UNIT 12 - INVESTMENT & SAVINGS PLANNING (11 Days)

A comprehensive financial plan requires understanding the various types of investment vehicles that can be used for short, medium and long term goals, as well as income from pensions and social security. As a background to all investing and saving, however, one must first understand the relationship between risk and reward.

EPF.18 The student will demonstrate knowledge of investment and savings planning by
b) comparing and contrasting investment and savings options
(BUS6120.107)
Day 1 Risk and reward
Day 2 Calculating outcomes

EPF.18 The student will demonstrate knowledge of investment and savings planning by
c) comparing costs and income sources for investments
(BUS6120.108)
Day 1 Where can the money come from?
Day 2 What does it cost to save?

EPF.18 The student will demonstrate knowledge of investment and savings planning by
d) examining the fundamental workings of Social Security and the system's effects on retirement planning
(BUS6120.109)
Day 1 Examining Social Security

EPF.18 The student will demonstrate knowledge of investment and savings planning by
e) contrasting alternative retirement plans
(BUS6120.110)
Day 1 IRAs, 401(k)s, pensions and annuities
Day 2 Help from your employer

EPF.18 The student will demonstrate knowledge of investment and savings planning by
f) describing how the stock market works
(BUS6120.111)
Day 1 What are stocks? The difference between speculating and investing
Day 2 What makes a stock rise or fall?

EPF.10 The student will develop consumer skills by
i) accessing reliable financial information from a variety of sources.
(BUS6120.050)
Day 1 Evaluating sources of information

Evaluation Day

<u>EPF.18 The student will demonstrate knowledge of investment and savings planning by</u>
b) comparing and contrasting investment and savings options

Day 1 - Risk and Reward

Content Knowledge

Before making any investment or saving decision, it is important to recognize its potential risks and rewards and consider that in making your decision. Rates of return and interest rates provide a way that individuals can assess risk. The higher the potential reward (the higher the rate of return or the interest paid out), the greater the risk. Thus, the safer the investment, the lower will be the reward. High returns are a necessary inducement paid to people in return for their willingness to take on significant risk. Savings vehicles such as passbook savings generally pay little interest, because they are very liquid – that is, they can be easily converted into cash. Since people are sacrificing very little opportunity to spend by leaving the funds in passbook savings, not much inducement is needed to encourage people to hold their funds this way.

Vocabulary
Convenience – This is a sense of the relative ease with which a financial instrument or institution can be accessed in terms of time and location.
Liquidity – This is a measure of how quickly a financial instrument can be converted to cash.
Reward – The benefit or return gained from an investment.
Risk – The chance of losing money.

Virginia Board of Education Framework
Savings options include
- savings accounts
- certificates of deposit
- money market funds

Some investments options include
- stocks
- bonds
- government savings bonds
- mutual funds
- real estate
- retirement plans

Factors used to compare savings and/or investment options include
- risk
- reward
- convenience
- liquidity

Teaching Tips

1) Introduce the relationship between risk and reward, and the concept of liquidity. In general, if funds are being invested for a goal that is more distant in time, riskier alternatives may be appropriate, since there is more time to recover from possible losses. Discuss this idea with respect to short, medium, and long term goals that students identified at the start of the previous Unit 11 – Goals, Saving, Interest and Banking.

2) An alternative to the above lesson introduction can be the Risk and Return Grab Bag (Bell Ringer Activity from the Atlanta Federal Reserve Bank) can be used.

3) Have students research the average rate of return for a number of investment options. These can include passbook/statement savings at a local financial institution, money-market funds at local financial institution, certificate of deposit (one-year maturity) at a local financial institution, a 1-year U.S. Treasury security, a U.S. savings bond, the stock of a familiar corporation, and a mutual fund based on the S&P 500.

4) The researched information can be used as a review of the PACED decision making model from the previous Unit. Students should create a decision-grid and follow the steps below.
    a. Define the problem at the top *(Which investment option should I choose to meet X goal?),*
    b. List the various alternatives along the vertical axis
    c. List the criteria characteristics of risk, reward, liquidity, and convenience along the horizontal axis. *Keep the focus on the goals that they identified at the start of the previous Unit.*
    d. Evaluate the various alternatives, using the criteria characteristics to determine what may be the best alternative for them.
    e. Students should explain their choices, identifying the trade-offs for each and their personal opportunity cost *(the next best alternative).* Goals having different time frames should result in different choices.

5) If you have already recently used the PACED model with your class and prefer a more active alternative, lesson 9: Building Wealth Over the Long Term in <u>Learning, Earning and Investing for a New Generation</u> can be used instead. This lesson can also be found on Virtual Economics 4.5.

6) A student's personal tolerance for risk is also a factor to consider in making their investment decisions. The risk tolerance online assessment cited below could be assigned for homework or used as an extension activity.

Lessons and Resources

<u>Financial Fitness for Life Grades 9-12</u> Lesson 21: There is No Free Lunch in Investing

<u>Learning, Earning & Investing for a New Generation</u> Lesson 9, Building Wealth Over the Long Term:

Khan academy on the difference between stocks and bonds (9:20)
https://www.khanacademy.org/economics-finance-domain/core-finance/stock-and-bonds/stocks-intro-tutorial/v/bonds-vs-stocks

Investment Risk Tolerance Quiz, http://njaes.rutgers.edu/money/riskquiz/

Risk and Return Grab Bag (Bell Ringer Activity - Atlanta Federal Reserve Bank)
https://www.frbatlanta.org/-/media/documents/education/lessons-and-activities/bell-ringer/risk-and-return-grab-bag.pdf

The Pros and Cons of Saving and Investing (Atlanta Federal Reserve Bank)
https://www.frbatlanta.org/-/media/documents/education/publications/extra-credit/2016/fall/lessons-and-activities/high-school/personal-finance/saving-and-investing-activities/extra-credit_pros-and-cons-of-saving-and-investing-activity.pdf

Day 2 - Calculating outcomes

Content Knowledge

Too often people make financial decisions by looking at a single aspect of the investment – rate of return or risk. Consequently, they may not reach their financial goal. By focusing on both the impact of the rate of return and the risk/reward trade-off, people can make more informed investment decisions.

Vocabulary
Bonds - A certificate of indebtedness issued by a government or a publicly held corporation, promising to repay borrowed money to the lender a fixed rate of interest and at a specified time. (Optional: Bonds are rated according to their perceived risk. AAA is the highest rating. B- or B3 is the lowest for a bond of a firm or government that is not in default.)
Certificates of Deposit (CD) - A (interest bearing) certificate issued by a bank to a person depositing money in an account for a specified period of time (often six months, one year or two years). A penalty is charged for early withdrawal from CD accounts.
Money Market Account - An interest-bearing account similar to a checking account. Deposits may be added at any time; some money market accounts limit the withdrawals depositors may make without paying a penalty. Also known as money market deposit account.
Mutual Funds - A pool of money used by a company to purchase a variety of stocks, bonds or money market instruments. Provides diversification and professional management for investors.
Real Estate - Property such as land, houses and office buildings.
Stocks - An ownership share or shares of ownership in a corporation.
Treasury Securities – Bonds issued by the United States Treasury to investors when the federal government borrows money. (Treasury bills have maturity of one year or less. Treasury notes have maturity of one to ten years. Treasury bonds have maturity of more than 10 years.)

Teaching Tips

1) This is an extension of the Day 1 activity. Have students use average rates of return for all investment vehicles suggested in the Day 1 activity. It does not matter if students have slightly different rates of return, as they may be using different financial institutions, different stocks, etc. Once students have gathered the information, make a list of the instruments and rates of return on the board. Have students calculate doubling time for a $2,000 investment for each instrument. This doubling time can be determined by using the Rule of 72. Divide 72 by the rate of return to determine the time it will take the investment to double. Have students also estimate the number of times their investment should double between now and a retirement age of 70.

2) Ask: Which investment will potentially provide you with the best retirement fund. Why? What are the advantages and disadvantages of each instrument in terms of return and risk, based on what you have already learned? Can you provide examples or hypothetical situations? What would you do as an individual investor?

3) Discuss the results of their risk tolerance assessments, contrasting the differing results among students.

Lessons and Resources

Personal Decision Making: Focus on Economics Lesson 14: Savings and Personal Investment: If You're So Smart, Why Aren't You Rich?

Learning, Earning, and Investing for a New Generation Lesson 1: Why Save

Your Credit Counts Section 5: Strategies for Wealth Building

Asset Management – lessons and video
http://www.pbs.org/teachers/access-analyze-act-economy/curriculum/assets/asset-management

Khan Academy tutorial on how to compare investments by calculating return on capital
http://www.khanacademy.org/video/return-on-capital?playlist=Finance

<u>EPF.18 The student will demonstrate knowledge of investment and savings by</u>
c) comparing costs and income sources for investments

Day 1 - Where can the money come from?

Content Knowledge

Many people plan to begin saving later in life, but never do. Too often individuals will put their hopes for savings on sources of funds that are unpredictable as to timing and size.

Vocabulary
Gifts – A voluntary present of money or some other valuable asset.
Inheritance – Money or other assets given to a party upon one's death, also known as a bequest.
Market Gains – Proceeds from previous investments in the form of interest payments, dividends (regular distribution of profits) or capital gains (realized income from selling an investment at a higher price than was paid for it).
Savings - Money set aside for a future use that is held in easily-accessed accounts, such as savings accounts and certificates of deposit (CDs)

Virginia Board of Education Framework
Sources of income funds for investing include
- savings
- gifts
- inheritances
- market gains.

Cost to consider when investing include
- finance charges and fees
- opportunity costs

Risks to consider when investing include
- market losses
- interest rate risk.

Teaching Tips

1) Have the students examine the sources of funds for investing. Savings can be the easiest as they depend on income and can be as predictable as one wants. Gifts and inheritance can be unpredictable both as to frequency and size. Market gains can fall between these extremes. Some investments produce regular payments either as dividends or interest payments, while others only produce capital gains which are subject to swings in the market and perceived value of the investment. And one can lose money invested in the market as well.

2) If readily available, students can use their research from Day 2 of Unit 11 *(the amount of money it would take to reach various goals).* Also, using the information from the previous day, have students calculate how long it will take to accumulate enough money

to reach various goals using the alternatives from the recent PACED chart. Have students vary the age at which they begin saving or investing to see the effect on goal attainment.

Lessons and Resources

Financial Fitness for Life (Grades 6-8) Lesson 12: Types of Savings Plans and Investments

Rate of Return – powerpoint and lesson
http://educateiowa.gov/index.php?option=com_docman&task=cat_view&gid=1025&limit=5&limitstart=0&order=hits&dir=ASC&Itemid=4434

Day 2 - What does it cost to save?

Content Knowledge

Investors are often captivated by low fees, or low loads and end up paying more for an investment than they anticipated. This combined with natural investment volatility, can result in a lower nest egg for future use. Students need to be able to identify the costs associated with various investments and to understand how costs affect return on an investment by reducing the principal or the return. While no-load funds offer clear advantages, loads are not necessarily a “bad” thing. This is because no-load funds typically have higher annual costs, on average. That means, depending on how long you own the fund, you may be better off with a load.

Vocabulary
Finance Charges/Fees - The total cost of credit, including interest and transaction fees.
Interest Rate Risk - The chance that interest rates may change (upward) while the saver is "locked in" to a (lower) rate for a time deposit (a CD, for example) or a bond. Also the chance that interest rates may change (downward) while a borrower is “locked in” to a (higher rate) on a loan.
Load – A fee charged for purchasing (front-end) or selling (back-end) shares of a mutual fund. Loads are usually calculated as a percentage of the amount of the transaction. Some mutual funds are no-load funds.
Market Gains/Losses – The loss of value of an investment due to market conditions.

Teaching Tips

The teacher will want to examine and explain the various types of fees that some investments may carry. This will include annual maintenance fees, loads, and per transaction fees.

Hypothetical:

Fund A Fund B

No load	5 % front-load
Annual fee 1.5%	Annual fee .75%
Initial investment - $10,000	$10,000
Rate of return 6%	Rate of return 6%
Ending Balance Year 1	
Investment + 6% - 1.5%	Investment – 5% + 6% - 0.75%
$10,441	$9,994.47
Ending Balance Year 2	
Preceding balance + 6% - 1.5%	Preceding balance + 6% - 0.75%
$10,901.45	$10,514.68
Ending Balance Year 3	
Preceding balance + 6% - 1.5%	Preceding balance + 6% - 0.75%
$11,382.20	$11,061.97
Ending Balance Year 4	
Preceding balance + 6% - 1.5%	Preceding balance + 6% - 0.75%
$11,884.16	$11,637.75
Ending Balance Year 5	
Preceding balance + 6% - 1.5%	Preceding balance + 6% - 0.75%
$12,408.25	$12,243.49
Ending Balance Year 6	
Preceding balance + 6% - 1.5%	Preceding balance + 6% - 0.75%
$12,955.45	$12,880.76
Ending Balance Year 7	
Preceding balance + 6% - 1.5%	Preceding balance + 6% - 0.75%
$13,526.79	$13,551.20

By the end of year 7, the difference in annual maintenance fees more than offsets the load.

Lessons and Resources

EconEdLink.org The Five Stages of Investing
https://www.econedlink.org/resources/the-five-stages-of-investing/

Readings
Explain the Cost of Investing in Mutual Funds
http://personalfinance.byu.edu/content/investments-6-mutual-fund-basics-1

Teaching Resources and Lesson Plans from the Stock Market Game https://vcee.org/smg-classroom-resources/

<u>EPF.18 The student will demonstrate knowledge of investment and savings planning by</u>
d) examining the fundamental workings of Social Security and the system's effects on retirement planning

Day 1 - Examining Social Security

Content Knowledge

The Social Security system is a key part of the U.S. financial support system, providing benefits for retirees, the disabled and the survivors of workers. Everyone needs to understand what it means for them during their working lifetimes (how FICA affects their gross pay) and in retirement (how much income they can expect to receive from social security).

Vocabulary
Benefits – monetary payments paid to workers who have contributed to the system when they are retired or disabled or to their survivors in case of death.
Federal Insurance Contributions Act (F.I.C.A.) - A federal system of old-age, survivors, disability and health-care insurance (Medicare) which requires employers to withhold (or transfer) wages from employees' paychecks and deposit that money in designated accounts.
Social Security System - A federal system of old-age, survivors', disability and hospital care (Medicare) insurance which requires employers to withhold (or transfer) wages from employees' paychecks and deposit that money in designated accounts.

Virginia Board of Education Framework
Social Security was designed as a safety net to provide income to older people when they could no longer work.

Social Security benefits are determined by the amount an individual has contributed to the system and the individual's age when claiming benefits. Social Security benefits include disability and survivor benefits, as well as retirement income.

For retirement planning, Social Security payments are likely to be less than income has been. Most retirees will need to supplement through savings, investments, continued employment, or adjusted lifestyle.

Teaching Tip

1) The video cited below can be used as an introduction. Upon completion of the video, ask students key questions about how social security operates, how it is structured, and who can receive benefits and under what conditions.

Lessons and Resources

Social Security Educators Toolkit (includes two lesson plans, infographics, and assessments) https://www.ssa.gov/thirdparty/materials/pdfs/educators/05-10016_Educator%20Toolkit.pdf

EdSitement Lesson 2: The Social Security Act
http://edsitement.neh.gov/lesson-plan/social-security-act

Lesson Plans on Aging Issues – The Baby Boomers and Social Security
http://www.ithaca.edu/gerontology/schools/pdf/Baby%20Boomers%20and%20Social%20Security.pdf

EPF.18 The student will demonstrate knowledge of investment and savings by
e) contrasting alternative retirement plans

Day 1 - IRAs, 401(k)s, Pensions and Annuities

Content Knowledge

Individuals who are fortunate to have some form of retirement benefits through their employer are no longer restricted to traditional pensions, and defined-benefit pensions are becoming rarer. In some circumstances, individuals can augment their retirement with IRAs. And many employers offer 401(k) plans. Individuals are increasingly responsible for making choices that will affect the funds available for their retirements.

Vocabulary
401(k) – A type of retirement savings account allowed in the United States. This account is funded a variety of ways involving contributions from the employee and employer. In some circumstances, funds are contributed pre-tax and the proceeds are taxed upon withdrawal.
Annuity – A financial contract where an individual makes a series of payments over time. At an agreed-upon time, the individual stops making payments and begins to receive payments, either for the rest of their life or for a defined period of time.
Individual Retirement Account (IRA) - An account in which an individual may set aside earned income in a tax-deferred savings plan for his or her retirement. There are two types of IRAs, traditional and Roth, each with its own qualifications and rules governing contributions and withdrawals.
Keogh Plan - A federally-approved, tax-deferred savings program for self-employed people, allowing them to set money aside for their retirement.
Pension Fund - An account established by a business to fund retirement benefits for its workers. Pension funds invest in stocks, bonds, mutual funds and real estate. Funds can either be defined benefit (the amount withdrawn upon retirement is set in advance – frequently as a percentage of salary); or defined contribution – where the amount contributed is defined and the amount withdrawn is dependent upon market performance and investment choices.
Pre-tax – A portion of the wage or salary that has not had taxes withheld prior to being allocated to a retirement plan or other approved benefit.

Virginia Board of Education Framework
Some retirement plans currently available include

- Individual Retirement Account (IRA)
- Tax-sheltered annuity (TSA)
- Keogh plan
- annuity
- employer retirement plan
- public pension plan.

Evaluating retirement plans requires knowledge of the costs and benefits of each type. For example, one cost of an IRA is the severe early-withdrawal fee, which is countered by the benefit of contributions reducing taxable income.

Teaching Tips

1) The teacher should spend time with the students discussing and constructing a table or chart as shown below.
2) Have students complete a costs and benefits comparison of each retirement investment option.

Retirement Investment	**Who contributes money**	**Risk**	**Payout**	**Tax Issues**
401K - retirement savings plan sponsored by an employer.	Employees contribute a percentage of their income into the fund. Many employers will will contribute matches to the employees contributions.	Employees can control how their funds are invested. Most plans offer a spread of mutual funds composed of stocks, bonds, and money market investments. The most popular option tends to be target-date funds, a combination of stocks and bonds that gradually become more conservative as you reach retirement.	No access to your funds before age 59 ½ or if you leave your employer at age 55 or older. If you dip in early, expect a 10% penalty — on top of the usual tax bill.	Contributions are made on pre-tax dollars. Withdrawals are subject to income tax.
403B - also known as a tax-sheltered annuity (TSA) **plan**, is a retirement **plan** for certain employees of	Employees contribute some of their salary to the plan. The employer may also contribute to the plan for employees.	Employees can control how their funds are invested. Most plans offer a spread of mutual funds composed of stocks, bonds,	Most plans allow employees to take money out of the plan when they: reach age 59½; have a severance	There are significant tax advantages for participants in a 403(b), including pre-tax contributions to a 403(b) plan

public schools, employees of certain tax-exempt organizations, and certain ministers.		and money market investments. The most popular option tends to be target-date funds, a combination of stocks and bonds that gradually become more conservative as you reach retirement	from employment; become disabled; die; or encounter a financial hardship. If an employee is fully vested, he or she may elect to withdraw the accumulated benefits and be subject to certain tax liabilities and/or penalties, or transfer it to an Individual Retirement Account (IRA) or, in some cases, to another employer plan.	and earnings on these amounts are not taxed until they are distributed from the plan.
Annuity - is a financial product that pays out a fixed stream of payments to an individual, primarily used as an income stream for retirees.	Annuities are created and sold by financial institutions, which accept and invest funds from individuals	While variable annuities carry some market risk and the potential to lose principal. The lump sum put into the annuity is **ill**iquid and subject to withdrawal penalties.	Annuities can be created so that, upon annuitization, payments will continue so long as either the annuitant or their spouse (if survivorship benefit is elected) is alive. Alternatively, annuities can be structured to pay out funds for a fixed amount of time, such as 20 years, regardless	Annuity earnings are subject to income tax when payouts are received. If taken out before age 59½, may be subject to a 10% IRS penalty.

			of how long the annuitant lives. Furthermore, annuities can begin immediately upon deposit of a lump sum, or they can be structured as deferred benefits.	
Traditional IRA - a way to save for retirement that gives you tax advantages.	You make contributions to a traditional IRA which may be fully or partially deductible, depending on your circumstances.	General market risk.	Withdrawals can begin at age 59 ½, but withdrawals made prior to that age are generally subject to a 10% penalty.	Earnings are tax-deferred until withdrawn.
Pension - a retirement account that an employer maintains to give you a fixed payout when you retire.	Your employer makes contributions into your cash balance pension.	A pension that includes cliff vesting typically means that if you leave the job in five years or less, you lose all pension benefits. A pension that includes graded vesting you will receive a minimum of 20% of your benefit if you leave after three years and ultimately receive 100% after seven years of employment.	Your payout typically depends on how long you worked for your employer and on your salary. When you retire, you can choose between a lump-sum payout or a monthly "annuity" payment.	You will pay income taxes upon receiving payouts from your pension.

Keogh Plan - tax-deferred pension plan available to self-employed individuals.	The self-employed individual will contribute a percentage of profit into the plan.	General market risk. Also, Keogh plans have more administrative burdens and higher upkeep costs 401(k) plans, but the contribution limits are higher.	Funds can be accessed as early as age 59.5, and withdrawals must begin by age 70.5.	You will pay income taxes upon receiving payouts from the plan.

Lessons and Resources

Retirement Planning Project (Atlanta Federal Reserve Education)
https://www.frbatlanta.org/-/media/documents/education/publications/extra-credit/2015/spring/lessons-and-activities/high-school/personal-finance/project-based-learning-for-personal-finance-classroom/projects/10-retirement-planning.pdf
PBS Frontline: How Much Will You Have When You Retire?
http://www.pbs.org/wgbh/pages/frontline/teach/retirement/lesson1.html

Reading
Why We Can All Learn a Lesson From Michael Jackson (estate planning)
http://retiresecure.com/why-we-can-all-learn-a-lesson-from-michael-jackson/

Day 2 - Help from your employer

Content Knowledge

Some employers offer a monetary match for funds the employee contributes toward a retirement plan. Too many people choose not to participate in employer match programs. Essentially, they choose to not collect part of their salary.

Teaching Tips

1) This is an extension of the previous day's activity. Have students calculate the value of employer contributions and employer matching programs for various types of retirement investments. Ask students what the opportunity cost of not participating in an employer matched plan means in terms of their total compensation – how much are they really making if they participate fully vs. not participate at all?

2) Refer to the principles of economic reasoning to understand why people fail to act to obtain the benefit of matching funds from their employers. See Unit 11, Day 1. Why do people fail to do what they know they should do? (*Because the effects of many of our decisions are felt in the future, and humans have a natural tendency to deal with needs that have immediate impact rather than taking time to arrange for benefits that will be experienced in the future.*) Discuss how students can set aside time to address their future financial needs on a regular basis. Keeping a picture that represents fulfillment of a future goal, in a prominent place, may help one to take action towards that goal.

<u>EPF.18 The student will demonstrate knowledge of investment and savings by</u>
f) describing how the stock market works.

Day 1 - What are stocks? What is the difference between speculating and investing?

Content Knowledge

Understanding what stocks are and how the stock market works will help students better evaluate investment decisions.

Vocabulary
Broker – an individual license to buy and sell stocks on behalf of others.
Capital Gains - A profit realized from the sale of property, stocks or other investments.
Dividend - A share of a company's net profits paid to stockholders.
Exchange – A place for the buying and selling of stocks, bonds or other investments
Investing - The process of putting money someplace in the long-term with the intention of making a financial gain. Investment possibilities include stocks, bonds, mutual funds, real estate, and other financial instruments or ventures.
Specialist – An individual who works at an exchange and whose job is to make a market when none exists, essentially buying stocks when there is no buyer and selling stocks when there is no seller.
Speculating – The process of putting money someplace in the short-term with the intent of making a profit from market movement.
Stock - An ownership share or shares of ownership in a corporation.

Virginia Board of Education Framework
Companies that wish to raise funds for growth can borrow money or sell shares (stock) of their company. To issue stock, firms generally go to investment banks that put together a prospectus with information for potential investors, help determine the market price of the offering, and issue the stocks in the primary market, where they are purchased. This provides businesses with funds to finance growth.

A stock exchange where buyers sell their shares is called the secondary market. Trades here are conducted between buyers; none of the money goes to the company.
In the secondary market, for every buyer there must be a seller. If there is no buyer or seller, a "specialist" at the stock exchange is required to "make a market." Buyers and sellers may work through a local broker who works through a floor broker at the stock exchange, or they may place orders for trades online. In either case, a commission is charged to pay the costs of the brokerage firms and the stock exchange.

When companies make profits, they may keep the profits to help them grow or they may share the profits with shareholders in the form of dividends. Shareholders can make money through dividends or through capital gains. A capital gain occurs when one sells a share for more than one paid for it. Stock prices are determined by supply and demand based on investor expectations. If a company is expected to be profitable in the future, demand for its shares rises and the price rises; when a company's future looks less-than-profitable, demand decreases and the price falls.

Teaching Tips

1) The teacher may want to refer to material covered in Unit 5 which addresses what stocks are, how they are created and traded, and why people choose to invest in them. Time should also be spent explaining the difference between investing and speculating.

2) One activity is to have students select stocks and begin to track the movement of the stock over the period of a week or two, or longer. Students can use online or traditional media as a way to find prices. Students should be encouraged to track the stock by creating a graph using Excel or other spreadsheet software.

If students have not already used an online stock market simulation, this would be an appropriate time to introduce such a simulation.

Lessons and Resources

Learning, Earning & Investing for a New Generation Lesson 3: What is a Stock?, Lesson 4: Finding Financial Information Online, and Lesson 7: What are Stock Markets?

EconEdLink.org Developing a Financial Investment Portfolio
https://www.econedlink.org/resources/developing-a-financial-investment-portfolio/

Teaching about the Stock Market – Lesson Plans and Teacher Materials
http://www.vcee.org/Teacher_Material

EconEdLink.org NYSE Made Easy
https://www.econedlink.org/resources/nyse-made-easy-lesson-plan/

Video
Understanding Capital Markets - Tools for Enhancing The Stock Market Game™: Invest it Forward™, Episode 1 (5:32)
https://www.stlouisfed.org/education/tools-for-enhancing-the-stock-market-game-invest-it-forward/episode-1-understanding-capital-markets

Simulation
The Stock Market Game in Virginia – Student teams manage a $100,000 portfolio and can compare their results with other teams in the region and the state. Recognition is given to the teams with the highest portfolios after a stated period of time (traditionally 10 weeks.)

http://www.vcee.org/programs-awards/view/4
The Stock Market Game
http://www.smgww.org/

Day 2 - What makes a stock rise or fall?

Content Knowledge

The stock market reacts to reality and to expectations. Students can benefit from understanding the difference and from distinguishing examples of each.

Virginia Board of Education Framework
Stock prices are determined by supply and demand based on investor expectations. If a company is expected to be profitable in the future, demand for its shares rises and the price rises; when a company's future looks less-than-profitable, demand decreases and the price falls.

When the overall economy is robust and growing, people become optimistic about prospects for business and the stock market goes up. Likewise, when investment interest rates fall, the stock market generally rises. When interest rates rise, the market goes down. When the overall economy is in decline, investors lose confidence and the stock market goes down.

Teaching Tips

1) The teacher should pick a stock and ask: What is likely to happen to demand for the stock (and its price) for each of the following headlines:

> Company reports 50% increase in sales.
> Company to pay all-time high dividend to stockholders of record at end of last month.
> Company being sued for damages – injuries to children by product.
> Company largest supplier files for bankruptcy – supplies uncertain.
> Company to open new store in largest shopping malls.
> Fifty new retail outlets open in largest cities of China, India.
> Lawsuit against company dismissed, appeal promised.
> New use found for company's oldest product – may cure cancer.

In each case, ask students to explain why they think the action will take place. If helpful to student understanding, this is an excellent opportunity to use a supply and demand graph to review events that cause moves along the lines or cause the line to shift. Draw a supply/demand graph where it can be seen by the class. Adjust the chart for each of the headlines above (move one of the curves, move both of the curves or move along the curves)

2) Students should then be encouraged to use resources available to look for news items about known companies and suggest whether they think this would make the company more attractive or less attractive to investors and provide an explanation.

Lessons and Resources

Learning, Earning & Investing for a New Generation Lesson 14: How are Stock Prices Determined?

EconEdLink.org   Here's Your Chance to Make Millions in the Stock Market
https://www.econedlink.org/resources/heres-your-chance-to-make-millions-in-the-stock-market-part-1/

EconEdLink.org   Stock Market Price History
https://www.econedlink.org/resources/stock-market-price-history/

EPF.10i The student will develop consumer skills by
i) accessing reliable financial information from a variety of sources.

Day 1 - Evaluating sources of information

Content Knowledge

Just as there are news sources that can't be trusted or may not present the entire picture, some financial sources are more reliable than others. Students need to be able to evaluate sources of information before relying on them to help make investment decisions.

Virginia Board of Education Framework
Data may be gathered from print, electronic, and verbal sources such as
• newspaper financial pages
• Internet sources
• investor services and newsletters
• financial magazines
• brokers
• banks
• credit unions
• financial advisors
• annual reports.

Financial data must be evaluated for reliability:
• Some information sources have an incentive to sell a product.
• Statistical data can be misrepresented, for example, to imply cause and effect.
• Some information sources are opinion programs, and others are news programs.
• Some advisors are more skilled than others.
• Past performance is no guarantee of future performance.
• It is the consumer's responsibility to determine the reliability of the information.

Teaching Tips

1) This is an extension of the previous day. Ask: What makes a source of information reliable? Why do you believe things you are told by some people and not by others? Can you apply some of these "filters" to what you read or hear about financial information?

Lessons and Resources

Econedlink lesson: Evaluating Websites.
https://www.econedlink.org/resources/cybersecurity-and-economics-evaluating-websites/
Investing Research sites
https://finance.yahoo.com/

https://www.marketwatch.com/

Reach out to VCEE or your local affiliated Center director to request a workshop on Economics, Personal Finance, and Cybersecurity. You can reach Stephen Day at shday@vcu.edu.

EVALUATION DAY