

Money & Me Educator's Lesson Guide

Title:	Keys to Investing
Goals:	Students will be better able to: <ul style="list-style-type: none">- Know the difference between saving and investing- Understand the Time Value Of Money- Explain the Rule of 72 – How to Double Your Money- Compare investment options- Recognize the risks and rewards of investing
Summary:	After completing this unit, students will be aware of different types of investments and the relationship between risk and return.

Day 3

Part 1

8:30-8:45am (15 minutes)

Review of Day 2's lesson; ask volunteer to share keys points
Review goals for today

Activity 1: Anticipatory Set

Ask each student to write their name on a blank piece of paper. First, write down five words that come to mind when you hear the term "investing" (give them one minute to do this). Second, write down the best way to invest \$100,000, they should put their name on the paper. Collect the pieces of paper and read out some of the answers, with no names associated to the answers. Tell students you will keep these answers until later.

Part 2

8:45-9:25 (40 minutes)

State that the students will watch a ½ hour episode of *Biz Kid\$*, followed by a brief discussion.

Play *Biz Kid\$* DVD – #121, Bulls, Bears, and Financial Markets

The episode you are about to see will examine stocks, bonds, commodities, and the markets where they trade. Learn from a 12-year old stock guru and discover various ways young people can invest.

Lead a brief discussion as a follow-up activity. Ask students what were the three main types of investments featured in this episode of *Biz Kid\$*?

Responses should include: stocks, bonds and commodities. Ask students to tell you what they remember about each of the three types of investments. Consider using the flip chart to record answers and definitions.

Biz Kid\$ definitions for educator's reference: In the video, buying **stocks** was referred to as "getting a little piece of something big," part ownership of a company. **Bonds** were described as loans you make to a government agency or company, for example, money for a city to build schools; and **commodities** were described as being anything people want or need, such as farm products, gold, oil, etc.

BREAK 9:25-9:35

Part 3

9:35-10:20 (45 minutes)

Begin instruction using NEFE HSFPP Unit 3: Investing

As a class, complete the **What Do You Think? activity** (IM p. 66, SG p. 28)

Ask one student to read aloud the saving paragraph and another to read the investing paragraph, then discuss features common to both savings and investments, PPT 3-A (IM p. 66, SG p.28).

Time is on YOUR side. Go through SG p. 29 as a class (IM p.67).

PPTs 3-B, 3-C, 3-D, 3-E and 3-F (IM pp. 68-69, SG pp. 30-31)

Exercise 3B: The Power of Compounding

Try It! PPTs 3-H & 3-I (IM p. 70, SG p. 32)

Exercise 3C: The Impact of Higher Returns

Interactive MS Excel Model – 401(k) Planner

Consider using this model with the class to show the time value of money and compound interest. Ask students to write down how much (\$\$\$) they think they want for retirement, what age they want to retire and how much they are willing to pay each pay check (26 times a year) to invest for their retirement. Then ask them at what age will they start investing.

BREAK 10:20-10:30

Part 4

10:25-11:20 (50 minutes)

PPTs 3-J & 3-K (IM p. 71, SG p. 33)

Exercise 3D: Risk versus Reward

Briefly examine the various types of income and growth investments described on pages 35-37. As a class, generate a list of common features of income and growth investments.

PPT 3-L (IM p. 76, SG p. 38)

Brass Magazine Activity: Read and Present

Divide class into four groups. Each group should receive enough copies of one of following articles so that each member has their own article.

- *Open an IRA*
- *Investing Information*
- *Playing the Market*
- *Rock Solid Bonds*

Ask each student to read the assigned article. As a group, they will need to answer a few questions and prepare to present the answers to their classmates. **Distribute appropriate set of questions** to each group.

Additional Resources:

www.smartstocks.com- free stock market game

Brass Magazine- November 2008 “Intrepid Investing”
November 2006-“Stock Talk”

BREAK 11:20-11:30

Part 5

11:30-Noon

JA Group Activity

Invest in Your Future Pocket Guide

Refer to JA Personal Finance Guide for Volunteers and Teachers

Session Two: From Dreams to Reality (pp. 18-20)

Allow approximately 20 minutes to play the game

Review of Activity 1 (10 minutes):

Hand back the piece of paper collected during the anticipatory set. Then ask students to look at their answers and see if they would change their answers. Ask one student to list the five things that came to mind when you heard the word “investing” as another student to explain how they would invest \$100,000. Did either student change their answer based on what they learned? If neither student changed their answer ask for a student that did and ask them to explain why.

Preparation for Day 5

Before you leave, which one of you is willing to give tomorrow morning’s summary of what we did together today? Record name of volunteer.

Homework Assignment:

First, research prices for two cars: 1) new and 2) used. Bring to class a copy of the price quote you got online or from a newspaper ad. It doesn’t matter what sources you use. Second, obtain at least two insurance quotes for each car from two different companies online or make a few calls. Be sure to get a copy of the estimate or write down info received over the phone if they don’t email the quote, and bring that to class as well.



NEFE High School Financial Planning Program
Unit Three – Investing: Making Money Work for You

Savings and Investments

Unique Savings Features Common Features Unique Investment Features

What are some features common to both investments and savings?

3-A

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Investing Weekly at 5% Interest

Amount Saved Per Week	Value After 10 Years
\$ 7.00	\$ 4,720
\$ 14.00	\$ 9,440
\$ 21.00	\$ 14,160
\$ 28.00	\$ 18,880
\$ 35.00	\$ 23,600

3-B 1

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Investing Annually to Achieve a Goal

Value of \$20	1 Year	2 Years	4 Years	6 Years
4%	\$20.80	\$21.63	\$23.40	\$25.31
5%	\$21.00	\$22.05	\$24.31	\$26.80
6%	\$21.20	\$22.47	\$25.25	\$28.37
8%	\$21.60	\$23.33	\$27.21	\$31.74
10%	\$22.00	\$24.20	\$29.28	\$35.43

3-C 1 2 3 4 5

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To Have \$50,000 at 8% Interest

Number of Years Saving	Monthly Amount	Daily Amount*
6	\$543.33	\$17.79
4	\$887.31	\$29.06
2	\$1,928.03	\$63.17

* Assumes a 365-day year for daily amounts

3-D 1 2 3

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Investing a \$10,000 Lump Sum

Interest Rate	5 Years	10 Years	15 Years	20 Years
5%	\$12,763	\$16,289	\$20,789	\$26,533
6%	\$13,382	\$17,908	\$23,966	\$32,071
7%	\$14,026	\$19,672	\$27,590	\$38,697
8%	\$14,693	\$21,589	\$31,722	\$46,610
9%	\$15,386	\$23,674	\$36,425	\$56,044
10%	\$16,105	\$25,937	\$41,772	\$67,275
11%	\$16,851	\$28,394	\$47,846	\$80,623
12%	\$17,623	\$31,058	\$54,736	\$96,463

3-E 1

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Investing \$1,000 Annually

Interest Rate	5 Years	10 Years	15 Years	20 Years
5%	\$5,526	\$12,578	\$21,579	\$33,066
6%	\$5,637	\$13,181	\$23,276	\$36,786
7%	\$5,751	\$13,816	\$25,129	\$40,995
8%	\$5,867	\$14,487	\$27,152	\$45,762
9%	\$5,985	\$15,193	\$29,361	\$51,160
10%	\$6,105	\$15,937	\$31,772	\$57,275
11%	\$6,228	\$16,722	\$34,405	\$64,203
12%	\$6,353	\$17,549	\$37,280	\$72,052

3-F 1

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Answers to Exercise 3B

Interest Rate	1 Year	2 Years	4 Years	6 Years
4%	\$10.40	\$10.82	\$11.70	\$12.65
8%	\$10.80	\$11.66	\$13.60	\$15.87

3-G 1 2 3 4 5 6

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Rule of 72

$$\frac{72}{\text{Interest Rate}} = \text{Years Needed to Double Investment}$$

$$\frac{72}{\text{Years Needed to Double Investment}} = \text{Interest Rate Required}$$

3-H

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Rule of 72: \$10,000 Invested

	INTEREST RATE		
Year	3%	6%	12%
6			\$20,000
12		\$20,000	\$40,000
18			\$80,000
24	\$20,000	\$40,000	\$160,000

3-I

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Financial Planning Pyramid

The pyramid is divided into four horizontal layers. From bottom to top, the layers are:

- Layer 1 (Bottom):** Insured Savings / Checking Accounts, U.S. Savings Bonds, Certificates of Deposit, Treasury Issues.
- Layer 2:** Money Market Accounts or Mutual Funds, High-Grade Municipal Bonds or Mutual Funds, High-Grade Corporate Bonds or Mutual Funds.
- Layer 3:** Balanced Mutual Funds, Blue-Chip Common Stock, Real Estate, High-Grade Preferred Stock, High-Grade Convertible Bonds, Growth Mutual Funds.
- Layer 4 (Top):** Collectibles, Speculative Stock / Bonds / Mutual Funds, Penny Stock, Commodities.

Labels on the right side of the pyramid: "Highest Risk Highest Earnings" at the top and "Lower Risk Lower Earnings" at the bottom, with a double-headed arrow indicating the risk/return spectrum.

3-J

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The Impact of Higher Returns on Savings and Investments

Rule of 72: The approximate frequency with which \$100 doubles at specific interest rates

Interest Rate	6 Yrs.	9 Yrs.	12 Yrs.	18 Yrs.	24 Yrs.
3%					\$200
4%				\$200	
6%			\$200		\$400
8%		\$200		\$400	
12%	\$200		\$400		\$800

3-K 1 2

Dollar Cost Averaging

One-Time Investment			Dollar-Cost Averaging		
Amount Invested	Share Price (\$)	Shares Purchased	Amount Invested	Share Price (\$)	Shares Purchased
\$1,000.00	\$20.00	50.00	\$100.00	\$20.00	5.00
			\$100.00	\$19.50	5.13
			\$100.00	\$19.25	5.19
			\$100.00	\$19.75	5.06
			\$100.00	\$19.20	5.21
			\$100.00	\$18.90	5.29
			\$100.00	\$18.00	5.56
			\$100.00	\$18.60	5.38
			\$100.00	\$19.78	5.06
			\$100.00	\$20.90	4.78
\$1,000.00	\$20.00	50.00	\$1,000.00	\$19.39*	51.66

3-L

1 | 2 | 3 | 4

* Average Share Price

401(k) Planner

Student - A

Assumptions	
401(k) contribution per paycheck	\$50
401(k) employer contribution match per paycheck	\$25
Paychecks per year (12, 24, 26, or 52)	26
Expected annual rate of return	5.00%
Age at of the end of this tax year	16
Anticipated retirement age	67
Current value of 401(k)	\$0
Date (the "as of" date for the current value)	June 29, 2010
The date of the year end	December 1, 2010
Marginal tax rate (federal plus state)	25.00%

Tax Deferred 401(k) Plan Growth	
Age	Estimated 401(k) Value
16	\$836
21	\$12,132
31	\$45,031
67	\$457,341
Pre-tax retirement income (From retirement age to 90 years old)	
Monthly income	\$2,792

Taxable Savings Plan Growth	
Age	Estimated Savings Value
16	\$834
21	\$11,718
31	\$40,572
67	\$317,858
Pre-tax retirement income (From retirement age to 90 years old)	
Monthly income	\$1,940

Growth of Investment

