

Dollars and Sense II: Our Interest in Interest, Managing Savings, and Debt

Lesson 8

Are You Ready to Manage Your Financial Interests?

Instructions for Teachers

Overview of Contents

Lesson 8 consists of a single computer simulation with two exercises offering students AND interested adults an opportunity to see where they stand financially and build their desired financial futures. That future will be likely to incorporate all of the financial elements covered in earlier lessons, including monetary ASSETS (savings and retirement funds), property EQUITY (partial or full ownership of a home or car), multiple forms of LIABILITY (credit card, car loan, and home mortgage debt), in addition to regular income and spending. By using a "Personal Balance Sheet," Lesson 8 encourages users to explore how they can grow their total personal EQUITY, which is the sum of all one's ASSETS (monetary and property) minus one's LIABILITIES.

Students may work with a pre-constructed Exercise 1 or create and explore the open-ended Exercise 2. Parents and other interested adults can use Exercise 2 to better understand their financial situations and to explore financial scenarios of personal relevance.

Using any or all of these elements (ASSETS, EQUITY, LIABILITIES, Income and Expenses), this lesson offers the following two options.

- The pre-constructed Exercise 1 places students in their early-mid 20s, having completed school, begun

MATERIALS

- Computer Simulation (available online at [http://www.clexchange.org/curriculum/dollarsandsense/Dollars and Sense II/ds2_lesson8.asp](http://www.clexchange.org/curriculum/dollarsandsense/Dollars%20and%20Sense%20II/ds2_lesson8.asp)).
- Two handouts (use as needed) to record plans and results.

their first job, and fallen in love. Armed with a shared post-tax income of either \$35,000 or \$50,000, they seek to build a comfortable and financially secure life together (with savings, a credit card, a car, a home) over the next several years.

- In Exercise 2, students, parents, and other interested adults may create and explore their own scenarios, involving a future ranging from 60 months (5 years) up to 180 months (15 years) and incorporating any or all of the following elements: an existing or desired car loan; home mortgage; credit card debt; savings and retirement funds; and either stable or changing monthly Income and Expenses. Individuals can explore a diverse range of situations, such as a looming financial catastrophe (as in the cases presented in Lesson 7), a potential or emerging problem, approaching retirement, etc., or they may choose “What if” scenarios designed to help them achieve personal finance goals and avoid future problems.

Simulation users will see the results of different financial strategies plotted out over time in GRAPHS and TABLES.

Core Objectives For Lesson 8

- (1) **Learning about Personal Balance Sheets.** Long-term financial health (both for individuals and businesses) is typically defined on the basis of ASSETS minus LIABILITIES. Individual ASSETS include money (savings and retirement funds) as well as EQUITY (partial or full ownership of homes and cars), while LIABILITIES include all forms of debt (outstanding car and home loans; credit card debt). Responsible use of savings, loans, and mortgages (to build EQUITY) offer ways to grow long-term ASSETS.

- (2) **Learning how crises arise and, ideally, how to anticipate and avoid them.** A common problem, illustrated in the Lesson 7 simulations, involves either (1) failing to recognize when total monthly spending (including credit card interest and loan payments), EXCEEDS income; or (2) ignoring the problem or addressing it through short-term financing (e.g., spending savings down, building credit card debt), which leads to a far larger problem later on. Recognizing – or better yet, anticipating – a problem and addressing it early is a critically important financial lesson.
- (3) **Building and living within budgets.** There is no mystery underlying how best to effectively manage loans and credit cards in the larger context of one’s personal finances. The key lies in knowing where and how one’s money comes (Income) and goes (expenses, loans, credit card interest). Using the data shown in GRAPHS and TABLES helps reinforce that understanding.
- (4) **Use Systems Thinking to visualize complex problems.** Systems Thinking concepts and frameworks illustrate what happens as \$\$ enter and exit one’s account and incorporate the compounding interest from the residual savings. This idea reinforces students’ deeper understanding of the general processes underlying the system.
- (5) **Using models to test options.** All the simulations are open-ended and hands-on. They are designed to encourage students to explore and test options and opportunities for evaluating different mental models, assumptions, or decisions. Ultimately, this leads to identifying and, subsequently, explaining

to others a preference for one choice over other choices. At the core of the process is an important recognition that there is no single right answer for everyone. Instead, there are options, trade-offs, and multiple pathways through which students can define and achieve personal financial goals.

Deepening Understanding For How The “System” Works

In addition to the tools of Systems Thinking, a valuable tool for conceptualizing long-term financial health is the Personal Balance Sheet (see below). This sheet provides a snapshot at any moment of one’s ASSETS and LIABILITIES: the difference, called EQUITY, defines one’s overall personal wealth.

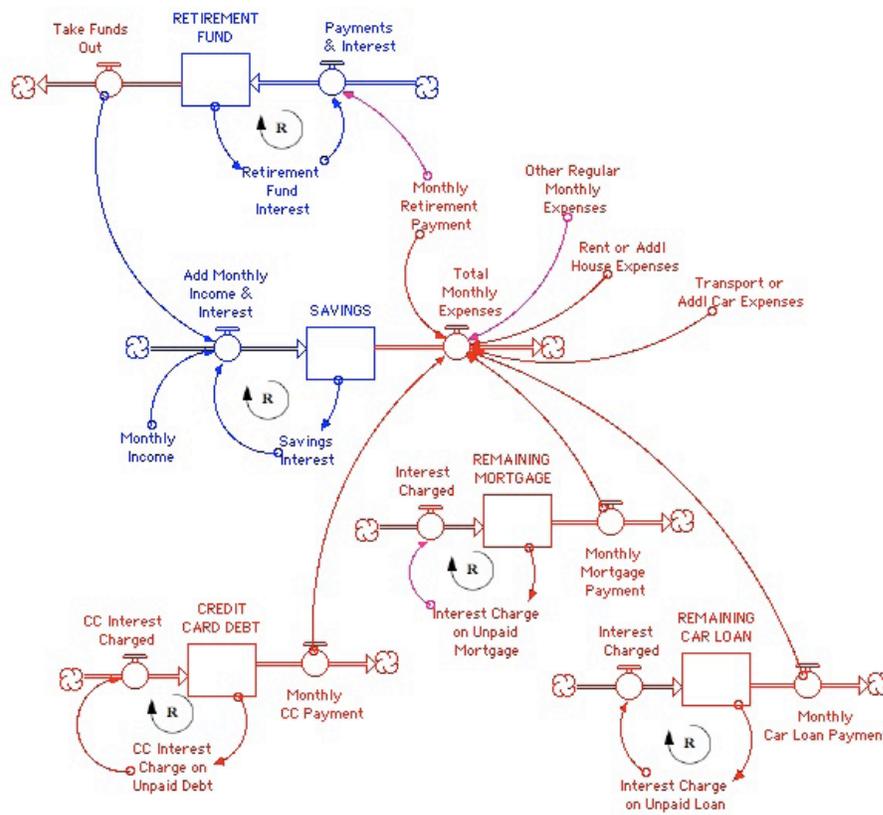
Personal Balance Sheet					
Assets			Liabilities		
Savings	=	\$ _____	Credit Card	=	\$ _____
Retirement	=	\$ _____	Car Loan	=	\$ _____
Equity in Home	=	\$ _____	Home Mortgage	=	\$ _____
Other Equity	=	\$ _____	Other Debts	=	\$ _____
Total Assets - Total Liabilities (Debts) = Equity					

[NOTE: The Monthly Income category IN THE SIMULATION includes both regular monthly income from a job, or other source, AND the monthly interest which is flowing into savings (increasing cash EQUITY). This allows a user to distinguish between the total number of dollars coming into one’s accounts versus the total number going out. Savings interest continues flow into one’s SAVINGS account (shown in the “Assets” table), along with residual monthly income left over after paying all one’s expenses.]

The conceptual tools of Systems Thinking help to visualize

the dynamic processes which unfold over time. These simulations include systems to build ASSETS (savings, retirement funds, home equity) while at the same time recognizing how to manage Expenses and LIABILITIES, the latter including credit card debt, automobile loans, and home mortgages. In all cases, the system for evaluating where and how to balance Expenses with Income, preferably by minimizing interest paid, is the same.

How This Simulation May Be Used



Managing one's use of loans and credit cards effectively translates into knowing where and what one is spending. This includes interest charged both on unpaid credit card balances and installment loans. Balancing total SPENDING with INCOME remains key. Where expenses rise or income falls, short-term solutions inevitably produce longer term problems. (1) Draining either SAVINGS or Retirement Funds undermines the "power" of long-term interest to work for you; and (2) Adding CREDIT CARD DEBT just increases your SPENDING by boosting interest charges you pay on borrowed money.

[http://www.clexchange.org/curriculum/dollarsandsense/Dollars and Sense II/ds2_lesson8.asp](http://www.clexchange.org/curriculum/dollarsandsense/Dollars%20and%20Sense%20II/ds2_lesson8.asp)

Following are brief introductions to each of the exercises, annotated versions of suggested student worksheets, and possible follow-up questions and activities for extended learning opportunities.

In the pre-constructed Exercise 1, students will be tasked with making trade-offs in determining how best to manage a modest income of \$35,000 or \$50,000 so it will provide a comfortable life, while building up SAVINGS and EQUITY and allowing them to weather a large and/or unexpected expense. Having observed, in Lesson 7, situations in which individuals live on (or even beyond) the edge, students here will have the opportunity to experiment to find ways to avoid potential future financial crises.

EXERCISE 1 HANDOUT with ANSWERS and GUIDES FOR TEACHERS

Starting Young: Managing One's Financial Future

This is a challenging exercise, because it asks students to explore where and how they can stretch a modest income of either \$35,000 or \$50,000 (after taxes) to address immediate needs and wants while, at the same time, using that income to build future security in the form of savings and/or retirement funds and/or in EQUITY (notably in car or home ownership).

The process involves carefully developing a budget to avoid the pitfalls (demonstrated in Lesson 7) of spending more than one earns. Once that process is complete (and sacrifices and/or trade-offs are recognized because it simply isn't possible with either income to satisfy all one's wants!), the simulation then permits students to test different scenarios to evaluate where and how they can best secure their long-term futures by building EQUITY in their Personal Balance Sheets (ASSETS minus LIABILITIES).

As with all of the lessons, there is NO single right answer. Rather, there are a number of different strategies, rooted in one's personal preferences, for successfully managing one's finances. Ideally, the strategy of choice recognizes the value of growing ASSETS, whether they are in the form of savings and/or retirement funds or in the EQUITY one has built through paying off loans (on cars or homes).

1. After reading the Introduction in Exercise 1, start by assuming you have an income (after taxes) of either ___ \$35,000 or ___ \$50,000.

Circle each of the following you hope to acquire or already have.

Credit Card

Car

Home

2. Next, develop a Household Budget using the form below.

Building a Household Budget Plan

1 Monthly Income

After Tax Wages \$ _____

Interest Earned
(Simulation calculates Interest payments automatically on Savings)

2 House Expenses

Mortgage/Rent \$ _____

Add House Expenses:

- Utilities \$ _____
(heat, electric, water, trash, etc.)
- Insurance \$ _____
- Taxes \$ _____
- Maintenance/Repair \$ _____

TOTAL HOME EXPENSES \$ _____

3 Vehicle/Transportation

Payments \$ _____
(own, rent, public transport)

Additional Car Expenses:

- Insurance \$ _____
- Fuel \$ _____
- Maintenance/Repairs \$ _____

TOTAL TRANSPORT EXP. \$ _____

4 Daily and Other Expenses

- Food/Dining Out \$ _____
- Phone, Internet, TV \$ _____
- Health/Beauty/Med \$ _____
- Clothing \$ _____
- Entertainment \$ _____

Other including:

- Childcare \$ _____
- Life Insurance \$ _____
- Charitable Contribs \$ _____
- Emergencies \$ _____
- Miscellaneous \$ _____

TOTAL OTHER EXPENSES \$ _____

5 Debt Payments

(Simulation calculates payments automatically on Mortgage and Loans, in addition to Minimum Due on Credit Card)

- Mortgage \$ _____
- Personal Loans \$ _____
- Credit Card Paymts \$ _____

TOTAL DEBT EXPENSES \$ _____

TOTAL EXPENSES
(add up #2-5) \$ _____

Building a budget is the key to determining if one can live within one's means (earn more than one spends!). This budget offers students the opportunity to research and learn about

different types of expenses, as well as to evaluate if and how much they can borrow (to build EQUITY in a car or house). Being able to explain one's choices within that context, and the likely sacrifices or trade-offs necessary to achieve financial stability, is important.

3. Describe (on the back of this paper) sacrifices or trade-offs you have made with this budget (What have you either given up or reduced?) and the personal EQUITY (in \$\$ or property ownership) you hope to build over ___ years.
4. Next, define numbers (see below) that are relevant to your scenario and then use this information to "Set Up Your Scenario" in the simulation. Use information from your Household Budget. These numbers correspond to inputs that will drive the simulation and allow you to explore "What ifs."

ASSETS (own)

Current Savings \$ _____
 Savings Interest Rate % _____
 Present Retirement Fund \$ _____
 (\$\$ in your account)
 Annual Retirement Growth % _____
 Current Value of Car \$ (if own) _____
 Current Home Value \$ (if own) _____

INCOME & EXPENSES (except loans)

Monthly Income (my/our) \$ _____
 Annual Income Growth % _____
 Retirement Payment \$ _____
 Rent (if not own) or Additional Home Expenses (besides mortgage) \$ _____
 Transport (if not own car) or Add'l Car Expenses (besides loan) \$ _____
 Credit Card Payment \$ _____
 All other Monthly Expenses \$ _____

LIABILITIES (owe)

Credit Card
 Credit Card Debt \$ _____
 Monthly Credit Card Charges \$ _____
 Credit Card Limit \$ _____
 Annual CC Interest Rate % _____

Car/Auto
 Car Loan \$ Owed _____
 Car Payments Remaining _____
 Car Loan Interest % _____

Housing Situation
 Outstanding Mortgage \$ _____
 Mortgage Payments Remaining _____
 Mortgage Interest Rate % _____

5. Open "My Personal Balance Sheet" and run the simulation. Are you satisfied with the results? If not, describe why not. If so, can you do better? Explain.

6. Explore options (using the following table) that either correct for errors in the original scenario or offer more attractive results (e.g., options for larger purchases, or for achieving greater savings). Specify at least 3 strategies.

The power in using simulations is twofold: first, to see the errors in one's thinking (before actually committing those same errors in real life!); second, to explore different options. Specifying that students run at least three scenarios encourages them to think about where and how they might improve upon their original plan.

	Option 1	Option 2	Option 3
Income & Expenses			
A. Change Monthly Income			
B. Change (reduce) Other Expenses			
Retirement Fund			
A. Make 1 time (1x) Retirement (if established) Withdrawal			
B. Alter (monthly) Retirement Payments to Established Fund			
Car Options			
A. Change Number of Payments			
B. Sell the Car (click button)			
C. If car is sold or you do not own a car, indicate Alternative Transport Costs			
House Options			
A. If house is owned and then sold (click button)			
B. If house is owned, then sold, cost of Monthly Rent			
Credit Card Options			
A. Set New (reduced) Monthly Credit Card (CC) Charges			
B. Pay this (alternative) Amount Monthly			
C. Pay off Entire Credit Card Debt with Savings (Click button)			

7. Analyze your results. Pick your most successful run and print the 4 graphs. Then discuss your choice, using the graphs to explain how and why you have chosen this particular plan. Include all of the costs of your plan in your explanation (including trade-offs needed to make the plan work).

Obviously, this is the most important measure of the students' learning. Can they explain, through the process of exploring different options, why they selected one plan over the others and how the one they selected is different from their original plan? How does their selection fit with their Personal Balance Sheet? Does it balance building EQUITY with living comfortably within the present?

In Exercise 2, students may choose "What if" situations designed to help them achieve personal finance goals and avoid future problems. In addition, students can explore a diverse range of situations, such as a looming financial catastrophe (as in the cases presented in Lesson 7) or a potential or emerging problem. As with Lesson 7, students may focus on particular lessons, for example, the following:

- How financial crises often arise when credit cards are used to cover unanticipated financial shortfalls.
- When problems involve expenses associated with cars, students can explore a number of options, including buying or selling one's car, adding to or paying off one's credit card balances, or altering income and other expenses.
- When larger problems involve home expenses, students may consider options including selling one's home, reducing other spending, paying off credit card debt, and/or altering income to evaluate how to extricate oneself from financial crises or avoid them altogether.
- Decisions surrounding long-term use of savings and/or retirement funds offer a third set of options for evaluating different trade-offs.
- Students may also explore a tremendous range of "What if" scenarios aimed at maximizing personal assets through saving and the wise use of loans.

EXERCISE 2 HANDOUT with ANSWERS and GUIDES FOR TEACHERS

Helping Adults Manage Their Financial Life

1. After reading the Introduction in Exercise 2, describe how you will use this simulation to assist you in addressing a future financial GOAL or current problem.

Exercise 2 offers students, parents, and/or interested adults an open-ended simulation with which to define and explore a diverse range of personal financial issues. Scenarios may incorporate any or all of the following: changing income or expenses, retirement funds, credit card use, car loans and/or mortgages. As with Exercise 1, consideration should focus on first developing a budget to avoid the pitfalls (demonstrated in Lesson 7) of spending more than one earns, then testing different scenarios to evaluate where and how to secure long-term futures by building EQUITY in their Personal Balance Sheets (ASSETS minus LIABILITIES).

As with all of the lessons, there is NO single right answer. Rather, there are a number of different strategies, rooted in one's personal preferences, for successfully managing one's finances. Ideally, the strategy of choice recognizes the value of growing ASSETS,

whether they are in the form of savings and/or retirement funds or in the EQUITY one has built through paying off loans (on cars or homes).

2. Next, develop a Household Budget using the Household Budget Plan form.

3. Describe (on the back) sacrifices or trade-offs you have made with this budget (What have you either given up or reduced?) and describe the personal EQUITY you hope to build over ___ years.

Building a Household Budget Plan

<p>1 Monthly Income</p> <p>After Tax Wages \$ _____</p> <p>Interest Earned (Simulation calculates Interest payments automatically on Savings)</p>	<p>4 Daily and Other Expenses</p> <ul style="list-style-type: none"> • Food/Dining Out \$ _____ • Phone, Internet, TV \$ _____ • Health/Beauty/Med \$ _____ • Clothing \$ _____ • Entertainment \$ _____ <p>Other including:</p> <ul style="list-style-type: none"> • Childcare \$ _____ • Life Insurance \$ _____ • Charitable Contribs \$ _____ • Emergencies \$ _____ • Miscellaneous \$ _____ <p>TOTAL OTHER EXPENSES \$ _____</p>
<p>2 House Expenses</p> <p>Mortgage/Rent \$ _____</p> <p>Add House Expenses:</p> <ul style="list-style-type: none"> • Utilities \$ _____ (heat, electric, water, trash, etc.) • Insurance \$ _____ • Taxes \$ _____ • Maintenance/Repair \$ _____ <p>TOTAL HOME EXPENSES \$ _____</p>	<p>5 Debt Payments (Simulation calculates payments automatically on Mortgage and Loans, in addition to Minimum Due on Credit Card)</p> <ul style="list-style-type: none"> • Mortgage \$ _____ • Personal Loans \$ _____ • Credit Card Paymts \$ _____ <p>TOTAL DEBT EXPENSES \$ _____</p>
<p>3 Vehicle/Transportation</p> <p>Payments \$ _____ (own, rent, public transport)</p> <p>Additional Car Expenses:</p> <ul style="list-style-type: none"> • Insurance \$ _____ • Fuel \$ _____ • Maintenance/Repairs \$ _____ <p>TOTAL TRANSPORT EXP. \$ _____</p>	<p>TOTAL EXPENSES (add up #2-5) \$ _____</p>

Building a budget is the key to determining if one can live within one's means (earn more than one spends!). This budget offers students the opportunity to research and learn about different types of expenses, as well as to evaluate if and how much they can borrow (to build EQUITY in a car or house). Being able to explain one's choices within that context, and the likely sacrifices or trade-offs necessary to achieve financial stability, is important.

4. Next, define numbers (see below) that are relevant to your scenario and then use this information to "Set Up Your Scenario" in the simulation. Use information from your Household Budget. These numbers correspond to inputs that will drive the simulation and allow you to explore "What ifs."

ASSETS (own)

Current Savings \$ _____
 Savings Interest Rate % _____
 Present Retirement Fund \$ _____
 (\$\$ in your account)
 Annual Retirement Growth % _____
 Current Value of Car \$ (if own) _____
 Current Home Value \$ (if own) _____

INCOME & EXPENSES (except loans)

Monthly Income (my/our) \$ _____
 Annual Income Growth % _____
 Retirement Payment \$ _____
 Rent (if not own) or Additional Home Expenses (besides mortgage) \$ _____
 Transport (if not own car) or Add'l Car Expenses (besides loan) \$ _____
 Credit Card Payment \$ _____
 All other Monthly Expenses \$ _____

LIABILITIES (owe)

Credit Card
 Credit Card Debt \$ _____
 Monthly Credit Card Charges \$ _____
 Credit Card Limit \$ _____
 Annual CC Interest Rate % _____

Car/Auto
 Car Loan \$ Owed _____
 Car Payments Remaining _____
 Car Loan Interest % _____

Housing Situation
 Outstanding Mortgage \$ _____
 Mortgage Payments Remaining _____
 Mortgage Interest Rate % _____

5. Open "My Personal Balance Sheet" and run the simulation. Are you satisfied with the results? If not, describe why not. If so, can you do better? Explain.

The power in using simulations is twofold: first, to see the errors in one's thinking (before actually committing those same errors in real life!); second, to explore different options. Specifying that a student run at least three scenarios encourages them to think about where and how they might improve upon their original plan.

6. Explore options (using the following table) that either correct for errors in the original scenario or offer more attractive results (e.g., options for larger purchases or for achieving greater savings). Specify at least 3 strategies.

	Option 1	Option 2	Option 3
Income & Expenses			
A. Change Monthly Income			
B. Change (reduce) Other Expenses			
Retirement Fund			
A. Make 1 time (1x) Retirement (if established) Withdrawal			
B. Alter (monthly) Retirement Payments to Established Fund			
Car Options			
A. Change Number of Payments			
B. Sell the Car (click button)			
C. If car is sold or you do not own a car, indicate Alternative Transport Costs			
House Options			
A. If house is owned and then sold (click button)			
B. If house is owned, then sold, cost of Monthly Rent			
Credit Card Options			
A. Set New (reduced) Monthly Credit Card (CC) Charges			
B. Pay this (alternative) Amount Monthly			
C. Pay off Entire Credit Card Debt with Savings (Click button)			

7. Analyze your results. Pick your most successful run and print the 4 graphs. Then discuss your choice, using the graphs to explain how and why you have chosen this particular plan. Include all of the costs of your plan in your explanation (including trade-offs needed to make the plan work).

Obviously, this is the most important measure of the student's learning. Can they explain, through the process of exploring different options, why they selected one over the others (and how is the one they selected different from their original plan)? How

does their selection fit with their Personal Balance Sheet? Does it balance building EQUITY with living comfortably within the present?

Summary

The challenge of knowing where, when, and how to manage savings and loans is an important aspect of personal financial literacy. Too often, it is not adequately understood, with devastating consequences. In this Lesson 8 as in others, it is critically important to know not only what one is earning but also what one is spending (including interest payments), and where and how spending has the potential to offer long-term benefits in the form of growing assets. By making appropriate decisions, it is possible to live comfortably within one's means (income). At the same time, it is critical to recognize how and when imbalances arise and how to avoid using short-term solutions (e.g., a credit card) to cover shortfalls. Remember the powerful lesson: short-term solutions typically only make problems worse in the long-term.

Lessons focusing on the positive ways to use financial instruments (e.g., credit cards, loans) are important. But it is also true that people learn from their mistakes. In this case, the mistakes of others offer lessons about the dangers in not addressing problems head on and dealing with them sooner rather than later.

Starting Young: Managing One's Financial Future

1. After reading the Introduction in Exercise 1, start by assuming you have an income (after taxes) of either ___\$35,000 or ___\$50,000.

Circle each of the following you hope to acquire or already have.

Credit Card

Car

Home

2. Next, develop a Household Budget using the form below.
3. Describe (on the back of this paper) sacrifices or trade-offs you have made with this budget (What have you either given up or reduced?) and the personal EQUITY (in \$\$ or property ownership) you hope to build over ___ years.
4. Next, define numbers (see below) that are relevant to your scenario and then use this information to "Set Up Your Scenario" in the simulation. Use information from your Household Budget. These numbers correspond to inputs that will drive the simulation and allow you to explore "What ifs."

ASSETS (own)

Current Savings \$ _____

Savings Interest Rate % _____

Present Retirement Fund \$ _____
(\$\$ in your account)

Annual Retirement Growth % _____

Current Value of Car \$ (if own) _____

Current Home Value \$ (if own) _____

INCOME & EXPENSES (except loans)

Monthly Income (my/our) \$ _____

Annual Income Growth % _____

Retirement Payment \$ _____

Rent (if not own) or Additional Home Expenses (besides mortgage) \$ _____

Transport (if not own car) or Add'l Car Expenses (besides loan) \$ _____

Credit Card Payment \$ _____

All other Monthly Expenses \$ _____

LIABILITIES (owe)

Credit Card

Credit Card Debt \$ _____

Monthly Credit Card Charges \$ _____

Credit Card Limit \$ _____

Annual CC Interest Rate % _____

Car/Auto

Car Loan \$ Owed _____

Car Payments Remaining _____

Car Loan Interest % _____

Housing Situation

Outstanding Mortgage \$ _____

Mortgage Payments Remaining _____

Mortgage Interest Rate % _____

5. Open “My Personal Balance Sheet” and run the simulation. Are you satisfied with the results? If not, describe why not. If so, can you do better? Explain.

6. Explore options (using the following table) that either correct for errors in the original scenario or offer more attractive results (e.g., options for larger purchases, or for achieving greater savings). Specify at least 3 strategies.

	Option 1	Option 2	Option 3
Income & Expenses			
A. Change Monthly Income			
B. Change (reduce) Other Expenses			
Retirement Fund			
A. Make 1 time (1x) Retirement (if established) Withdrawal			
B. Alter (monthly) Retirement Payments to Established Fund			
Car Options			
A. Change Number of Payments			
B. Sell the Car (click button)			
C. If car is sold or you do not own a car, indicate Alternative Transport Costs			
House Options			
A. If house is owned and then sold (click button)			
B. If house is owned, then sold, cost of Monthly Rent			
Credit Card Options			
A. Set New (reduced) Monthly Credit Card (CC) Charges			
B. Pay this (alternative) Amount Monthly			
C. Pay off Entire Credit Card Debt with Savings (Click button)			

(Turn page over for question 7.)

7. Analyze your results. Pick your most successful run and print the 4 graphs. Then discuss your choice, using the graphs to explain how and why you have chosen this particular plan. Include all of the costs of your plan in your explanation (including trade-offs needed to make the plan work).

Helping Adults Manage Their Financial Life

1. After reading the Introduction in Exercise 2, describe how you will use this simulation to assist you in addressing a future financial GOAL or current problem.
2. Next, develop a Household Budget using the form below.

Building a Household Budget Plan

1 Monthly Income

After Tax Wages \$ _____

Interest Earned
(Simulation calculates Interest payments automatically on Savings)

2 House Expenses

Mortgage/Rent \$ _____

Add House Expenses:

- Utilities \$ _____
(heat, electric, water, trash, etc.)
- Insurance \$ _____
- Taxes \$ _____
- Maintenance/Repair \$ _____

TOTAL HOME EXPENSES \$ _____

3 Vehicle/Transportation

Payments \$ _____
(own, rent, public transport)

Additional Car Expenses:

- Insurance \$ _____
- Fuel \$ _____
- Maintenance/Repairs \$ _____

TOTAL TRANSPORT EXP. \$ _____

4 Daily and Other Expenses

- Food/Dining Out \$ _____
- Phone, Internet, TV \$ _____
- Health/Beauty/Med \$ _____
- Clothing \$ _____
- Entertainment \$ _____

Other including:

- Childcare \$ _____
- Life Insurance \$ _____
- Charitable Contribs \$ _____
- Emergencies \$ _____
- Miscellaneous \$ _____

TOTAL OTHER EXPENSES \$ _____

5 Debt Payments

(Simulation calculates payments automatically on Mortgage and Loans, in addition to Minimum Due on Credit Card)

- Mortgage \$ _____
- Personal Loans \$ _____
- Credit Card Paymts \$ _____

TOTAL DEBT EXPENSES \$ _____

TOTAL EXPENSES

(add up #2-5) \$ _____

- Describe (on the back) sacrifices or trade-offs you have made with this budget (What have you either given up or reduced?) and describe the personal EQUITY you hope to build over ___ years.
- Next, define numbers (see below) that are relevant to your scenario and then use this information to “Set Up Your Scenario” in the simulation. Use information from your Household Budget. These numbers correspond to inputs that will drive the simulation and allow you to explore “What ifs.”

ASSETS (own)

Current Savings \$ _____
 Savings Interest Rate % _____
 Present Retirement Fund \$ _____
 (\$\$ in your account)
 Annual Retirement Growth % _____
 Current Value of Car \$ (if own) _____
 Current Home Value \$ (if own) _____

INCOME & EXPENSES (except loans)

Monthly Income (my/our) \$ _____
 Annual Income Growth % _____
 Retirement Payment \$ _____
 Rent (if not own) or Additional Home Expenses (besides mortgage) \$ _____
 Transport (if not own car) or Add'l Car Expenses (besides loan) \$ _____
 Credit Card Payment \$ _____
 All other Monthly Expenses \$ _____

LIABILITIES (owe)

Credit Card
 Credit Card Debt \$ _____
 Monthly Credit Card Charges \$ _____
 Credit Card Limit \$ _____
 Annual CC Interest Rate % _____
Car/Auto
 Car Loan \$ Owed _____
 Car Payments Remaining _____
 Car Loan Interest % _____
Housing Situation
 Outstanding Mortgage \$ _____
 Mortgage Payments Remaining _____
 Mortgage Interest Rate % _____

- Open “My Personal Balance Sheet” and run the simulation. Are you satisfied with the results? If not, describe why not. If so, can you do better? Explain.
- Explore options (using the following table) that either correct for errors in the original scenario or offer more attractive results (e.g., options for larger purchases or for achieving greater savings). Specify at least 3 strategies.

	Option 1	Option 2	Option 3
Income & Expenses			
A. Change Monthly Income			
B. Change (reduce) Other Expenses			
Retirement Fund			
A. Make 1 time (1x) Retirement (if established) Withdrawal			
B. Alter (monthly) Retirement Payments to Established Fund			
Car Options			
A. Change Number of Payments			
B. Sell the Car (click button)			
C. If car is sold or you do not own a car, indicate Alternative Transport Costs			
House Options			
A. If house is owned and then sold (click button)			
B. If house is owned, then sold, cost of Monthly Rent			
Credit Card Options			
A. Set New (reduced) Monthly Credit Card (CC) Charges			
B. Pay this (alternative) Amount Monthly			
C. Pay off Entire Credit Card Debt with Savings (Click button)			

7. Analyze your results. Pick your most successful run and print the 4 graphs. Then discuss your choice, using the graphs to explain how and why you have chosen this particular plan. Include all of the costs of your plan in your explanation (including trade-offs needed to make the plan work).

Lesson Title:

Dollars and Sense II, Lesson 8: Are You Ready to Manage Your Financial Interests?

Overview:

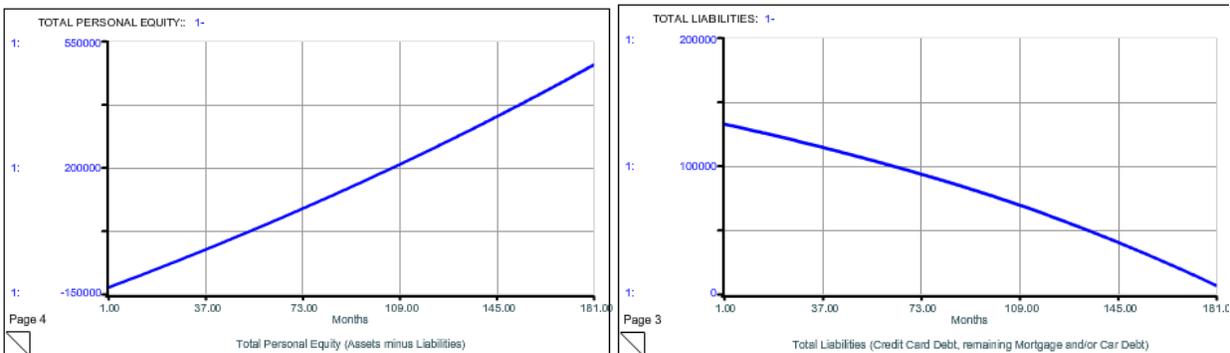
The simulations in *Dollars and Sense II* introduce 6th – 12th grade students to the terminology and basic structures of *compound interest* and how it relates to saving and spending. Later simulations in this series also include *interest payments* on debt. Students become aware of the influence of time in the calculation of interest, both as it helps (in the case of savings) and hurts (in the case of debt).

Related Characteristic(s) of Complex Systems:

Conflicts arise between short-term and long-term goals.

Ideas and Examples for Connecting to the Characteristic:

Lesson 8 offers two exercises for students to practice building a solid financial future. One exercise can be personalized to reflect the future they would like to have and the other is an opportunity to help an adult out of a difficult financial situation. Results vary considerably. Encourage students to envision the financial future they would like to have. Most people think their finances will look something like these graphs:



Young people are “expected” to be debt-laden when starting their adult lives, but over time their equity will grow and their liabilities will be paid down. For this to happen, especially on a modest income, they must learn to live within their means.

Monthly Income

\$4,847.05

Spending

\$1,708.03

Compare short-term and long-term results of the students’ simulation runs. Are they sacrificing long-term financial health for short-term consumer spending? Ask them what can be done differently to create a better result for later in life. Simulation results can be the basis of rich classroom discussions about money, financial freedom and responsibility.

Resource(s)

Khan Academy offers a 2-part series on personal balance sheets:

<http://www.youtube.com/watch?v=mxsYHiDVNlk>

© 2013 *Creative Learning Exchange* www.clexchange.org

Working in K-12 education to develop Systems Citizens

Permission granted for photocopying and electronic distribution for non-commercial educational purposes with attribution

<http://www.youtube.com/watch?v=U2Nw5T44zvY>

© 2013 **Creative Learning Exchange** www.clexchange.org
Working in K-12 education to develop Systems Citizens

Permission granted for photocopying and electronic distribution for non-commercial educational purposes with attribution