CHAPTER 2

What do other high school students know about saving?

We asked high school students to describe something they really wanted and thought they *had* to buy, only to realize later that they wasted their money.

"I worked and saved $250 for a guitar that I never learned how to play."

Junior, Michigan

"I bought some fish that I thought I really wanted. I never fed them, totally lost interest in them, and they all died. What a waste of money!"

Junior, Alabama

"I really wanted this expensive skateboard that cost $229. I had to have it. Turned out it skated no better than the other ones that were a lot less expensive."

Sophomore, Alabama

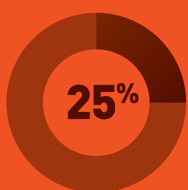
"I got a pink Coach purse that I paid more than $200 for and have maybe used twice."

Junior, Florida

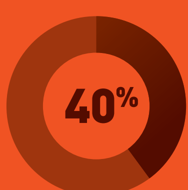
"I bought an $80 sweater that turned out to be really cheap quality."

Freshman, Tennessee

Saving



of American families have no savings at all.*



of Americans are not saving for retirement.*

YOU MIGHT BE wondering why you, a teenager, need to worry about saving money. While saving money when you make very little can be a challenge, it is important that you develop a habit of saving a portion of what you earn now. This simple habit can change your life in the years to come. In fact, it's the only foolproof way of becoming a millionaire. The best part is, anyone can do it! The earlier you begin to save, the wealthier you can become—it's as simple as that!

*StatisticBrain.com

Before You Begin

Learning Outcomes

Once you've completed this chapter's videos, you will be asked to return to this list and place a checkmark next to the items you've mastered.

Section 1: Saving: An Exercise of Character

- [ ] Identify the Five Foundations of personal finance.
- [ ] Understand the purpose of having an emergency fund.

Section 2: Three Basic Reasons to Save Money

- [ ] Explain the three basic reasons for saving money.
- [ ] Understand the importance of saving for both long-term and short-term goals.
- [ ] Describe what a sinking fund is and identify purchases for which you would use a sinking fund.

Section 3: The Power of Compound Interest

- [ ] Demonstrate how compound interest works and understand the impact of annual interest rate.
- [ ] Describe the difference between simple and compound interest.
- [ ] Understand the importance of beginning to save now.

Key Terms

Get to know the language of money.

» **Compound interest:** Interest paid on interest previously earned; credited daily, monthly, quarterly or semiannually

» **Emergency fund:** Five hundred dollars in readily available cash to be used only in the event of an emergency; the goal of the First Foundation

» **Interest rate:** Percentage paid to a lender for the use of borrowed money (in debt); percentage earned on invested principal (in investing)

» **Five Foundations:** The five steps to financial success

» **Sinking fund:** Saving money over time for a large purchase

Measure Your Progress

Before watching the video, read each statement below and mark whether you agree or disagree in the "Before" column. Then, after watching the video, do it again using the "After" column to see if you changed your mind on any statement.

BEFORE			AFTER	
Agree	Disagree		Agree	Disagree
☐	☐	1. The amount of money you save depends on how much money you earn. Simply put, you will save more when you earn more.	☐	☐
☐	☐	2. A savings account at your bank is the best place to put your emergency fund.	☐	☐
☐	☐	3. The two biggest factors in compound interest and building wealth are time and the initial amount of the investment.	☐	☐
☐	☐	4. It is okay to use your emergency fund to pay cash for big purchases such as a TV or a cell phone.	☐	☐
☐	☐	5. You should pay yourself first before you pay bills.	☐	☐

JOURNAL QUESTION: INTRODUCTION

What are your initial thoughts about saving? What do you want to learn about saving?

CHAPTER 2

> “Discipline yourself to do the things you need to do when you need to do them, and the day will come when you will be able to do the things you want to do when you want to do them.”
>
> ZIG ZIGLAR
> Best-selling author and motivational speaker

The most important lessons teens want to know when learning how to manage money are learning to save (35%) and understanding how to budget (28%).

ING Direct USA Survey

THE FIVE FOUNDATIONS are the beginner steps for establishing and maintaining financial peace. These steps will serve as your compass or framework for your financial success. You will find the Five Foundations explained in detail throughout this course. These are basic steps that anyone can and should do in order to win with money. So start now. We want to see you WIN!

Section 1:

Saving: An Exercise of Character

VIDEO 1.1

The Five Foundations

1 THE FIRST FOUNDATION
Save a $500 ________ Fund
1

2 THE SECOND FOUNDATION
Get Out of ________
2

3 THE THIRD FOUNDATION
Pay ________ for Your Car
3

4 THE FOURTH FOUNDATION
Pay Cash for ________
4

5 THE FIFTH FOUNDATION
Build ________ and ________
5 6

Saving Money the American Way

THE FIRST FOUNDATION is saving an emergency fund. It is going to rain. Even as a young adult, you need a rainy-day fund. You'll have many financial goals throughout your life. You don't want anything to stand in the way of paying your way through college or buying your first house. But emergencies will happen along the way. *Money Magazine* says that 78% of us will have a major negative event in a given 10-year period of time. At your age, it might be needing to pay for a car repair. Later in life, it might be an extended illness or an injury that keeps you from working for several months. Regardless of the emergency, having money set aside—$500 at your age—will ensure that those life events do not devastate you financially.

+

You should have an emergency fund because unexpected things are going to happen. Smart people have known this for centuries and used to say, "In the house of the wise are stores of choice food and oil, but a foolish man devours all he has" (Proverbs 21:20). In other words, having some money saved away can turn a crisis into an inconvenience.

Are Americans Good Savers?

A Negative Savings Rate

Back in December 2006, CNN Money reported that Americans had a -0.6% savings rate. The savings rate compares after-tax income to the money people spent on a variety of items. It turns negative when people take on additional debt such as credit cards or car loans. The negative savings rate meant that Americans were spending more money than they were making in 2006. The title of CNN Money's article was "Americans spend every cent and more: Critics say America's negative savings rate can't be sustained and see a recession coming. Are they right?"

Fast Forward to Today

The critics were right, and Americans faced one of the worst recessions in our nation's history.

If our collective spending and saving habits have an effect on the overall economy, shouldn't Americans want to change their behavior? After all, when the economy is strong, we prosper through lower unemployment and higher incomes. When it is weak, we suffer with high unemployment and lower incomes.

Americans' initial response to the economic downturn was positive. In the summer of 2008, the savings rate reached nearly 7%. However, Americans did not maintain this new commitment to saving. By 2010, Americans saved 5.5% of their income. During 2012, that number plunged as low as 3.3%.*

What's the Lesson Here?

When things are good, Americans tend to behave as though things will always be good. The reality is, whether it's an economic downturn or a personal money emergency, you have to be prepared. You need an emergency fund, an old-fashioned rainy-day fund!

*Economic Research, Federal Reserve Bank of St. Louis

The First Foundation

» The First Foundation is $ ______ [7] in an emergency fund. You should do this as quickly as possible.

» When you're in high school, you won't have the same emergency expenses as your ______ [8] (like needing to put a new roof on the house). For you, a surprise expense might be fixing a flat tire or replacing a broken cell phone.

» An emergency fund allows you to have money available for any surprise ______ [9].

» If you don't have money saved to pay for these things, then ______ [10] will start looking like an easy answer.

» Debt ______ [11] solves problems. At best, it just delays one problem while creating another one!

» When you're older and out of school, you'll need to ______ [12] your emergency fund into a full three to ______ [13] months' worth of expenses.

» Make sure this money is kept in the ______ [14] and that you ONLY use it for emergencies. You can't keep the money handy, because it will get spent.

» Keep your emergency fund in a ______ [15] savings account away from your spending money.

TIPS FROM TEENS ON SAVING

Bailey, 15: "I have a little gift box that I put spare change and bills into when I earn baby-sitting money. Whenever I have a significant amount in there, I'll invest it or put it in the bank. It's important to keep a routine. Every time I get money, I put some of it away."

Adam, 16: "I recently got a part-time job where my paychecks are automatically deposited into my checking account. I set up an automatic transfer of $25 from my checking to my savings account each week. Since it's all done automatically, I never actually see the money. It is just left to pile up in my savings account. I've already saved several hundred dollars *without doing anything!*"

WHAT ABOUT YOU?
Think of a way you have saved money or could save money. Write it down and then share it with your class.

How Can I Save $500 Quickly?

Five hundred dollars might sound like a lot, but you'd be amazed at how quickly you can pile up some cash! First, make it a goal. Next, set a target date. Goals need a timeline. Now here are some money-making ideas:

1. If you get a regular allowance from your parents, save it! Say goodbye to fancy coffees, vending machine goodies and fast food. Okay, not forever! Those are fun treats. But try limiting yourself to a Friday splurge and saving your money the other days of the week.

2. Hold an auction. Gather things you don't use or need anymore, like expensive clothing or your unused gaming system (get your parents' permission, of course) and sell them online or at a garage sale. You won't believe how much money you have in the form of unused stuff!

3. Become an entrepreneur! Hand out fliers in your neighborhood advertising baby-sitting or yard work services.

4. If you're old enough and your schedule allows it, get a part-time job on the weekends.

5. Communicate your money goals with your parents. They might be willing to pay you for doing extra jobs around the house or for getting good grades.

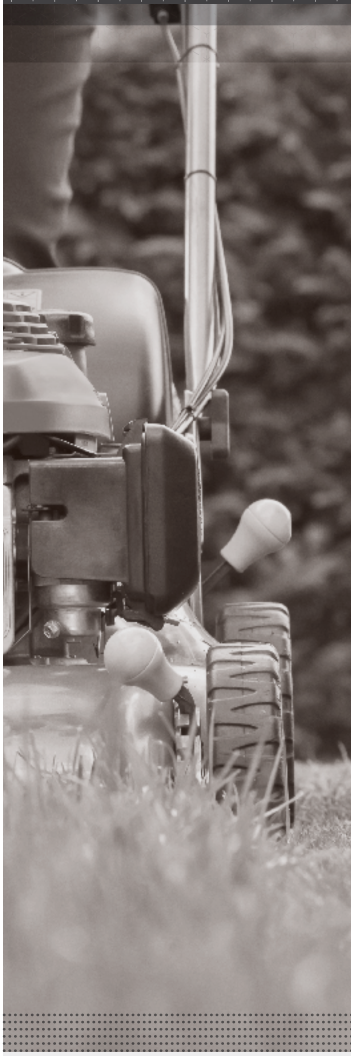
6. If your parents (or other relatives) own a business, they might be able to hook you up with a part-time job there.

7. Consider tutoring. Some teens report earning as much as $20 an hour.

8. Take advantage of summer months off of school. Explore being a camp counselor, golf caddy or a lifeguard.

9. Watch the local ads for people needing pet sitters or house sitters when they go out of town.

10. Use your skills. Think about what you are good at. You might offer horseback riding lessons, Spanish lessons or piano lessons.



JOURNAL QUESTION: VIDEO 1.1

What has kept you from saving in the past? Based on what you've learned, how can you change this?

80% of America's millionaires are first-generation rich. That means they started with nothing, did smart stuff, and became millionaires.

The Millionaire Next Door

Section 2:

Three Basic Reasons to Save Money

The **First Foundation** is simple. **Save a $500 emergency fund**. Keep in mind that $500 won't always be enough for your emergency fund. As you get older and you have more financial responsibilities like paying a mortgage and supporting a family, you will want to have three to six months of living expenses set aside in your emergency fund. How much money is that? Well, that will depend on what your monthly bills total at any given time. For instance, if your living expenses (mortgage, utilities, insurance, food, etc.) total $3,000 a month, then you'll want to set aside $9,000 to $18,000 in an emergency fund. That sounds like a lot. But rest assured, if you are managing your money wisely, as your income grows so will your savings.

"Save a part of your income and begin now, for the man with a surplus controls circumstances and the man without a surplus is controlled by circumstances."

HENRY BUCKLEY
Australian politician

VIDEO 2.1

Save Money for Three Basic Reasons:

1. [ ] Fund 16
2. [ ] 17
3. [ ] Building 18

Emergency Fund

» [ ] 19 are going to happen. Count on it. The First Foundation, a beginner emergency fund, is $500.

✱ **NOTE:** Later in life this should increase to three to six months of living expenses.

» It's a good idea to open a separate savings account for your emergency fund. Then, leave it alone!

» Your emergency fund is not an investment. It is insurance for when unexpected things happen.

» The emergency fund is your first savings priority. Do it quickly!

So now you know about the savings crisis in America. You might be thinking, *Yeah, I'd like to start saving, but I'm barely making any money. And sometimes, doing something fun seems more important than saving just a few bucks. Besides, if I can only save $20 or $50 a month, is it really worth it?*

The Answer: Absolutely! By starting now, you're giving your money time to grow. And when you start young, you'll end up with more cash than someone who waits.

JOURNAL QUESTION: VIDEO 2.1

Explain how having an emergency fund helps protect your wealth.

VIDEO 2.2

Purchases

» The second thing you save money for is ________[20].

» Instead of ________[21] to purchase, pay cash by using a ________[22] fund approach.

A **sinking fund** is a way to save when you know you have a large purchase coming up, like a prom dress or new tires for your car. You calculate the expected cost of the item and how long you have until you need to purchase it. Divide the total cost of the item by the number of months until the purchase. For instance, if prom is five months away and the amount you are willing to spend is $200, you will need to save $40 a month toward your purchase ($200 divided by 5 equals $40).

Saving over time means you will never need to go into debt for a large purchase. Think of it this way: You pay yourself $40 a month, and then pay cash instead of using a credit card and paying someone else $40 a month *plus interest*! That's right. That dress would end up costing you *more than $200* if you borrowed money for it.

In 2012, only **27%** of all point-of-sale purchases were made with cash, and that number is expected to drop to **23%** by 2017.

Report published by Javelin Strategy & Research

WHICH IS WISER?

Using a **sinking fund** versus borrowing money for a large purchase—you make the call.

Say you borrow $4,000 to purchase a dining room set, and your interest rate is 24% for two years.

This means you will have payments of $211 per month for 24 months. So, you will pay a total of $5,064, plus interest, for that set.

But if you use the sinking fund method and save the same $211 per month for only 18 months, you will be able to pay cash.

When you pay cash, you can almost always negotiate a discount. So you will be able to **own** that furniture even earlier for **less money**.

Wealth Building

» The third thing you save money for is ______ building.
23

» ______ is the key ingredient when it comes to wealth building.
24

» Building wealth is a ______ not a sprint.
25

"It was character that got us out of bed, commitment that moved us into action, and discipline that enabled us to follow through."

ZIG ZIGLAR
American author and motivational speaker

JOURNAL QUESTION: VIDEO 2.2

Why do you think so many people borrow money for large purchases instead of using a sinking fund?

Ready to Start Saving? Read These Bank Tips First!

✱ **REMEMBER:** The emergency fund is not intended to grow wealth, so interest earned is not a factor.

» **A bank is one of the safest places to keep your money.** Since the financial crisis of 2008, the federal government (Federal Deposit Insurance Corporation or FDIC) increased the level of insurance on bank accounts to $250,000 per depositor.

» **An interest-bearing account** is an account that generates interest income on the available balance in the account.

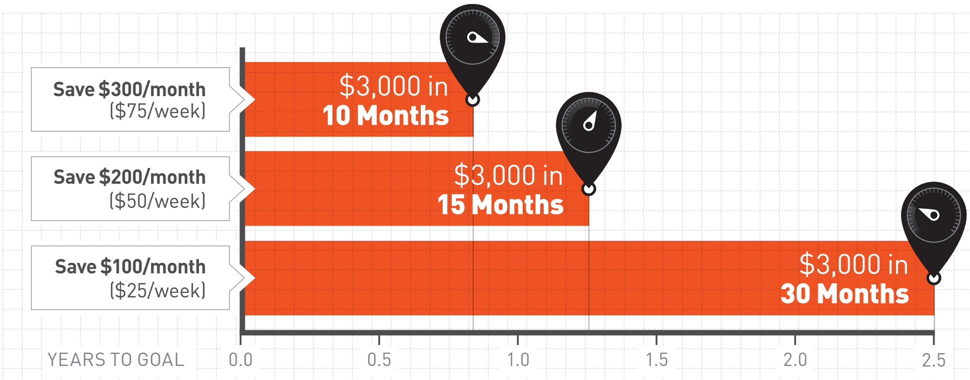
» **The convenience of a bank account comes at a cost.** Banks generally pay lower rates on interest-bearing accounts than other financial institutions that offer accounts that resemble bank services: The most common are brokerage cash management accounts, credit union accounts, and mutual fund money market accounts.

» **Inflation can eat up the interest you earn on an interest-bearing bank account.** Even a low rate of inflation (a persistent rise in the cost of goods and services or the decline in the purchase power of money) generally outpaces what banks pay on interest-bearing accounts.

Maybe You *Can* Afford That Car!

"I'm 14 and want to buy a car in a couple of years. How much money will it take to get a good one?"

DAVE'S ANSWER: You can buy a good used car for around $3,000. This may seem like a lot right now, but let me show you how easy it can be. Let's say you work part time after school and on weekends. If you make $100 a week and save it all, you'll have enough for a car in only eight months. Pretty cool, huh? Can't do $100 a week? Saving a little bit at a time adds up, and you will eventually reach your goal. Take a look at the graph below for a few ways it can be done.



VIDEO 2.3

Wealth Building *(Continued)*

» ______ ______ is a mathematical explosion. You must start ______.

27

✱ **TURN THE PAGE:** Follow along with the Ben and Arthur compound interest chart to see the power of compound interest!

JOURNAL QUESTION: VIDEO 2.3

How is saving an exercise of your character?

IMPORTANT: Since you're in high school, hold off on investing for retirement until you have college completely paid for. It doesn't make sense to invest while, at the same time, taking out loans for college. We want you to live debt free, even through college. Make paying for your education a priority over investing. Once you've done that, invest as soon as possible.

The Story of Ben and Arthur

Both save $2,000 per year at 12%. Ben starts at age 19 and stops at age 26, while Arthur starts at age 27 and stops at age 65.

Ben invested **ONLY $16,000.**

Ben **stops** investing;
Arthur **starts** investing

Saving $2,000 each year works out to only $167 per month!

$2,000 INVESTED ANNUALLY
÷ 12 MONTHS
$167 INVESTED MONTHLY

Arthur invested $78,000 and **NEVER CAUGHT UP!**

Ben came out ahead by over $700,000!

BEN			ARTHUR	
Invests	Running Total	Age	Invests	Running Total
2,000	2,240	19	0	0
2,000	4,749	20	0	0
2,000	7,558	21	0	0
2,000	10,706	22	0	0
2,000	14,230	23	0	0
2,000	18,178	24	0	0
2,000	22,599	25	0	0
2,000	27,551	26	0	0
0	30,857	27	2,000	2,240
0	34,560	28	2,000	4,749
0	38,708	29	2,000	7,558
0	43,352	30	2,000	10,706
0	48,554	31	2,000	14,230
0	54,381	32	2,000	18,178
0	60,907	33	2,000	22,599
0	68,216	34	2,000	27,551
0	76,802	35	2,000	33,097
0	85,570	36	2,000	39,309
0	95,383	37	2,000	46,266
0	107,339	38	2,000	54,058
0	120,220	39	2,000	62,785
0	134,646	40	2,000	72,559
0	150,804	41	2,000	83,506
0	168,900	42	2,000	95,767
0	189,168	43	2,000	109,499
0	211,869	44	2,000	124,879
0	237,293	45	2,000	142,104
0	265,768	46	2,000	161,396
0	297,660	47	2,000	183,004
0	333,379	48	2,000	207,204
0	373,385	49	2,000	234,308
0	418,191	50	2,000	264,665
0	468,374	51	2,000	298,665
0	524,579	52	2,000	336,745
0	587,528	53	2,000	379,394
0	658,032	54	2,000	427,161
0	736,995	55	2,000	480,660
0	825,435	56	2,000	540,579
0	924,487	57	2,000	607,688
0	1,035,425	58	2,000	682,851
0	1,159,676	59	2,000	767,033
0	1,298,837	60	2,000	861,317
0	1,454,698	61	2,000	966,915
0	1,629,261	62	2,000	1,085,185
0	1,824,773	63	2,000	1,217,647
0	2,043,746	64	2,000	1,366,005
0	2,288,996	65	2,000	1,532,166
Grand Total	**$2,288,996**	*vs*		**$1,532,166**

Section 3:
The Power of Compound Interest

VIDEO 3.1: THERE ARE NO FILL-INS IN THIS SECTION.

What Is Interest?

> *The most powerful force in the universe is compound interest!"*
> ALBERT EINSTEIN, German physicist

What is **interest**? In investing, it is the money the principal (original amount invested) earns. It is typically a percentage of the principal, paid on a monthly, quarterly or annual basis.

Compound interest is interest paid on interest previously earned.

Whew! Need further explanation? Here's an example.

Take a one-time investment of $1,000 and earn 10% on it. Your interest earned at the end of the year is $100. Add that to your original $1,000, and you have $1,100.

At the end of the next year, your $1,100 is compounded at 10% interest, so your return on investment is $110. Add that to the $1,100, and you now have $1,210. Your interest on $1,210 is $121.

So as time passes, the amount you earn from interest grows. That is why it is so important that you start as early as possible. You have more time for your interest to snowball and pick up more and more snow!

How to Calculate Compound Interest

Use this simple formula to figure out the future value of a deposit once compound interest has worked its magic.

$$FV=PV\ (1+r/m)^{mt}$$

* **REMEMBER:** When calculating this formula, use the mathematical order of operations.

FV: The future value
PV: The present value
r: The annual rate of interest as a decimal (5% is expressed as the decimal 0.05)
m: The number of times per year the interest is compounded (monthly, annually, etc.)
t: The number of years you leave it invested

INTERESTED IN INVESTING?
We will talk more about investing in Chapter 8.

What excites you most about investing?

"Making money without doing anything."
Junior, Oklahoma

"Being able to be financially secure when I retire."
Senior, Florida

"I am excited about what even a small investment can become."
Senior, Colorado

"Having tons of money in the end."
Senior, New Jersey

"Patience is golden because it will increase the satisfaction you take from achieving your goals and desires."
DAVE RAMSEY

Budget Builder

Saving money is a lot easier to do when you make it part of your budget! Go to **foundationsU.com/2** for your next budget lesson.

See what your investment will be worth in 40 years! Check out the Investing Calculator at foundationsU.com.

Compound Interest *(Continued)*

Inflation: Inflation is a persistent rise in the price of goods and services over a period of time.

Time Value of Money: This principle suggests that a certain amount of money today has different buying power than the same amount of money in the future. This notion exists both because there is an opportunity to earn interest on the money and because inflation will drive prices up, thereby changing the "value" of the money.

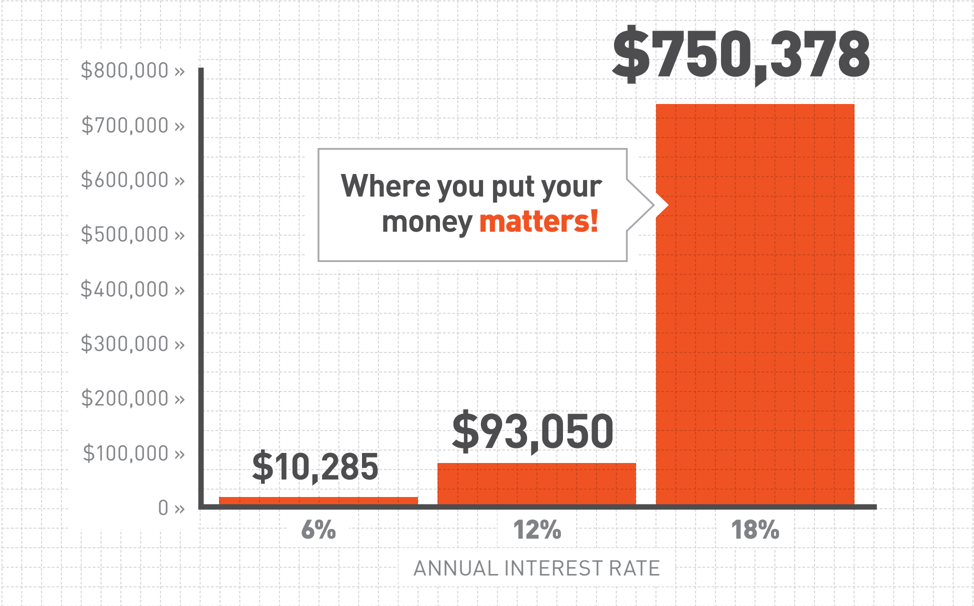
So let's say you and a friend each get $100 for your birthdays. Your friend buys designer jeans, and you put your cash in a savings account. In two years, your money will have earned interest. But will you have enough cash to buy the same designer jeans?

The trade-off between money now and money later depends on, among other things, the inflation rate and the rate of interest you can earn by investing or saving.

The rate of return, or the interest rate, on your investment is important to consider. We will talk about different types of investments and rate of return in detail in Chapter 8, *Investing and Retirement*.

How Important Is My Interest Rate?

Look at what happens to a $1,000 one-time investment with no withdrawals from age 25 to age 65 (40 years).



JOURNAL QUESTION: VIDEO 3.1

Why don't more people save for the future? Which reasons can be fixed by having a money plan?

"Most people have the will to win; few have the will to prepare to win."

BOBBY KNIGHT
Former head coach of the Indiana Hoosiers (1971–2000)

Chapter Summary

Check for Understanding

Now it's time to check your learning! Go back to the Before You Begin section for this chapter. Place a checkmark next to the learning outcomes you've mastered and complete the "after" column of the Measure Your Progress section.

Build On What You've Learned

Review: The Three Reasons to Save

Fill in the graphic organizer. What are the three things you need to save for? Describe why each is important for your financial future. Take a look at section 2 if you need help.

3 Reasons to Save

1	2	3
SAVE FOR:	SAVE FOR:	SAVE FOR:
IMPORTANT BECAUSE:	IMPORTANT BECAUSE:	IMPORTANT BECAUSE:

Take Action Challenge

See how quickly you can save your $500 emergency fund. Set a time goal and make it happen!

Goal: ________ Months ________ Weeks ________ Days

$0 Chart your progress here! ········ **Emergency Fund Complete!**

$50 $100 $150 $200 $250 $300 $350 $400 $450 $500

Big Ideas

The following Big Ideas are intended to provide clear focus and purpose to the lessons. Read each statement and think about how what you've learned will affect your current and future decisions. Then, in the space provided, write an "I believe" statement for each of the Big Ideas.

» The Five Foundations are your steps to Financial Peace.

» The First Foundation: Save a $500 Emergency Fund

» Save for emergencies, large purchases and wealth building.

Money in Review

Matching

Match the following terms to the correct definition below.

A The Five Foundations
B Interest Rate
C Sinking Fund
D Compound Interest
E Emergency Fund
F Inflation
G Interest-Bearing Account

1. ☐ An account that generates interest income on the available balance in the account
2. ☐ The five steps to financial success
3. ☐ A savings account that is set aside to be used only for emergency expenses
4. ☐ Interest paid on interest previously earned
5. ☐ Saving money over time for a large purchase
6. ☐ A rate which is either charged (on debt) or paid (on investment accounts) for the use of money
7. ☐ The persistent increase in the cost of goods and services or the persistent decline in the purchasing power of money

Illustration

Draw a picture representation of each of the following terms.

Recession

Economy

Multiple Choice

Circle the correct answer.

8. When it comes to saving money, the amount you save is determined by how much you have left at the end of the month once all of your spending is done.
   - (A) True
   - (B) False

9. Your income level greatly affects your saving habits.
   - (A) True
   - (B) False

10. At your age, a fully funded emergency fund should be:
    - (A) $1,000
    - (B) $5,000
    - (C) $100
    - (D) $500

11. Which of the following is not one of the three basic reasons for saving money?
    - (A) Large purchases
    - (B) Have money available to lend to friends
    - (C) Emergency fund
    - (D) Build wealth

12. Instead of borrowing money for large purchases, you should set money aside in a ____________ over time and pay with cash.
    - (A) Sinking fund
    - (B) Emergency fund
    - (C) Credit card fund
    - (D) Mortgage fund

Short Answer

Respond in the space provided.

13. What is the First Foundation? Explain how and why the dollar amount will change as you get older.

14. Looking back at the "Ben and Arthur" story, how did Ben come out ahead even though he invested less money than Arthur?

15. What two things do you consider when evaluating the time value of money?

16. Calculate the compound interest for each problem below.
    - $1,000 at 6% interest for three years
    - $500 at 18% interest for four years
    - $1,500 at 12% interest for two years

17. Why do you need an emergency fund at your age?