, then Raven does not have $150 because her $150 will not buy what it would have bought 10 years ago. In real terms, Raven’s account is worth $135. Yes, she actually has $150 in the bank, but it only buys the equivalent of what $135 would have bought 10 years ago.

The reason this matters is because if investors think there will be large amounts of inflation, they may be hesitant to save money in the bank. If you are saving at a 2% rate of interest and there is 4% inflation, you’re really losing value, losing purchasing power. Therefore, serious savers and investors pay attention to the expected rate of inflation over time before making investments.

If you want to go more into this, you can look up something called the Fisher equation, but it is not required to teach this element and is not presented here. The basic takeaway is prices will rise over time and you want to make sure that your money is growing at an equivalent rate to keep up.

Resource:
Investopedia’s video on the topic, conveys the differences very well: [http://www.investopedia.com/terms/n/nominal.asp](http://www.investopedia.com/terms/n/nominal.asp)

**SSEPF5 Explain how changes in taxation can have an impact on an individual’s spending and saving choices.**

From a personal finance perspective – students should understand that decisions made by governments (federal, state, and local) can impact their personal financial situation. The focus should be on what governments do instead of what they should or should not do.

**SSEPF5 Explain how changes in taxation can have an impact on an individual’s spending and saving choices.**

a. Describe income, sales, property, capital gains, and estate taxes in the U.S.

Taxes fund federal, state, and local governments. However, students are often surprised by how much of their income will end up paid in the various types of taxes. The greater amount paid in tax results in a lower **disposable income (or net income)** and decreased ability to spend and save. This standard is meant to make students aware of some of the most common types of taxes they should plan for in their budgets.
<table>
<thead>
<tr>
<th>Tax</th>
<th>What is taxed?</th>
<th>Who levies this type of tax in the US?</th>
<th>What are the revenues used for?</th>
<th>Type of Tax and Other Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Wages, salaries, tips earned from any form of employment</td>
<td>Federal, many state, some local governments</td>
<td>Largest source of government income at the federal level (and many states); helps pay for the many public goods and services available</td>
<td>Progressive tax; allowed at the federal level by the 16th amendment; some states choose not to use income taxes</td>
</tr>
<tr>
<td>Property</td>
<td>Land and, in some cases, buildings and residences on the land that have value</td>
<td>Local governments</td>
<td>To raise money for local governments – usually to be spent on education or local law enforcement or healthcare</td>
<td>Technically a proportional tax, but tied closely to property values; controversial because it is usually a major funding source for local education and there are large discrepancies in property values within states yielding very different funding levels for education.</td>
</tr>
<tr>
<td>Sales</td>
<td>Goods and services at the consumer level</td>
<td>State and local governments</td>
<td>Varies, but in high tourist areas, the purpose is to take advantage of out-of-towners spending money locally; also provides flexibility for local governments to use it for special projects like education or transportation, sometimes called</td>
<td>Even though sales taxes sound proportional, in practice they are somewhat regressive because people who have high incomes are less affected by them than people with low incomes; sales taxes vary widely in the United States from 0% in some places to 7.25% base tax in California</td>
</tr>
</tbody>
</table>
### Capital Gains

| Sales of property or investments (stocks, bonds, etc.) when an increase in value is involved | Federal and state government | A small proportion of government income at the federal level (and many states); helps pay for the many public goods and services available | To encourage investment, capital gains taxes tax revenue earned from investments differently than from income. Taxes vary depending whether the gains were “short-term” or “long term”; primary homes are often excluded; this tax can be offset by capital losses |

### Estate Taxes

| Tax on property or assets transferred to others upon your death. | Federal and some state governments (not Georgia) | This tax does not have a specific revenue use. It goes into the general funds for the entity that collects it. | Since the minimum value of the estate must be $12.06 million in 2022 to be required to file an estate tax return, not many are subject to this type of tax. It does have graduated scales, so it is |
technically a progressive tax.

Source: https://taxfoundation.org/the-three-basic-tax-types/

Resources:
The IRS actually has some very good teacher materials, including lesson plans on various types of taxes here: https://apps.irs.gov/app/understandingTaxes/teacher/

The IRS website has a multitude of resources that can answer almost any tax question although, in true IRS form, it can be a bit daunting to navigate! https://www.irs.gov/


Infographic explaining how sales taxes are regressive: https://www.accuratetax.com/blog/regressive-sales-tax-infographic/

SSEPF5 Explain how changes in taxation can have an impact on an individual’s spending and saving choices.
b. Describe the difference between progressive, regressive, and proportional taxes.

Consider reviewing this element before SSEPF5a to connect the effects of the different types of taxes mentioned there. Taxes can fall into three categories: progressive, regressive, and proportional. The category into which a tax falls determines how it will affect people who make higher or lower incomes.

Progressive taxes are taxes where the percent of income paid increases as the tax rate increases. The U.S. federal income tax is a progressive tax. For example, a progressive tax might have a tax rate of 1% for every $10,000 earned annually, with a maximum tax rate of 50%. This system would lead to the following example.

**Progressive Income Tax Example**

<table>
<thead>
<tr>
<th>Income</th>
<th>Tax Rate</th>
<th>Calculation</th>
<th>Total Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,000</td>
<td>1%</td>
<td>$10,000 X .01</td>
<td>$100</td>
</tr>
<tr>
<td>$30,000</td>
<td>3%</td>
<td>$30,000 X .03</td>
<td>$900</td>
</tr>
<tr>
<td>$200,000</td>
<td>20%</td>
<td>$200,000 X .20</td>
<td>$40,000</td>
</tr>
<tr>
<td>$500,000</td>
<td>50%</td>
<td>$500,000 X .50</td>
<td>$250,000</td>
</tr>
</tbody>
</table>

In the example, people earning $30,000, or three times as much as those earning $10,000, would have to pay nine times the amount in taxes ($900 compared to $100). Those earning $200,000, more than six times as much as those earning $30,000, would have to pay more than forty-four times as much in taxes. While this may seem excessive, the rationale is that a progressive tax takes more money from those who can afford to pay it. Opponents of progressive taxes argue that higher tax rates for high income earners are a disincentive to engage in productive activity.
Regressive taxes are taxes where the percent of income paid decreases as the tax rate increases. Social Security payments are paid regressively. Someone with a very high income, will receive a much lower percentage of that income out of Social Security than someone with a lower income. Consider a tax that imposes a flat rate of $1,000 annually regardless of income. For someone earning only $3,000 a year, this tax would be huge, accounting for one-third of all earnings. To someone earning $50,000 a year, the tax rate is not as large, accounting for only 2% of annual income. Most sales taxes are regressive because lower income people tend to spend a greater proportion of their income on sales taxed items than higher income people.

Proportional taxes occur when everyone pays the same percentage regardless of income. Note that they do not pay the same dollar amount, just the same percent of income. If the proportional tax rate is 15%, then everyone pays 15%, regardless of whether he or she makes $10,000 or $570,000. The FICA tax workers pay to fund Social Security and Medicare is proportional. Everyone pays the same percentage of their income to this tax up to a specified income cap. Apart from FICA, these are somewhat rare in the United States, although some states use proportional systems for their state income tax (Colorado, for example).

The chart below shows how this works. The tax rates are fictional and for illustrative purposes only. Notice, when looking at a regressive system, the person who is making the most money is still paying the most in taxes in terms of dollars, it is just a lower percentage of their overall income. This is important to share with students as well. While this element is merely a “describe” element, don’t hesitate to encourage discussion on the concepts of economic equity and fairness here.
### Comparison of Tax Systems for Different Levels of Income

<table>
<thead>
<tr>
<th>Person/Income</th>
<th>Progressive System</th>
<th>Regressive System</th>
<th>Proportional System</th>
</tr>
</thead>
</table>
| **A / $10,000** | Tax Rate: 10%  
Tax Paid: $1,000  | Tax Rate: 10%  
Tax Paid: $1,000  | Tax Rate: 10%  
Tax Paid: $1,000  |
| **B / $40,000** | Tax Rate: 15%  
Tax Paid: $6,000  | Tax Rate: 7.5%  
Tax Paid: $3,000  | Tax Rate: 10%  
Tax Paid: $4,000  |
| **C / $100,000** | Tax Rate: 28%  
Tax Paid: $28,000  | Tax Rate: 5%  
Tax Paid: $5,000  | Tax Rate: 10%  
Tax Paid: $10,000  |

While not required in this element, you may want to note that the United States Federal Income Tax System is not a purely progressive system, it is a modified step progressive system. This means that the 22% tax bracket doesn’t actually pay 22% of their income, they pay the proportions for each of the income steps before the 22% bracket and then pay 22% for any amount over and above the income cutoff for this bracket. The effective tax rate for an individual filing who made $45,000 in 2018 was only 13%, and this is without including any deductions or credits based on their individual situation. See the example below.

#### US Federal Income Step-Progressive Tax System

<table>
<thead>
<tr>
<th>Rate</th>
<th>Individuals</th>
<th>Married Filing Jointly</th>
<th>Calculate your taxes if you make $45,000 per year and are single.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>Up to $9,525</td>
<td>Up to $19,050</td>
<td>$952.50</td>
</tr>
<tr>
<td>12%</td>
<td>$9,526 to $38,700</td>
<td>$19,051 to $77,400</td>
<td>$3,500.88</td>
</tr>
<tr>
<td>22%</td>
<td>$38,701 to $82,500</td>
<td>$77,401 to $165,000</td>
<td>$1,385.78</td>
</tr>
<tr>
<td>24%</td>
<td>$82,501 to $157,500</td>
<td>$165,001 to $315,000</td>
<td></td>
</tr>
<tr>
<td>32%</td>
<td>$157,501 to $200,000</td>
<td>$315,001 to $400,000</td>
<td></td>
</tr>
<tr>
<td>35%</td>
<td>$200,001 to $500,000</td>
<td>$400,001 to $600,000</td>
<td></td>
</tr>
<tr>
<td>37%</td>
<td>over $500,000</td>
<td>over $600,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>$5,839.16</td>
<td>Effective Tax Rate: 13%</td>
</tr>
</tbody>
</table>
SSEPF6 Evaluate the costs and benefits of using credit.

Whether you agree or disagree with using credit as a means of consuming goods and services, there is no denying its importance in the United States economy. This standard is not designed to promote or discourage use of credit. Instead, it presents an opportunity for students to understand why credit exists, how it is used, and how it affects their lives. As you work through the elements of this standard, remain focused on the importance of credit and how it is relevant to adults in various ways.
a. Differentiate between and explain how to access one's credit report and credit score.

A **credit score** is a number - a numeric representation of a person's credit worthiness. This element asks students to describe the “components” of a credit score. The components are actually found in more detail on a credit report. Some lenders only use a credit score to decide who gets a loan, but more common is for lenders to get a **credit report** which includes the basic components of a credit score plus a lot more detailed information about payment and credit history.

![Credit Score Diagram](https://www.atlantafed.org/education/teach/infographic-posters/credit.asp)

One common misconception people have about credit scores is that there is only ONE score. Actually, there are a variety of ways to calculate credit scores and several companies that calculate them. Even the score that most people refer to when referring to a credit score – the FICO score – can vary slightly depending which factors are being included and how they are weighted. Some companies even develop their own methodology for evaluating a person’s credit. Kia Motors, for example, uses a proprietary method for calculating a credit score based on factors that they think make people more likely to repay a car loan. What’s more, when a person gets their credit score from a company like Transunion or Experian, they are often getting something called an “educational score” which may be different from the score used by a number of lenders when making an actual decision.

This element is NOT designed to promote any for-profit credit reporting companies. You can teach that these companies exist as a way to educate people about their credit score, but the curriculum does not suggest one company over another. Furthermore, instruct students that if someone finds an error or incorrect information on their credit report, they need to contact the credit reporting agencies about the issue directly and in writing.
The one site you do need to teach is the government sponsored annualcreditreport.com. This site acknowledges it is authorized by federal law and the screen looks something like this (subject to change, of course, over time):

Teacher Note: Having a sample credit report would be very helpful for teaching this element. While unable to procure a “fair use” one for this document, they are very easy to search for. Use your favorite search engine and type in “sample credit report.” Each of the major reporting agencies provides samples as well as several organizations that show you exactly what a store sees when they run your credit.

The following video from the St. Louis Fed describes how credit scores are calculated: https://www.stlouisfed.org/education/continuing-education-video-series/episode-1-understanding-how-a-fico-credit-score-is-determined

The three primary credit reporting agencies all have various educational resources that are very useful for teaching this element:

Transunion: https://www.transunion.com/credit-report

Experian: http://www.experian.com/blogs/ask-experian/credit-education/

Equifax: https://www.equifax.com/personal/education

Other resources: How to read and understand a sample credit report from Creditcards.com: http://www.creditcards.com/credit-card-news/help/interactive-sample-credit-report-6000.php
SSEPF6 Evaluate the costs and benefits of using credit.
a. Describe the basic components of a credit score including payment history, debt to income ratio, amount owed, length of credit history, types of credit used, amount of available credit, and recent credit applications.

The items included in this element are commonly included in credit scores – even if the weights or actual metrics may differ when different companies compute them. The exact formulas used for most of these credit scores are proprietary and not publicly available. However, it is almost always the case that payment history is one of the highest weighted parts of the formula.

The three big companies that report credit scores are Transunion, Experian, and Equifax. Different lenders have contracts with the various companies for credit reporting. Capital One works closely with Experian, Bank of America with Transunion, etc.

This element no longer specifically mentions what is commonly referred to as the “3 Cs” of credit: character, collateral, and capacity. They are not required to understand these terms, but they can be useful in helping students remember what lenders are looking for. These broad categories include the specific factors that go into a person’s credit worthiness that are listed in the standard. The element asks students to “describe” these factors. That basically means that students need to be able to give some examples of things within these categories that affect a person’s credit worthiness or credit score. Credit worthiness is a term used to describe both a person’s ability to receive credit via an application AND a person’s ability to get a good interest rate, while a credit score is a numerical measure of this credit worthiness.

Teaching Note: It is helpful to put the student in the position of the lender to help them understand the logic. Consider asking, if your new friend asked you for a $100 loan, what things would you want to know before you say yes? They will list things like: What will they use it for? How trustworthy are they? Do they have any other debt? Have they paid other people back in the past? Do they have a job to be able to earn the money to pay me back? If they can’t pay me back in cash, is there anything of worth they can give me to make us even? Essentially, banks and other lenders are using a credit score (or credit report) to tell them all of this information efficiently, and without the borrower having the ability to just fudge it on their application. Show students how their questions essentially create the loan application. Lenders are ultimately using rational decision making to answer one underlying question: Is the potential gain from your loan worth the risk?
What Lenders Want to Know About Potential Borrowers

<table>
<thead>
<tr>
<th>Factors that Determine a Credit Score</th>
<th>Collateral</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Character</strong></td>
<td><strong>Your assets</strong></td>
</tr>
<tr>
<td>Willingness to repay debt</td>
<td><em>(not included in credit score)</em></td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td></td>
</tr>
<tr>
<td>Ability to repay debt</td>
<td></td>
</tr>
<tr>
<td><strong>Collateral</strong></td>
<td></td>
</tr>
<tr>
<td>Payment History</td>
<td>Debt to Income Ratio</td>
</tr>
<tr>
<td>Length of Credit History</td>
<td>Amount of Available Credit</td>
</tr>
<tr>
<td>Types of Credit Used</td>
<td>Amount Owed</td>
</tr>
<tr>
<td>Recent Credit Applications</td>
<td></td>
</tr>
</tbody>
</table>

Payment history includes how frequently a person makes their monthly payments on time. To have a payment history, therefore, someone must have lent money to the person in the past. Payment history is tough for young people because they have no history. Students often wonder how the credit companies get this information. Explain to students that payment history is reported to the big credit agencies by lenders. Not every lender reports payment history on the same schedule and, in some rare cases, some lenders don’t report history at all.

Source: https://www.atlantafed.org/education/teach/infographic-posters/credit.aspx
Usually one or two late payments will not drastically affect a person’s score (although they can), but a trend of late payments will significantly harm a score.

**Debt to income ratio** is a monthly measure of a person’s ability to make a payment. It uses monthly debt service payments compared to a person’s gross monthly income. Debt service payments are typically calculated by looking at a lender’s minimum monthly payment requirements. Gross monthly income is usually taken from the income reported on credit applications so this can change over time. While there is no absolute standard for what is good/bad, 35% or less is generally seen as a “good” number and over 50% is bad. The lower the debt to income ratio, the better.

**Amount owed** is a nominal value that literally adds up how much is owed to creditors. This number can change with each reporting period so it is important to check a credit score frequently. By itself, the amount owed is only somewhat useful because a person’s income and the type of credit owed can characterize the debt differently.

**Length of credit history** is exactly what it sounds like. How long have accounts been opened? The longer accounts have been opened, the better. NOTE: Because this is seen as a measure of creditworthiness, a person who is trying to improve their credit should NOT close accounts – especially old accounts! Closing an old account removes that account from history and this can actually have a negative impact on a credit score.

All credit is not created equal and, thus, **types of credit used** are displayed on a credit report. Student loans are not treated the same way as revolving credit cards. A mortgage that is collateralized by a house is not the same type of loan as a debt consolidation loan with no collateral. While not a major part of a credit score, knowing the type of debt a person carries can make a difference to some lenders.

**Amount of available credit** compares a person’s credit line to how much they have used. In general, a lender wants to know that you have not maxed out all your available options. A low amount of available credit may indicate a person is unable to handle their finances and is potentially desperate. Some lenders will start to mark off if a person is using more than 10% of the total credit available to them.

Something that surprises many people is to find out that **recent credit applications** can have a negative impact on a credit score. Similarly to a low amount of available credit, many applications for credit may indicate that an individual is out of reasonable options and is looking for money to handle prior mismanagements of money. It is critically important to understand how credit scores work. There are some popular personal finance experts that suggest credit scores are useless and people should not be borrowing money under any circumstances. While this is admirable, the reality is many people do borrow money or will need to at some point and they need to understand the complex nature of lending decisions.

Teaching Note: A unique way to teach this concept to students is to try to get them to figure these things out without telling them. To do this, explain that as a class they are going to make a decision whether to loan someone $35,000 to buy a new car. Have them create an application that asks everything they want to know about this person before they will lend the money.
Resources:

Vantagescore (a for profit company) provides a well-vetted “myths vs. reality” type page about who uses credit scores and why:  https://your.vantagescore.com/resource/42

EconExpress credit worthiness: https://www.gpb.org/education/econ-express/credit-worthiness

The Consumer Financial Protection Bureau has a large Q&A page where citizens have posted questions for the government agency to answer. Several of them deal with how credit scores are used, like this one:  https://www.consumerfinance.gov/ask-cfpb/ive-been-looking-for-a-job-what-do-employers-see-when-they-do-credit-checks-and-background-checks-en-1823/

Federal Reserve Bank of Philadelphia: Understanding and Improving your Credit Score https://www.philadelphiahfed.org/education/understanding-and-improving-your-credit-score

The following video from the St. Louis Fed describes how credit scores are calculated:  https://www.stlouisfed.org/education/continuing-education-video-series/episode-1-understanding-how-a-fico-credit-score-is-determined

SSEPF6 Evaluate the costs and benefits of using credit.

- c. Analyze and evaluate a sample loan application for credit worthiness and the ability to receive favorable interest rates.

Having students evaluate some fictitious applications is a great way to get students to understand how this process works in the real world. The more trustworthy and safe the applicant looks on paper, the more likely they are to be approved for the loan at a favorable interest rate. This also helps build empathy with students as they see the difficulties of trying to approve a loan for individuals with complex applications. The resources below include a couple of lessons designed to do exactly this.

Resource:


Econedlink lesson: https://econedlink.org/resources/making-credit-choices/

Econedlink lesson (2): https://www.econedlink.org/resources/car-loan-project/

While not an “application” concept, NGPF’s Credit Clash game reviews the important concepts from the last couple of elements: http://creditclash.com/
**SSEP6 Evaluate the costs and benefits of using credit.**

d. Explain the difference between revolving credit and installment credit.

This is a concept that can be discussed with SSEPF6b as one of the factors that can affect a credit score. Both of these types of loans affect a credit score, however, the proportion of revolving credit used compared to the amount of revolving credit available (called credit utilization rate) may have a bigger impact on scores than installment credit balances. In general, it’s ok to have a high installment loan balance (like a mortgage) as long as the monthly payment amount is affordable for your level of income.

**Revolving credit** is often in the form of a credit card, where the consumer can use the money as they wish and pay it back to the bank later. Once offered, the credit company has an open-ended obligation to offer you credit up to the limit they have set for you. The monthly payment varies based on how much was spent and how much the borrower wants to pay towards the balance. The borrower can choose to pay only the minimum or pay down their full balance. It should be noted that if they choose to pay less than their full balance, they will likely be charged interest on their purchases based on their APR, which is discussed in **SSEP4b**.

**Installment credit** is a loan structure where you repay with fixed payments over a set term. With this type of loan, the borrower knows up front what their monthly payment amount will be and they will know how many “installments” they will need to make to pay it off. The benefit is that the borrower can plan in their budget for the same amount each month. This type of loan may still be amortized, so the proportion of the payment that goes towards principal and interest may change, but the payment amount will not. Amortization is discussed further in **SSEP4c**.

While students are not required to categorize the loans like the following chart, it may be useful for you as the teacher to know. Choose examples that would best fit your students’ needs.

<table>
<thead>
<tr>
<th>Typical Types of Loans in Each Category</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revolving Credit</strong></td>
<td><strong>Installment Credit</strong></td>
</tr>
<tr>
<td>Credit Cards</td>
<td>Mortgages</td>
</tr>
<tr>
<td>Personal lines of credit</td>
<td>Car Loans</td>
</tr>
<tr>
<td>Home equity lines of credit</td>
<td>Student Loans</td>
</tr>
<tr>
<td>Business lines of credit</td>
<td>Personal Loans</td>
</tr>
<tr>
<td></td>
<td>Business Loans</td>
</tr>
</tbody>
</table>

Resource:
Article from CNBC on the difference between the two types of credit. Sponsored, for profit article - credit offers are made at the end of the article.
https://www.cnbc.com/select/revolving-credit-vs-installment-credit/
**SSEPF6 Evaluate the costs and benefits of using credit.**

e. Explain causes of personal bankruptcy and describe consequences of declaring bankruptcy.

Bankruptcy is a legal process when a person or business is unable to pay debts. The legal proceedings allows freedom from debts or obligations while providing creditors an opportunity to be repaid. Federal courts handle bankruptcy proceedings, and rules are outlined in the U.S. Bankruptcy Code.

Teacher Note: Be sensitive to the fact that you may have students who have experienced the impact of bankruptcy.

Practically speaking, there are not universal “causes” of personal bankruptcy. By definition, each bankruptcy is unique and personal. A 2015 Harvard University study identified medical expenses as the most common cause of personal bankruptcy. Other major factors include reduced income/job loss, credit card debt, and divorce. There are six types of bankruptcy. Chapter 7 and Chapter 13 apply directly to individuals and their characteristics are outlined in the graphic below.


There are consequences of declaring bankruptcy. Your property may be sold and profits used to pay off the outstanding debts. You may get to keep some of your property but there are stipulations. If you own a home you may lose this property if there is a lot of equity as this could be used to pay off your creditors. If you have a car and continue to make payments on time, you may get to keep it. If you can’t keep up with payments, several factors come into play: how much the car is worth, how much is owed on the vehicle, and other laws that vary by state. Bankruptcy can relieve debts but the
bankruptcy filing will stay on your credit reports for years and can make it difficult to borrow in the future. Bankruptcy can reflect on your credit report for 7 to 10 years. Individuals could get a car loan for example, after filing but at a much higher interest rate than someone who hasn’t filed. Bankruptcies are public record meaning any member of the public can access this information. Review the bubble map of consequences and negative effects of filing bankruptcy below.


Resources:

The US Courts' Bankruptcy Basics, [https://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics](https://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics) provides information on the variety of bank

Federal Reserve Bank of St. Louis, Lesson Plan 9-12: Bankruptcy Basics, [https://www.stlouisfed.org/education/bankruptcy-basics](https://www.stlouisfed.org/education/bankruptcy-basics)

This is a blog post that could be used to understand additional common reasons for bankruptcy: [http://www.huffingtonpost.com/simple-thrifty-living/top-10-reasons-people-go-b_6887642.html](http://www.huffingtonpost.com/simple-thrifty-living/top-10-reasons-people-go-b_6887642.html)

Bankruptcy information related to Georgia: [http://www.georgiabankruptcy.com/faq.html#3](http://www.georgiabankruptcy.com/faq.html#3)
SSEP7 Analyze how insurance and other risk-management strategies protect against financial loss.

Insurance protects against financial loss because it transfers the risk of financial loss away from the individual and to a company that can then share that risk with other people who wish to protect themselves against the same thing. Also, even though the standard implies there are “other risk-management strategies,” the following elements actually only deal with insurance.

SSEP7 Analyze how insurance and other risk-management strategies protect against financial loss.

a. Explain why people buy insurance.

Life involves risk. There are risks involved with driving, exercising, and even walking down the street. Financial risks are unavoidable too: who could have predicted the economic impact of COVID-19 before 2020? While some types of risk can be avoided, eliminating risk completely is almost impossible. While some types of insurance are required by law, the main reasons why people buy insurance are for asset protection, shared liability and reduced risk from potential financial shock or financial loss. These terms are further explained under SSEPF7c. Essentially, people buy insurance to mitigate risks and create a financial safety net in case of the unexpected. This is really all the students need to know in order to master this standard.

Teaching Note: A great way to encourage students to think about how insurance works is to run a simulation where you offer them the option to buy insurance, and then you roll a dice or pull a number to have something bad “happen” to random students with funny stories. Then, discuss as a class the financial impact on them whether they bought insurance or whether they didn’t. You can ask them follow up questions: Do you regret buying insurance? Are you glad you had someone to split the costs with after the unexpected event?

Insurance is a balancing act. You want to make sure you buy enough coverage to protect you from financial shock, but you also don’t want to pay for more coverage than you really need and throw away money every month. Insurance is a classic example of when you should use a rational decision-making model to help you decide what types of insurance to buy and how much coverage to select. It could be an extension of the models mentioned in SSEPF1d. Some of the costs and benefits of insurance are specifically outlined in SSEPF7c.

As for car insurance, minimum coverage is legally required for all cars registered in Georgia and this is a good chance to remind students to always have proof of coverage when they drive. Georgia specifically requires liability coverage which means that you are required to purchase insurance that would protect and compensate other drivers if you are at fault for an accident. Unless you haven’t paid off your car completely, you are not required to purchase insurance that will fix your own car. In most cases, you would probably want to protect your investment by having comprehensive auto insurance, but this would be a situation where you should weigh the costs and benefits of your specific case. If your car is worth less than the cost of the upgrade on the auto insurance policy, then it doesn’t make sense to pay for it.

A mortgage company who lends money to a customer to purchase a house will require them to purchase home insurance to cover the lender’s potential risk. If the house were destroyed in a fire or...
storm, the mortgage company would not be able to sell the now worthless asset to recoup the amount of the loan. If a home with insurance were destroyed, instead the insurance company would be required to rebuild the home or compensate the owner of the home for the loss (in this case, if the mortgage isn’t paid in full yet, the lender is the owner of the home, so they would be paid their portion first). Home insurance decreases the risk that the mortgage company would lose the entire amount of the loan. This is what makes it possible for them to offer home loans. Without this protection, it is unlikely that banks would offer sizable loans for houses and people would instead have to save up the full amount to purchase their home without a mortgage.

Resources:

SSEPF7 Analyze how insurance and other risk-management strategies protect against financial loss.

b. Describe various types of insurance such as automobile, health, life (whole and term), disability, renters, flood and property.

Automobile: financial protection to the owners, operators and occupants of an automobile in case of accidents or damages; usually a fairly detailed policy that includes not just the car, but property contained inside the car and can extend to other vehicles; students may be familiar with “state minimum coverage” which, in Georgia, just means that an owner of a vehicle must at least carry enough insurance to pay for damages to someone else’s vehicle, known as collision coverage; all sorts of add-ons exist including hit and run coverage, uninsured motorists (when someone hits you and they don’t have insurance) and extra injury coverage.

Health: protects against financial loss caused by the costs of illness or accident; designed to make going to the doctor or getting medical care more affordable; usually offered through an employer; students sometimes get this confused with disability but the difference is health insurance pays the medical provider whereas disability insurance pays the person directly for lost wages.

Term Life: life insurance that offers a payment to specified beneficiaries when the policyholder dies; term life insurance only applies for a specified period of time, usually maxing out at 30 years.

Whole Life: unlike term life, whole life insurance has no expiration date and guarantees payment upon death; this obviously comes with a higher premium.

Disability: Provides income during a specified period when a person is unable to work because of illness or an accident.

Renters: Provides coverage for your belongings in case of theft, fire, or storm damage, but not for the structure itself. Policies usually include liability coverage for guests if they get hurt at your place.
Flood: provides coverage to restore your home to its original condition in case of a flood or water damage that comes from outside your walls. In certain high-risk areas, homeowners are required to have flood insurance. Most regular homeowner’s insurance policies do not cover floods (or any water damage that comes from outside the structure’s walls).

Property (Homeowner’s): Protects the homeowner from loss caused by fire, theft, and storm damage of the structure and the possessions within the structure. Policies usually include liability coverage for guests if they get hurt on your property.

Resources:
Nerdwallet’s description of the differences in term life and whole life: https://www.nerdwallet.com/blog/insurance/what-is-the-difference-between-term-whole-life-insurance/


GCEE’s insurance lesson has an activity that has students analyze different types of insurance: https://dl.orangedox.com/gceecannoninsurancelesson

SSEPF7 Analyze how insurance and other risk-management strategies protect against financial loss.

C. Explain the costs and benefits associated with different types of insurance, including deductibles, premiums, coverage limits, shared liability, and asset protection.

Deductibles and premiums are the “costs” of insurance. Shared liability and asset-protection are the “benefits.” Copays are a little strange as they are both a cost and a benefit, depending on your perspective.

Before analyzing, make sure students understand what these things are. A simple set of definitions follows:

- **Premium:** this is the “cost” of the insurance policy. This amount of money must be paid to the insurance company in regular intervals to keep the policy current.

- **Deductible:** an amount of money the insured person is responsible for paying before the insurance company will start paying benefits. If the insured never files a claim, they will never have to pay their deductible. Typically, if you choose a plan with a low deductible, you will have a high premium and visa-versa.
• **Coverage Limits:** the highest amount your insurer will pay for a claim that your insurance policy covers. For example, your auto insurance may have a coverage limit for $100,000 per accident. You can pay higher premiums to get

• **Shared Liability:** the practice of the insurance company taking some of the responsibility for an accident away from the insured person.

• **Asset protection:** part of an insurance policy that guarantees that if a stated asset is damaged or lost, the insurance company will replace it.

With health insurance, depending on the plan, you may also pay co-pays and/or co-insurance:

• **Copays:** usually a flat amount of money a person pays out of pocket when using certain medical services. This payment is usually made up front or on the same day the service is provided and is only a portion of the total amount the services cost.

• **Coinsurance:** the amount you pay for covered health care after you meet your deductible. This amount is a percentage of the total cost of care—for example, after paying your deductible, you may be responsible for 20% of any medical bills for the rest of the year, while your insurance company will pay 80% up to your coverage limit.

Have students discuss why these items exist, their benefits, when they might be most useful, and the relationships between them. For example, for most policies, as premiums go up, deductibles go down. Asset protection and premiums, on the other hand, have a more direct relationship. A thorough discussion of these terms will help students understand the complex nature of insurance and the many issues that surround it and why insurance discussions get controversial.
### Consumer Costs and Benefits of Obtaining Insurance

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premiums</td>
<td>Shared liability</td>
</tr>
<tr>
<td>Deductibles</td>
<td>Asset protection</td>
</tr>
<tr>
<td>Co-Pays - Most of the time, you are required to pay your copay upfront before you can access the service.</td>
<td>Reduced risk of financial shock</td>
</tr>
<tr>
<td>Coinsurance - You are required to pay a portion of your bills above your deductible, usually 20-50%.</td>
<td>Negotiated rates (in-network) - insurance companies can negotiate rates with preferred providers through collective bargaining because providers are more likely to get business if they are recommended by your insurance company.</td>
</tr>
<tr>
<td>Coverage Limits - Once you exceed your coverage limit, the remaining balance is your responsibility.</td>
<td>Copays - The insurance company usually pays any amount over and above the copay for this type of service, usually predictable flat fees that can help you anticipate your costs.</td>
</tr>
<tr>
<td></td>
<td>Coinsurance - If you are required to pay 20%, your insurance company is paying the other 80%.</td>
</tr>
</tbody>
</table>

**SSEP7 Analyze how insurance and other risk-management strategies protect against financial loss.**

d. Define insurability and explain why insurance rates can vary.

Insurability is whether or not something or someone can (or should) be insured and to what degree. Because people engage in various levels of risky behaviors and have various levels of property valuation, it should only make sense that insurance rates can vary significantly. For example, have the students imagine they are an insurance company insuring cars and have the following customers in front of them:
<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Type of Car</th>
<th>Driving Record</th>
<th>Other Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe</td>
<td>19</td>
<td>Porsche Boxster</td>
<td>Two speeding tickets, one rear end collision (his fault), one ticket for failure</td>
<td>Never took defensive driving in high</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>to maintain lane</td>
<td>school</td>
</tr>
<tr>
<td>Deon</td>
<td>40</td>
<td>Toyota Camry</td>
<td>One parking ticket 5 years ago</td>
<td>Took defensive driving in high school,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>has never missed an insurance payment</td>
</tr>
</tbody>
</table>

Do they want to charge these two drivers the same premium? What about deductibles? Why does it matter? Asking questions like this will get at the heart of this element. You can then apply the same rationale to property insurance. Health insurance gets a little trickier, however, because many health insurance policies are negotiated in large groups. For example, an employer might go to an insurance company and agree to enroll 300 employees for a certain rate. There is no way all 300 of those employees have exactly the same health status. Some will be very healthy and others will be sick. Some will be single and others will have families. In this case, the insurance company has to figure out some type of average to charge. Inevitably, some will overpay and some will underpay for their services.

Students will likely be able to make their own list of what can affect insurability for the items in the elements, but here’s a guideline to go by to help them or check their answers:

Health insurance: age, activity level, diet, pre-existing conditions, past history, city vs. rural lifestyle, where you live, frequency of past doctor’s visits, smoker vs. non-smoker, type of housing. Auto insurance: age, type of car, age/make/model of car, driving record, grades (if applicable), other types of insurance carried, distance driven, lease vs. own vs. rental.

Property insurance: value of property, own vs. rental vs. lease, number of people on property, special events

**SSEPF8 Describe how the earnings of workers are determined in the marketplace.**

There are several factors that go into determining earnings for workers in the marketplace. While very important, students should understand that employers look at more than just their resume of skills and education when determining their eligibility for a certain position. They also pay attention to their communication skills and may ask for references to determine if they have the other soft skills needed to be successful. Now more than ever, they are also looking at social media footprints. Workers should be aware of all these things in order to find success in their field.
a. Identify skills that are required to be successful in the workplace, including positive work ethic, punctuality, time management, teamwork, and communication skills.

Successful workers practice key behaviors known as soft skills. Soft skills every worker needs include: work ethic, punctuality, time management, teamwork, communication skills, and good character.

**Work ethic** refers to how seriously one pursues the expectations associated with employment. People with good work ethic practice all the soft skills listed above. When at work, people with good work ethic spend their time pursuing the goals of the job and producing excellent results to the best of their ability. Examples of poor work ethic include spending work hours pursuing personal interests, finding ways to avoid work, letting coworkers perform one’s assigned job functions, doing the minimum amount of work required to get by, and/or not following the rules outlined by the employer.

Actor Woody Allen once said, “Ninety percent of success is just showing up.” **Punctuality** means arriving on time and ready to work at the established time. Many employers of young workers lament how many lose their jobs due to lack of punctuality.

Most workers divide their work time among many different tasks and responsibilities. Workers with good **time management** skills efficiently organize their work hours to accomplish all objectives with minimal stress.

Today’s workplace is increasingly flat. This means rather than many layers of managers, many people work on teams led by peers or lead teams of peers. These teams are often cross-functional meaning they are composed of people with different skill sets. **Teamwork** is part of most jobs. Team members need to work well with each other, support each other, and perform their assigned tasks well.

Excellent verbal and written **communication skills** help workers perform their jobs well. This means knowing how to get your ideas across to someone else and using appropriate style, grammar, and/or spelling. These skills help everyone understand what is expected and keep people motivated. Poor verbal and written communications skills cause workers to be viewed negatively and can cause conflict. In dangerous or high-risk environments, poor communication skills could put lives at risk.

**Good character** refers to doing the right thing every time. Today’s workers often enjoy a lot of freedom in how and where they work. Working remotely requires discipline to stay on task and meet goals. Employers need workers who behave ethically. Poor character traits include stealing from an employer, lying, plagiarizing the work of others, and treating co-workers or customers poorly.

**Resources:**

SSEPF8 Describe how the earnings of workers are determined in the marketplace.

b. Describe the impact a person’s social media footprint can have on their career and finances.

The heart of this standard is for students to understand that anything that is public on social media is visible to your current or future employer. Employers may view you as a potential liability if you post controversial opinions, revealing photos, illegal activities, underage drinking, or inappropriate content. They may refuse to hire you, or may fire you if you become a liability to the company’s image or values. Some colleges are even checking their applicants’ social media footprint before they send acceptance letters. If you want to participate in social media, it is suggested that you keep your profile settings private and only visible to people who chose. However, this is not full-proof. Even if you send a private message, a SnapChat, or TikTok video, they can be saved or screenshoted for later. As a general rule, if you wouldn’t want your (future) boss to see it, don’t post it.

There are some positive aspects of social media for creating contacts and networking to find opportunities. LinkedIn is an example of a professional social networking site focused on career development. Some companies and recruiters use sites like this to find or screen potential candidates, and you may be able to increase your future earnings by having an updated profile. It is very important that you only post professional content on a site like this.

Teacher Note: Spending a lengthy amount of time on this content is not necessary to meet the needs of the standard. Having students dive into resources, articles, and real-life lessons-learned will be sufficient to meet the needs of describing the impact social media can have on one’s career and finances.

Resource:
Common Sense lesson plan, Who’s Looking at Your Digital Footprint?


LinkedIn article, What You Should Know About Your Digital Footprint, https://www.linkedin.com/pulse/what-you-should-know-your-digital-footprint/

NGPF Linked In lesson: https://docs.google.com/document/d/1sV7veSpdxUbmDK9vrLWjrKT37mjX9FnY UgWkNO7o1DY/edit
SSEPF8 Describe how the earnings of workers are determined in the marketplace.

- Evaluate job and career options and explain the significance of investment in education, training, and skill development as it relates to future earnings.

Economies—and marketplace demands—change as well. At some point in the 20th century, people who excelled at selling typewriters could probably have demanded a high salary for their work. Today, this expertise is no longer in demand, so work would be hard to get and at a much lower wage than it once was.

In general, the three factors determine the wage a worker can expect. The strength of demand for workers in the market, the number of workers supplying their labor in the market, and the amount of specialized knowledge, skills, training, and licenses required to do the job.

As a rule, the more knowledge, skills, education, and training a worker has, the higher the wage the worker can expect assuming their education applies to a field with strong employer demand. The direct relationship between education level and income is one of the strongest correlations there is in all of social science. Of course, there are exceptions and students love to point these out: “My [insert friend/family member] dropped out of [random education level] and he makes tons of money!” The reason those exceptions are so noteworthy is because of their rarity. For the vast majority of people, the best way to insure a healthy and stable economic lifestyle is through some sort of skill development. That said, it is important to stress with students that going to college is not always the path to success. Trade schools, internships, technical schools, and apprenticeships are also very useful ways of developing skills and employability.

The chart below from the Bureau of Labor Statistics shows the correlation between level of education and median weekly wages. It also shows how likely people in each education level are to be unemployed.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Median Usual Weekly Earnings ($)</th>
<th>Unemployment Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral degree</td>
<td>1,909</td>
<td>1.5</td>
</tr>
<tr>
<td>Professional degree</td>
<td>1,924</td>
<td>1.8</td>
</tr>
<tr>
<td>Master's degree</td>
<td>1,574</td>
<td>2.6</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>1,334</td>
<td>3.5</td>
</tr>
<tr>
<td>Associate's degree</td>
<td>963</td>
<td>4.6</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>899</td>
<td>5.5</td>
</tr>
<tr>
<td>High school diploma</td>
<td>809</td>
<td>6.2</td>
</tr>
<tr>
<td>Less than a high school diploma</td>
<td>626</td>
<td>8.3</td>
</tr>
</tbody>
</table>


Students can use a rational decision making model to evaluate different careers that they are interested in. They should look at what type training is required and the costs involved, and whether...
the future benefits and income will be worth the cost. In most cases, completing some form of training pays off, but students should factor in their personality, and family/personal goals along with financial goals, so that they don’t end up in a job that they hate and have to go back and retrain in a new skill. It may be helpful to have students take a personality test to help get ideas about careers that might fit them best. Then have them sit and really research the careers that interest them the most. Encourage them to look up how satisfied people in that field are, or talk to a family friend who is in the field. The more information they have about their potential choices, the better decision they can make, whatever that means to them. Remind students that moving too far in one direction toward a career and then having to backtrack is way more costly than doing the research up front.

Resource:

Bureau of Labor Statistics Occupational Outlook Handbook, provides ways to look up median pay of 818 jobs and sort them by a variety of variables including education levels as seen below.

https://www.bls.gov/ooh/occupation-finder.htm

The chart below shows the jobs the BLS is predicting will be the fastest growing career fields through 2030. The original data can be found at, https://www.bls.gov/ooh/fastest-growing.htm
Fastest growing does not necessarily mean the most pay, but it does indicate that there will be jobs available in these fields, which will impact future potential earnings. Students should understand that just getting an education is no guarantee of increased income, but variables such as economic conditions and overall labor market demand also play a role.

Students should understand there is a direct relationship between education and income levels and an indirect relationship between education levels and unemployment levels. Education, here, is used broadly to refer to any sort of increase in human capital including formal education, training, skill-development, internships, experience-based opportunities, or other options. It does not have to be a college degree to increase human capital and increase potential earnings. Many certificate programs offer specific skills in in-demand fields. Finally, give students opportunities to discover that just getting an education is no guarantee of increased income, but variables such as economic conditions and overall labor market demand also play a role.
SSPF9 Explain ways consumers are protected by rules and regulations.

At the Federal level, there are hundreds of laws, rules, and regulations that directly relate to consumers. Many citizens are unaware of just how many forms of consumer protection are available to them at any given moment. While the United States’ economy is largely based on free-market principles, many markets have significant government regulation on the seller side. Sometimes people complain about these regulations as being burdensome for business, but the reality is that many of these regulations were requested by consumers in the form of protection.

SSPF9 Explain ways consumers are protected by rules and regulations.

a. Describe how government agencies offer protection in banking, investments, borrowing, and buying goods and services.

The Securities and Exchange Commission (SEC), Federal Trade Commission (FTC), National Credit Union Association (NCUA), Federal Deposit Insurance Corporation (FDIC), and the Consumer Financial Protection Bureau (CFPB) are government agencies that offer protection in banking, investments, borrowing, and buying goods and services.

Each of these organizations have extensive websites that provide more than enough information for students to be able to describe their roles. Links to each of their pages are below.

- National Credit Union Association (NCUA), https://www.ncua.gov/
- Federal Deposit Insurance Corporation (FDIC), https://www.fdic.gov/
SSPF9 Explain ways consumers are protected by rules and regulations.

b. Compare different methods for lodging consumer complaints (e.g., Better Business Bureau, online methods, and direct contact with business).

This element has great potential for discourse, research, and practical application. The underlying issue is how a consumer should deal with a situation where they feel they’ve been wronged by a business. While one of the methods listed in this element is not necessarily better than another, it might be worthwhile to have students select when each of the options is most appropriate. For example, undercooked French fries are probably not a reason to file a complaint at usa.gov. On the flip side, if you discover a safety problem with your car and think it might affect more than just your car, it might be difficult to contact the company directly.

Better Business Bureaus are typically non-profit entities that exist to help consumers make informed decisions and to assist in getting solutions from companies that are members of their network. When they work perfectly, businesses in a particular community get recognized with stickers or medallions they place in their windows or on advertisements that let customers know the business is BBB approved. In general, a consumer should really contact the Better Business Bureau before making a purchase to see how previous issues have been handled. Georgia has four BBBS that can be linked to in the link below. BBBS are a great source for contacting and finding information about local businesses that participate in their network. In some cases, a Chamber of Commerce can serve a similar function.

Usa.gov/consumer-complaints is actually more of an information repository than an actual place to go to make complaints. However, the information found here is powerful for someone who needs to make a big complaint or a series of complaints against a large corporation or set of corporations. Some of the other information found in this element (BBB and contacting the business directly) are also suggested on this website.

Direct contact with a business is almost always the first step that should be taken in any situation. The usa.gov/consumer-complaints site has some templates for doing this. When teaching this to students, ask other ways they might go about contacting a business. Calling and emailing should be obvious, but the students may also mention filling out surveys, reviewing them online, texting issues to designated company text lines, or even calling out companies on social media. Some companies have even hired people to monitor social media looking for complaints so they can follow up with those consumers and try to resolve their issues. Taco Bell, for example, responded to one complaint on Twitter by offering a year's supply of tacos to a customer.

The ultimate takeaway is that students should understand there are appropriate avenues for dealing with legitimate consumer complaints and that contacting the business directly should be the first step. If that fails to get the desired result, however, there are other methods that can be used.

Resources:

USA.gov's Filing a Consumer Complaint, https://www.usa.gov/consumer-complaints

National Better Business Bureau (Georgia Locations): https://www.bbb.org/bbb
SSPF9 Explain ways consumers are protected by rules and regulations.

c. Explain the primary purpose of important consumer legislation (i.e., the Truth in Lending Act, Fair Debt Collection Practices Act, Fair Credit Reporting Act, the Equal Housing Act, and the Dodd-Frank Act)

These pieces of legislation specifically refer to credit and banking activities. Ensure students understand these are not the only pieces of consumer protection that exist, but a select example in one industry.

The Truth in Lending Act (1968) forces creditors to make all the terms of a loan available to the borrower prior to the loan being finalized. Perhaps most importantly, this legislation encouraged the standard use of annual percentage rates as the industry metric by which loans could be compared.

The Fair Debt Collection Practices Act (1977) sets the guidelines for behaviors debt collectors can use to try to get money from people. This includes, among other things, restricting the times of day and frequency a debt collector can call, the phone etiquette a collector must use, and restricting debt collectors from using threatening language to collect a debt. A complete list of the restrictions and guidelines can be found here: [https://www.ftc.gov/enforcement/rules/rulemaking-regulatory-reform-proceedings/fair-debt-collection-practices-act-text](https://www.ftc.gov/enforcement/rules/rulemaking-regulatory-reform-proceedings/fair-debt-collection-practices-act-text)

The Fair Credit Reporting Act (1970) is actually a broad series of legislation, rules, and procedures that are designed to protect a consumer’s information regarding their credit, borrowing history, and insurance transactions. The primary purpose of this act is to prevent anyone from providing false or misleading information about a consumer to another agency. This act has changed significantly over the years with changing technologies and rules for enforcing this act are frequently changed or updated to reflect new technological issues.

The Fair Housing Act (1968) prohibits housing discrimination on the basis of race, color, religion, sex, disability, familial status, or national origin. These factors cannot play into the sale, rental, or financing of housing.

The Dodd-Frank Act (also known as the Dodd-Frank Wall Street Reform and Consumer Protection Act) (2010) was a massive piece of legislation (over 2,000 pages) that established a variety of government agencies and industry practices designed to address some of the many financial practices that contributed to the 2008 economic collapse. It is not necessary to go over all of these changes with students in this class just so long as the students understand that the act was designed to reign in financial institutions. As of this writing, the act had been somewhat replaced by the House of Representatives with something called the Choice Act. The Senate is not expected to pass it, however. (6-19-2017). One criticism of the Dodd-Frank Act is that it made the bureaucratic oversight of the industry complicated and hard to follow, as seen in this graphic from the Economist:
The organizations in red were in existence prior to Dodd Frank and their basic functionality has not changed. The organizations in blue also existed prior to Dodd Frank, but now have some new powers or cross checks. The organizations in green were created by Dodd Frank. If your company was involved in basic retail banking, for example, you would be responsible for reporting to the Bureau of Consumer Financial Protection, FDIC, Federal Reserve (your direct regulator), and the Office of the Comptroller of the Currency as well as providing any reports requested by the Office of Financial Research. While this is great protection for consumers, some people – and banks especially – wonder if this is too much “red tape” to effectively function. The flipside to this is that there has always been a heavy degree of regulation in the banking sector and yet, despite that, banks have been able to come up with creative investment products and have substantial growth for decades.

**SSPF10 Explain sources of and protection against identity theft.**

The threat of identity and financial information theft is all around. Students need to be aware of the most common sources of identity theft so they can protect themselves from it. They also need to know what actions to take if it happens to them. Students know bits and pieces of this information, so this is a chance for class discussion to help students brainstorm each of these standards and then you can fill in the gaps.

**SSPF10 Explain sources of and protection against identity theft.**
a. Describe common ways identity theft happens including dumpster diving, skimming, phishing, stealing, and data breaches.

If you do not discard of important documents properly, people who dumpster dive may be able to steal your identity by looking through your trash. Usually they are looking for financial documents, credit card offers, insurance information, or anything else of value.

Credit card skimming is when someone steals your credit card information in an otherwise legitimate transaction. It could be a device that has been added to an ATM or gas pump that skims your number when you insert your card. It could be a waiter or waitress who scans your card when they take it to run it after your meal. There are even devices that can pick up your credit card information as you walk by through your wallet or purse. You can purchase a special RFID sleeve or wallet that can block transmissions to protect from these devices. You should be wary of non-bank ATMs, inspect devices to check for tampering or a piece of extra plastic that sticks out more than it should, and use your other hand to block the view as you insert your PIN. You should check your accounts often for any transactions that you don’t recognize and take immediate action.

Phishing is when someone sends you an email ploy to “fish” for your information. Usually the email looks like it came from a legitimate source like a bank or insurance company, but if you look closer, you can usually tell that the email address itself doesn’t look legitimate. If you can tell the email address doesn’t look right, delete it without even opening it. It may give you a link to click on, or may ask you to insert your username and password to verify your identity. Banks and other legitimate companies don’t usually send emails asking for information that they already have. If the email makes it sound like your data has been compromised or sounds fishy, try calling the number you have on file for the company (not the one the email provides) to verify that it is from them before you enter any personal information.

Data breaches can expose your sensitive information through several different means. The company could have been hacked by an outside party, could have had an insider steal the physical or digital information (employee, contractor, or customer), could have had a portable memory drive or device stolen, or could have had an unintended disclosure where sensitive information was posted or sent to the wrong party on accident. If your information is included in a data breach, the company is required to notify you.

Apart from the others, obviously your information could just be stolen outright. It could be by someone who you know when you left your bank statement or rejected credit card offer on your counter, or it could be by someone at a coffee shop on the open unsecured wifi when you decided to check your bank balance. In general, it is important that you use caution and are vigilant at all times regarding your personal information.

Resource:
A few more ways information can be stolen are listed on ID Watch Dogs, https://www.idwatchdog.com/11-ways-identity-theft-happens/
SSPF10 Explain sources of and protection against identity theft.

b. Describe ways to protect yourself from identity theft including shredding important documents, not opening attachments to unknown emails, not revealing personal information over the phone or email, using secure networks, regularly monitoring your credit report, changing passwords on accounts, and carefully managing social media.

Any document that has an account number, financial or banking information, travel itinerary, or your social security number should be shredded. You should shred important documents like credit card or insurance offers, paid billing statements, ATM receipts, sales receipts, paid utility bills, expired warranties, expired identification documents (driver's license, passport). Otherwise, someone could simply go through your trash and find out everything they need to steal your identity or open a credit card in your name.

You should not open attachments to unknown emails because opening it alone can allow someone to install something onto your computer that allows them to clone your computer or steal your data. If someone you do not know calls you, you should not reveal personal information over the phone. Sometimes they will tell you that they are from a company that you know, but if they ask you for information that they already have about you, you should take caution. Ask them to tell you something they should know about you from your account to verify that they are who they say they are. Sometimes, they will make it sound like you won something in an effort to get your information to send it to you. Remember, if it sounds too good to be true, it probably is. The same goes for email - you should never send personal information like passwords, banking accounts, or social security numbers via email.

It is important to always use secure networks. It is not a good idea to open up financial accounts while on public WiFi or a shared computer. On your home network, you should be using a high level of encryption on your own WiFi which can be added to your router. You should also have firewall and antivirus protection in your computer (which is sometimes built in) and you should never download items from suspicious sources.

You should regularly monitor your credit report by checking annualcreditreport.com at least once a year. You are legally entitled to a report from each of the three major credit reporting agencies, so some people split them up throughout the year so they can check their credit report every four months. You can also hire a service to monitor your credit report and send alerts if there is any unusual activity. Some of those services will also cover you if your identity is stolen and help you recover.

It is important to regularly change passwords on important accounts. Most experts recommend that they be changed at least once per year and that they should meet certain minimum requirements. Strong passwords should be at least 8 characters long, include numbers, special characters, and both capital and lowercase letters.
Students should **carefully manage social media** to make sure they don’t overshare or give out more personal information than they should. They should never post their address, phone number or current location on social media. They should be careful not to include identifying information in photos like their house number or the street name. There is even location data embedded in some types of photos. An excited new driver should never post a picture of their new driver’s license. If they wouldn’t want a random stranger to know the information, they shouldn’t post it. More information about how social media can affect earnings and employment is also under **SSEPF8b**.

Video from Commonsense.org: *Teen Voices: Oversharing and Your Digital Footprint*

**SSPF10 Explain sources of and protection against identity theft.**

- Describe steps that should be taken if a person is the victim of identity theft including getting replacement credit cards, freezing credit histories, alerting appropriate officials, and changing passwords.

When a person is a victim of identity theft, the first thing they should do is freeze any affected credit cards and request new card numbers. Then, they should report the issue to the FTC at [https://www.identitytheft.gov/](https://www.identitytheft.gov/) and file the appropriate paperwork to get assistance from the government in solving the dispute. Next, they can check their full credit report to see if there is anything they don’t recognize and report it immediately. Depending on the severity of the breach, they should call or visit the three credit reporting agencies online, Experian, Transunion and Equifax, to freeze their credit history so that no further accounts can be made in their name. While they are in the process of all of this, they should change their passwords for their financial institutions, email, and other important sites. Passwords should not be the same for multiple sites and should be at least 8 characters long and include capital and lowercase letters, numbers, and special characters. Make sure not to store passwords in an obvious location.

Resource:
Video explaining how Identitytheft.gov helps people file a report and recover from identity theft.
[https://www.youtube.com/watch?v=0GGDKL7VPO](https://www.youtube.com/watch?v=0GGDKL7VPO)
SSPF10 **Explain sources of and protection against identity theft.**

d. Describe the basic characteristics of investment scams such as Ponzi schemes, pump and dumps, and “advance fee” scams and how to avoid them.

It is important for students to be able to recognize and avoid certain types of investment scams.

**Ponzi schemes** are investment scams that offer very high returns with very little risk. Often these schemes include collecting from new investors to pay past investors rather than from actual returns. Usually the person orchestrating it will try to cash out before the whole pyramid falls apart. Students should understand that risk and return are directly related, and that they should be wary of any investment opportunity that “guarantees” certain returns. All investment has risks involved and those risks should be presented honestly.

Source: [https://sites.google.com/site/bernardmadofffraud/ponzi-scheme-explanation](https://sites.google.com/site/bernardmadofffraud/ponzi-scheme-explanation)

“**Pump and dump**” is a term that relates certain types of speculative investments like stocks and cryptocurrency. In the stock market, certain stocks’ prices are pumped up from rampant hype beyond realistic fundamental valuations. The pump can be started by large market makers, influencers or by members on internet forums. Once it gets to an unsustainable level, people will start to dump the stock to get their returns out as quickly as possible, causing the price of the stock to plummet. The most famous recent examples involved GameStop and AMC stocks from early 2021. Cryptocurrency markets are famous for pump and dump schemes as well.
This is a good place to teach the students the old adage: “If something sounds too good to be true, it probably is.” **Advance fee scams** usually contact you out of the blue saying that you won, inherited, or are entitled to a large sum of money. After they have gotten you really excited, they tell you they need you to send an upfront fee to them to be able to collect the money. Maybe it’s for the shipping cost, maybe it’s the Western Union fee, maybe it's because they say they need it to verify your account, so they can send it to you - they will come up with all kinds of plausible reasons why they need you to send them money. Don’t. If you legitimately won something, they will show up in person, or send you a verified check. Don’t fall for this one. Other famous advance fee scams have involved: money back guarantees on scholarships, asking for your credit card details to confirm your eligibility for their program, offering a free invitation to an online seminar, or an email from an individual promising great riches for a small down payment.