

# SESSION 18:

## Saving and Investing

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### Session Description

Students will participate in hands-on activities about saving and investing.

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### Talking Points

#### *Saving*

1. Saving is allocating part of one's current income toward the purchase of goods and services in the future (i.e., it is spending on future goods and services).
2. Saving is hard to do because it goes against people's natural time preference to enjoy benefits now and pay costs later.
3. Saving is good to do because there is a monetary reward: interest (a payment typically based on a percentage of the amount saved).
4. The simple interest formula shows how much interest (I) an initial amount of savings (the principal, P) will earn at a fixed interest rate (r) over a specific amount of time (t, usually years):  $I = prt$ .
5. The compound interest formula shows how much an initial amount of savings (P) will be worth (A) at the end of some number of years (t) if the annual interest rate is r and n is the number of times interest is compounded during the year:  
 $A = P(1 + \frac{r}{n})^{nt}$ .
6. Based on compounding, one can determine the number of years it would take an initial amount of savings to double. This doubling can be approximated by the Rule of 72: Time to double =  $72/r$ , where r is the interest rate expressed as a whole number.
7. Because of compounding, the earlier a person starts to save, the greater the impact on the amount saved.

#### *Investing*

1. The rate of return on an investment, or asset, over a year is the return (any income generated plus any change in the market value of the asset over the year) divided by the market value of the asset at the beginning of the year.
2. The rate of return on an asset can vary from period to period.

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3. The expected rate of return is an average of the actual rates of return over several periods and is typically expressed as an annual rate of return.
4. The greater the variability of the actual rate of return from the expected rate of return, the greater the risk associated with the asset.
5. Because people tend to be risk averse (i.e., they wish to avoid risk), they usually must be paid a higher expected rate of return on riskier assets.
6. Risk can be reduced by
  - a. choosing assets with lower variability,
  - b. time, and/or
  - c. diversification (holding several different types of assets).
7. The PACED decision-making model can be applied to the investment decision:
  - a. **P**roblem: The need to choose investments for a portfolio.
  - b. **A**lternatives: Identify investment alternatives (choices), e.g., stocks, bonds, mutual funds, savings accounts, and real estate.
  - c. **C**riteria: Determine which factors to use to evaluate alternatives, e.g., risk, rate of return, liquidity, costs, and diversification.
  - d. **E**valuation: Evaluate the alternatives based on the criteria. Evaluation will vary depending on a person's age, risk preferences, time horizon, and so on.
  - e. **D**ecision: Choose the highest-ranked alternative given the criteria.

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## Session 18: Standards and Benchmarks

### Arkansas Economic Standards

**Strand:** Personal Financial Management

*Content Standard 8: Students will analyze factors affecting income, wealth, and financial risk.*

- PFM.8.E.2 Evaluate a variety of strategies for making personal financial goals to build short-term and long-term wealth.

### Common Core State Standards

- CCSS.ELA-Literacy.RH.9-10.1 Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.
- CCSS.ELA-Literacy.RH.9-10.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.
- CCSS.ELA-Literacy.RH.9-10.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.
- CCSS.ELA-Literacy.SL.9-10.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
- CCSS.ELA-Literacy.SL.9-10.1d Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.
- CCSS.ELA-Literacy.L.9-10.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies.
- CCSS.ELA-Literacy.L.9-10.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.
- CCSS.ELA-Literacy.RH.11-12.1 Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- CCSS.ELA-Literacy.RH.11-12.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

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- CCSS.ELA-Literacy.SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.
- CCSS.ELA-Literacy.SL.11-12.1d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
- CCSS.ELA-Literacy.L.11-12.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11–12 reading and content*, choosing flexibly from a range of strategies.
- CCSS.ELA-Literacy.L.11-12.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

## Session 18: Resources


### *Saving*

1. No Frills Money Skills Video Series (Federal Reserve Bank of St. Louis)
  - b. Episode 1: Compound Interest (7:21);  
<https://www.stlouisfed.org/education/no-frills-money-skills-video-series/episode-1-growing-money-compound-interest>
2. Learning, Earning, and Investing (*Virtual Economics*® 4.5)
  - a. Lesson 1: Why Save?
3. Financial Fitness for Life (9–12) (*Virtual Economics*® 4.5)
  - a. Lesson 20: What’s the Cost of Spending and Saving?

### *Investing*

4. Financial Fitness for Life (9–12) (*Virtual Economics*® 4.5)
  - a. Lesson 21: There Is No Free Lunch in Investing
5. Learning, Earning, and Investing (*Virtual Economics*® 4.5)
  - a. Lesson 12: Building Wealth over the Long Term
6. Lesson: Diversification and Risk (Federal Reserve Bank of St. Louis);  
<https://www.stlouisfed.org/education/diversification-and-risk>
  - a. Choose the lesson PDF and the accompanying slides of your choice:
    - i. SMART Notebook
    - ii. PowerPoint
7. No Frills Money Skills Video Series (Federal Reserve Bank of St. Louis)
  - a. Episode 3: Get Into Stocks (8:58);  
<https://www.stlouisfed.org/education/no-frills-money-skills-video-series/episode-3-get-into-stocks>

### *Saving and Investing*

8. Online Course: Soar to Savings (Federal Reserve Bank of St. Louis)
  - a. Go to <https://www.stlouisfed.org/education>.
  - b. Choose  Teachers: Go directly to the Online Course Login .
  - c. Register or, if you already have an account, log in.

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### Tools for Teaching the Arkansas Economics and Personal Finance Course

- d. Register your class for the course as follows:
  - i. Choose the "COURSES" tab.
  - ii. In the "COURSE NAME" column choose "Soar to Savings."
  - iii. Choose "ADD TO CLASSROOM" and follow the prompts.