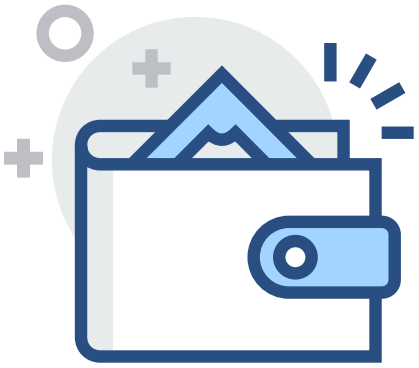
DISCOVER

Pathway to Financial Success

In Schools



MIDDLE SCHOOL | UNIT 1

Being Financially Responsible

Title

Recommendations versus Reality: Budgeting in the Real World

LEARNING OBJECTIVES

Students will:

- **convert** monthly budget percentages to dollar amounts.
- **identify** components of a budget including income and expenses.
- **draw conclusions** about the use of budgets to track personal finances.
- **explain** why percentages are more useful that dollar amounts when providing financial advice.

Content Area

Math

Grades

6–8

Overview

How does developing a budget help you manage your money? Students practice calculating percentages by creating personal budgets. The activity begins with students considering how teens spend money and comparing their responses to national averages. Students then work in pairs to develop a budget given recommended percentages and random income and expense scenarios.

Themes

Personal Finance: Financial Responsibility

Math: Ratios and Percents

Common Core Math Standards

6.RP.A.3.C: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

7.RP.A.3: Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error

MP1: Make sense of problems and persevere in solving them.

MP4: Model with mathematics.

Connect

How does this connect to the student?

Students often struggle to see connections between math concepts they learn in school and their everyday lives. Deciding how to allocate a person's income is something all students will one day need to do.

How does this connect to careers?

Budget Analyst: Individuals and families aren't the only ones that use budgets. Budget analysts help public and private institutions organize their finances. They prepare budget reports and monitor spending.

How does this connect to the world?

Every year local, state, and federal governments develop and pass budgets that determine how government money will be collected and spent. Understanding how budgets work can help individuals be more informed citizens and voters.

Key Terms

Personal Finance: budget, income, expense, gross pay, net or take-home pay, fixed expenses, variable expenses

Math: percent, pie chart

Prepare

Background: Percentages are used in many ways to express different types of information. Using percents to provide financial guidance offers a way to make information applicable to individuals and families of all incomes levels. For example, suggesting that a person save ten percent of their income is different than saying to save $100 each month. Using percentages allows the amount to scale proportional to the amount of a person's income.

In this activity, students will develop a budget based on randomly selected incomes and a set of recommended budget categories and percentages. It is important that students understand that there is no "one size fits all" when it comes to personal budgeting. Each individual and/or family will have its own unique situations and circumstances. However, starting with a set of recommendations offers a good springboard. You might consider drawing connections for students to other general recommendations such as those for a balanced diet or how much sleep a person should get each night.

Materials:

- **Our Teen Budget Student Handout**—one copy per pair of students
- **The Average Teen's Budget Student Handout**—one copy per pair of students or display
- **Budgeting for Adults Student Handout**—one copy per pair of students
- **Starting Salaries Student Handout**—one copy, cut into cards
- **Life Happens Student Handout**—one copy, cut into cards
- **Budgeting: What Is It and How Does It Work? Unit 1 Student Video**
- **Calculators (optional)**—one per student

Engage

- Ask students what they know about ***budgets*** (a plan used to decide the amount of money that can be spent and how it will be used). Explain that budgets can be used by individuals, families, businesses, and even governments. Provide examples of categories typically found on a family's budget such as housing, transportation (which might include things like a car payment, insurance, gas), food (groceries and eating out), etc.
- Challenge students to work in pairs and identify at least four categories they might see on a budget prepared by a teenager. Distribute one copy of **Our Teen Budget Student Handout** to each pair. Explain that people have taken a look at how spend their money and broken down those expenses into the categories shown (food, clothing, etc.).

Teach

- Play the video, **Budgeting: What Is It and How Does It Work?** Ask students how the average teen budget shown in the video compares to the ones they created. Use **The Average Teen's Budget Student Handout** as a reference for comparisons. Remind students that the numbers provided are averages based on an annual survey of teens. Discuss what might cause a person's spending to look different from the percentages shown (i.e., family income, gender, etc.).
- Distribute one copy of the **Budgeting for Adults Student Handout** to each student pair. Review the "Expenses" categories and the recommended percents. Inform students that different experts make recommendations on how individuals and families should spend their money. However, not all experts agree. For example, some suggest spending a higher percentage of one's income on giving than others.
- Tell students that each of them will receive a scenario with a job title and starting salary. They will then work in pairs to combine their incomes and develop a budget based on a household with two adults. Remind students that their ***income*** (the amount of money they earn) will directly impact their ***expenses*** (the amount of money they spend).
- Distribute one scenario card from the **Starting Salaries Student Handout**[1] to each student. Tell students that the salary noted on the card is for one full year and is based on national averages for people with little to no experience. In other words, this is what they might expect as a "starting salary."
- Direct students to form pairs and complete the "Our Income" section on the **Budgeting for Adults Student Handout**. Explain the difference between ***gross pay*** (a person's total pay before taxes or other deductions) and ***net*** or ***take-home pay*** (how much a person makes after taxes and other deductions). If needed, give examples of taxes and deductions a person might expect such as social security, Medicare, state and local taxes, insurance, etc.
- Instruct students to transfer each person's net pay amount to the income area of the "Our Budget" section. Direct students to complete the calculations and determine the budgeted amount for each category based on the recommended percentages in the Round 1 column. If needed, review the process for finding the percent of a number with students. Clarify for students whether they should use a calculator and/or where to show their work.
- When pairs complete their calculations for Round 1 ask them to draw one Life Happens Card from the **Life Happens Student Handout** and adjust their budgets based on this new information in Round 2. As needed, review the process for finding percent increase or decrease with students. For Round 3, pairs should swap Life Happens cards and conduct the activity again. Note that Round 3 adjustments should be made off of the amounts in Round 2 (not the original).

[1]Source of starting salaries: *Entry Level Jobs in the United States;* Salary.com

Conclude

- Call on pairs to share how the Life Happens cards impacted their budgets and the adjustments they had to make as a result. Share with students that some expenses are considered ***fixed expenses*** (remain consistent from month to month) while others are ***variable expenses*** (ones that change from month to month). Challenge students to identify whether the expenses they changed were fixed or variable. Ask students for examples of other situations that might force a person or family to make changes to their budget.
- Ask students why financial experts would choose to provide budget recommendations as percentages rather than fixed dollar amounts (i.e., "Try and save 10% of your income" versus "Try and add $100 each month to your savings account").
- Direct students to submit an exit ticket answering the question: How will I use percentages in the future?

Extend

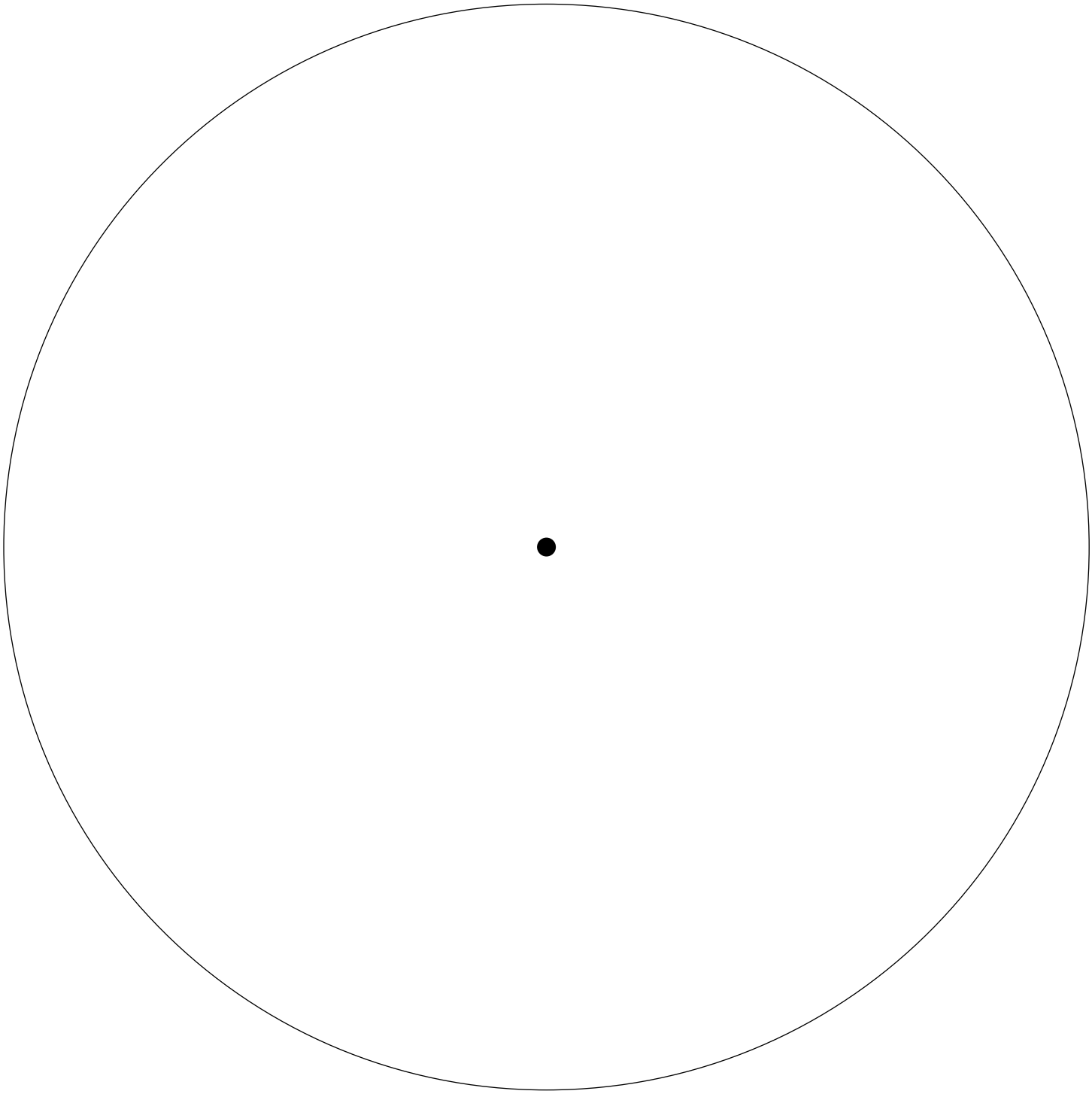
- **Math:** Challenge students to calculate the percentage change from their budgeted amounts (Round 1) to their final amounts (Round 3) for each income and expense category.
- **Technology:** Invite students to create a spreadsheet with the budget categories from the activity or others of their choosing. Use formulas to calculate the budgeted amounts and totals.
- **Research:** Direct students to research how taxes and deductions from a person's paycheck are calculated including any state or local income taxes that may apply. Are these flat taxes or do some people pay a different percentage than others?
- **Family:** Encourage students to discuss budgeting with their family. What categories of expenses does the family have? How similar is the family's budget to the percentages found in the activity?

Our Teen Budget

Directions: Create a pie chart using the circle below to illustrate how you would divide your money. Label each category in the chart with its name and the percentage. Remember that the percentages should total 100.

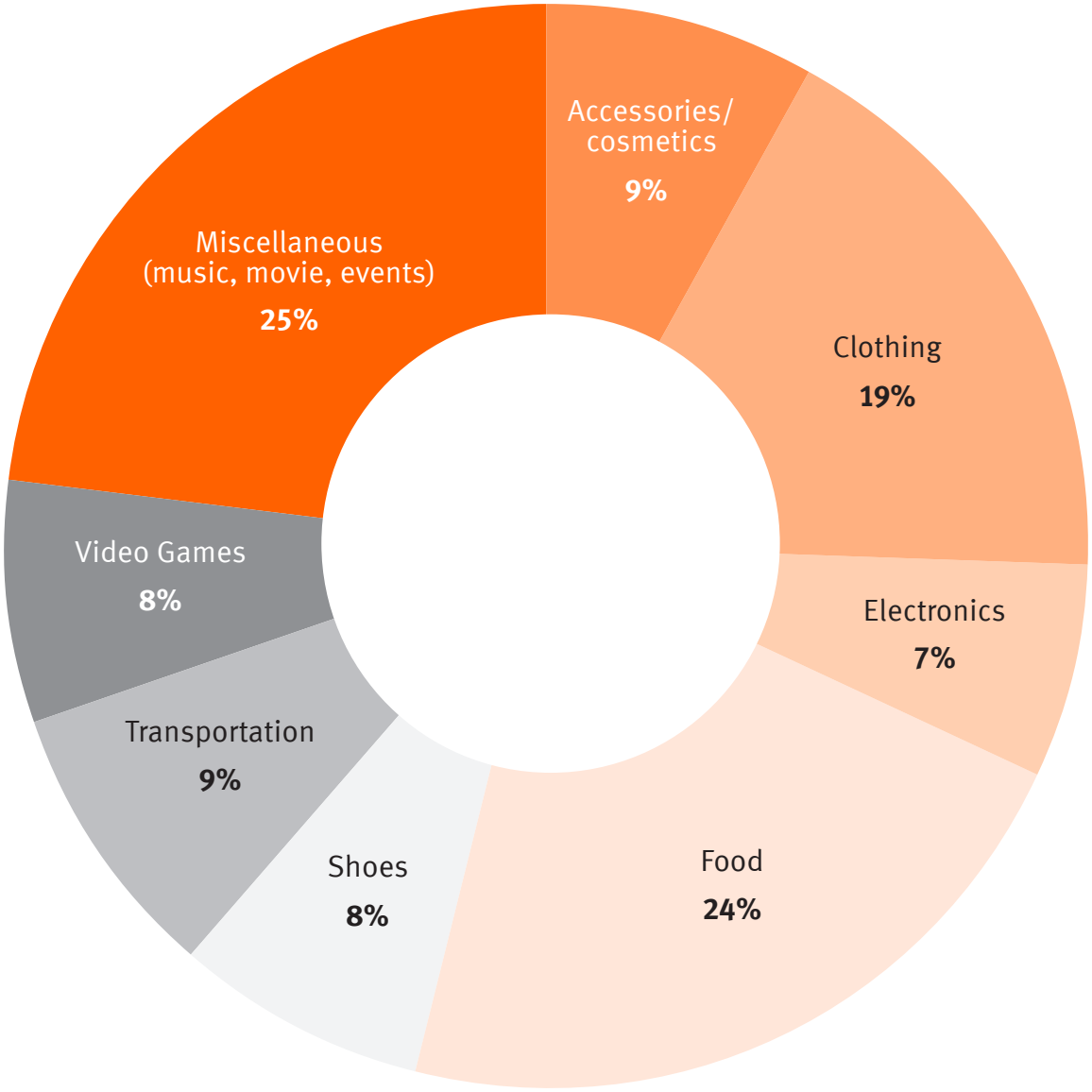
Spending Categories:

- Accessories/cosmetics
- Clothing
- Electronics
- Food
- Shoes
- Transportation
- Video games
- Miscellaneous (music, movie, events)



The Average Teen's Budget

Based on a survey of over 6,000 teens, the following represents an average breakdown of teen expenses:



Source: Taking Stock with Teens, Spring 2018, Piper Jaffrey

Budgeting for Adults

Directions:

- Start: Complete the Our Income section using the information on your scenario card.
- Round 1: Fill in the income of you and your partner. Enter these and total the amounts in the Round 1 Column. Calculate the recommended budgeted amount using your total income and the percentages that are provided.
- Round 2: Draw a *Life Happens Card*. Record your new income(s) and/or expenses in the Round 2 Column. Decide on new amounts for each expense category. Be sure your expenses do not total more than your income.
- Round 3: *Swap Life Happens Cards* with a nearby pair. Repeat the same steps as in Round 2.

Our Income

	Partner #1	Partner #2
Name		
Annual Gross Pay (annual income from card)		
Taxes and Deductions (25% of annual gross pay)		
Annual Net Pay (annual gross pay minus taxes and deductions)		
Monthly Net Pay (annual net pay divided by 12) **Use this amount for each person's income in Round 1 of the budget simulation*		

Budgeting for Adults

	Recommended %	Round 1	Round 2	Round 3
INCOME				
Partner 1:	_____	$	$	$
Partner 2:	_____	$	$	$
TOTAL INCOME	_____	$	$	$
EXPENSES				
Housing	25%	$	$	$
Utilities	7%	$	$	$
Insurance	10%	$	$	$
Food	14%	$	$	$
Transportation	17%	$	$	$
Personal Items	5%	$	$	$
Recreation	3%	$	$	$
Charitable Giving	5%	$	$	$
Saving	10%	$	$	$
Miscellaneous	4%	$	$	$
TOTAL	**100%**	$	$	$

Round 2 Life Card:

Round 3 Life Card:

Starting Salaries

Directions: Cut out each card. To use them again, consider printing them on cardstock and/or laminating them.

Fast Food Cook Average Annual Income: $20,521	**Bank Teller** Average Annual Income: $25,959
Call Center Representative Average Annual Income: $26,127	**Laboratory Courier** Average Annual Income: $29,283
Deli Counter Clerk Average Annual Income: $29,401	**Grocery Store Cashier** Average Annual Income: $30,248
Data Entry Clerk Average Annual Income: $31,606	**Patient Registrar** Average Annual Income: $33,574
Pharmacy Technician Average Annual Income: $33,841	**Legal Records Clerk** Average Annual Income: $36,541
Welder Average Annual Income: $38,900	**ATM Service Technician** Average Annual Income: $40,337
Administrative Assistant Average Annual Income: $40,588	**Payroll Clerk** Average Annual Income: $42,241

Starting Salaries

Directions: Cut out each card. To use them again, consider printing them on cardstock and/or laminating them.

Correctional Officer Average Annual Income: $43,997	**HVAC Mechanic** Average Annual Income: $44,381
Interior Designer Average Annual Income: $45,034	**Land Surveyor** Average Annual Income: $46,482
Microbiologist Average Annual Income: $45,861	**Technical Librarian** Average Annual Income: $46,749
Electrician Average Annual Income: $47,465	**Copywriter** Average Annual Income: $48,858
Landscape Architect Average Annual Income: $49,198	**Biologist** Average Annual Income: $49,527
Social Media Specialist verage Annual Income: $50,328	**Accountant** Average Annual Income: $51,091
Architect Average Annual Income: $53,897	**Building Inspector** Average Annual Income: $53,935

Starting Salaries

Directions: Cut out each card. To use them again, consider printing them on cardstock and/or laminating them.

Financial Analyst Average Annual Income: $56,333	**Chemist** Average Annual Income: $57,164
Web Designer verage Annual Income: $57,233	**Mine Engineer** Average Annual Income: $61,444
Environmental Engineer Average Annual Income: $62,174	**Commercial Loan Officer** Average Annual Income: $63,519
Database Administrator Average Annual Income: $64,116	**Mechanical Engineer** Average Annual Income: $66,795
Labor Relations Specialist Average Annual Income: $67,139	**Electrical Engineer** Average Annual Income: $68,432
Laboratory Supervisor Average Annual Income: $69,443	**Attorney** Average Annual Income: $92,894

Life Happens

Directions: Cut out each card. To use them again, consider printing them on cardstock and/or laminating them. During the activity, each pair of students will receive one card.

LIFE HAPPENS Great news! Partner #1 got a promotion at work. Net pay increases by 4%.	**LIFE HAPPENS** Bad news. Partner #2 was fired. You have to live off of one income this month. Be sure to think about which expenses you can realistically decrease.
LIFE HAPPENS Great news! Partner #2 got a promotion at work. Net pay increases by 8%.	**LIFE HAPPENS** Bad news. Partner #1 was let go at work. You have to live off of one income this month. Be sure to think about which expenses you can realistically decrease.
LIFE HAPPENS Uh oh! Your car won't pass inspection without new tires. A new set will cost $400.	**LIFE HAPPENS** You got a bill from your dentist. That procedure you had will cost you $340. Too bad you don't have dental insurance.
LIFE HAPPENS Friends are visiting from out of town. Your monthly entertainment budget increases by 50%.	**LIFE HAPPENS** Your dog gets sick and needs surgery. The vet bill is $320.
LIFE HAPPENS Your television stops working and you want to replace it at a cost of $250.	**LIFE HAPPENS** Bad news. Your aunt passed away. To travel to her funeral, you'll need to buy a $500 plane ticket.
LIFE HAPPENS Your landlord informs you that your utilities are going up due to higher demand. Your bill will increase $40 per month.	**LIFE HAPPENS** Wow! You won the office desk decorating contest. The prize is $100.

Life Happens

Directions: Cut out each card. To use them again, consider printing them on cardstock and/or laminating them. During the activity, each pair of students will receive one card.

LIFE HAPPENS You broke your finger playing basketball with friends. The visit to the outpatient clinic will cost $125.	**LIFE HAPPENS** Good news! Your credit score has improved. Your insurance costs go down 5%.
LIFE HAPPENS The holidays are fast approaching. You spend $300 on gifts for family members.	**LIFE HAPPENS** You make some calls and find out you can save 10% a month by switching to a different insurance company.
LIFE HAPPENS A deer jumps out and damages your car. Your automobile insurance covers the damage, but you have to pay the deductible of $250.	**LIFE HAPPENS** Good news! You have been an excellent driver and are rewarded with a $50 monthly premium reduction.
LIFE HAPPENS You are diagnosed with Celiac disease. You can only eat food that is gluten-free. Your food budget increases by 30%.	**LIFE HAPPENS** You cash in some savings bonds that were purchased for you by your grandparents. You receive $200.
LIFE HAPPENS You decide to become a vegetarian and eat only organic foods. Your food budget will need to go up by 20% to accommodate the change.	**LIFE HAPPENS** A family member is diagnosed with cancer. You decide to show support and donate 2% of your income each month to a cancer research organization.
LIFE HAPPENS Your hot water heater breaks. A new one will cost $350.	**LIFE HAPPENS** You learn to do your own oil changes and basic car maintenance. You expect to decrease your transportation costs by an average of $10 per month.