

Unit D: Investments

Half Course VI

HALF COURSE VI

Unit D: Investments

Hours: 12

General Learning Outcome:

Demonstrate an awareness of and recognize the differences concerning different types of financial investments.

This unit introduces students to various types of investment and savings vehicles, and stresses the importance of financial planning.

Specific Learning Outcomes

- D-1 Explain how financial values and goals affect investment choices.
- D-2 Describe different investment options; e.g., GICs, bonds, mutual funds, stocks, and real estate.
- D-3 Compare and contrast different investment options in terms of risk, rates of return, costs, liquidity, and lengths of term.
- D-4 Identify reasons for investing money in registered savings plans (RSPs).
- D-5 Describe the purchasing and selling of stocks.
- D-6 Adjust financial plans, including budgets, to achieve personal goals.
- D-7 Interpret Net Worth Statements.

INVESTMENTS

Instructional Materials

- *Essentials of Mathematics 12*

Assessment

could include quizzes, a dictionary of financial terms, and stock market simulations

**PRESCRIBED LEARNING
OUTCOMES**

General Outcome

Demonstrate an awareness of and recognize the differences concerning different types of financial investments.

Specific Outcome(s)

D-1 explain how financial values and goals affect investment choices

SUGGESTIONS FOR INSTRUCTION

Note: Material from this unit may be integrated into the Career/Life project. The careers that students select have an impact on their own financial plans.

The teacher may wish to start this unit with an introduction to the Stock Market Challenge project (see Blackline Masters) and continue this throughout the unit.

Possible learning activities:

1. List the three goals you hope to achieve this year. Discuss why they are important to you and how you plan to achieve them.
2. List the top 10 things you value most in life. Briefly describe why each is important to you.
3. What are the functions of advertising? How does advertising influence your goals?
4. List your favourite and least favourite ads on television, in magazines, or in newspapers. Describe why you like or dislike these ads.
5. Discuss how your goals might change throughout your life.
6. List three financial goals for a single person in his/her mid-20s.
7. List three financial goals for a married person with children in his/her mid-30s.
8. List three financial goals for a married person in his/her mid-50s, once the children have left home.
9. Discuss a model for good decision making.
10. Discuss factors affecting income and benefits.
11. Identify and describe common investment options.

✓ Communications	Patterns
✓ Connections	✓ Problem Solving
✓ Number Sense	✓ Reasoning
✓ Organization and Structure	Technology Visualization

SUGGESTIONS FOR ASSESSMENT

Written assignments should be graded and placed in a portfolio.

SUGGESTED LEARNING RESOURCES

Print

Senior 4 Consumer Mathematics (45S) Part VI: A Course for Distance Learning.
Winnipeg, MB: Manitoba Education, Training and Youth, 2002.
— Module 5, Lesson 1

Baron, C., et al. *Essentials of Mathematics 12*. Victoria, BC: British Columbia Ministry of Education, 2003.
[ISBN 0-7726-4997-9]

Rabbior, Gary. *Money and Youth*. Toronto, ON: The Canadian Foundation for Economic Education, 1997.
Telephone: 416-968-2236
Fax: 416-968-0488

<p style="text-align: center;">PRESCRIBED LEARNING OUTCOMES</p>	<p style="text-align: center;">SUGGESTIONS FOR INSTRUCTION</p>		
<p>D-2 describe different investment options; e.g., GICs, bonds, mutual funds, stocks, and real estate</p> <hr/> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure </td> <td style="width: 50%; border: none;"> <ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization </td> </tr> </table>	<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 	<p>List factors to consider when selecting saving and investment vehicles.</p> <p>Identify and describe the difference between debt investments and equity investments.</p> <p>Discuss reasons for starting investments early in life.</p>
<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 		
<p>D-3 compare and contrast different investment options in terms of risk, rates of return, costs, liquidity, and lengths of term</p> <hr/> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure </td> <td style="width: 50%; border: none;"> <ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization </td> </tr> </table>	<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 	<p>When considering lengths of term, be sure to consider the differences between short and long term with respect to goals and expected returns.</p> <p>Discussion could include:</p> <ul style="list-style-type: none"> • Why might someone buy a Canada Savings Bond (CSB) instead of stock? • Why might someone choose not to purchase a five-year term GIC?
<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 		
<p>D-4 identify reasons for investing money in registered savings plans (RSPs)</p> <hr/> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense Organization and Structure </td> <td style="width: 50%; border: none;"> <ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization </td> </tr> </table>	<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 	<p>Discuss the benefits of having an RRSP, e.g., tax sheltering.</p> <p>Discuss compounding and the benefits of investing early in an RRSP.</p>
<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 		

SUGGESTIONS FOR ASSESSMENT

SUGGESTED LEARNING
RESOURCES

Internet

<www.tse.com>
<www.fin-info.com>
<www.stock1.com>

Other

Invite financial planners or investment counsellors to speak to your students.

Print

Senior 4 Consumer Mathematics (45S) Part VI: A Course for Distance Learning.
Winnipeg, MB: Manitoba Education, Training and Youth, 2002.
— Module 5, Lesson 3, Cover Assignment

Senior 4 Consumer Mathematics (45S) Part VI: A Course for Distance Learning.
Winnipeg, MB: Manitoba Education, Training and Youth, 2002.
— Module 7, Cover Assignment

<p style="text-align: center;">PRESCRIBED LEARNING OUTCOMES</p>	<p style="text-align: center;">SUGGESTIONS FOR INSTRUCTION</p>		
<p>D-5 describe the purchasing and selling of stocks</p> <hr/> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization </td> </tr> </table>	<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 	<p>Define: stock exchange</p> <p>To what does the TSE Index refer? What does the number of the index mean?</p> <p>Determine a portfolio value. (A Blackline Master is provided.)</p> <p>Track specific stocks over a period of time.</p> <p>Create a stock market competition for students.</p>
<ul style="list-style-type: none"> ✓ Communications ✓ Connections Number Sense ✓ Organization and Structure 	<ul style="list-style-type: none"> ✓ Patterns Problem Solving ✓ Reasoning Technology Visualization 		
<p>D-6 adjust financial plans, including budgets, to achieve personal goals</p> <hr/> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> ✓ Communications ✓ Connections ✓ Number Sense Organization and Structure </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> Patterns Problem Solving ✓ Reasoning Technology Visualization </td> </tr> </table>	<ul style="list-style-type: none"> ✓ Communications ✓ Connections ✓ Number Sense Organization and Structure 	<ul style="list-style-type: none"> Patterns Problem Solving ✓ Reasoning Technology Visualization 	<p>Teachers can emphasize one of the fundamental principles of financial planning—the concept of “paying yourself first.” This concept refers to saving 10% of your salary throughout your working years and investing it carefully. Some financial advisors suggest immediately investing 10% of your salary and using only the remaining 90% for living expenditures. The 10% can be invested in various ways.</p> <p>Discuss with students the advantages of a financial plan and how to develop one.</p> <p>Students could discuss areas where they plan to improve their financial planning knowledge and skills.</p> <p>Discussion could include reasons for saving and ways to accumulate savings.</p>
<ul style="list-style-type: none"> ✓ Communications ✓ Connections ✓ Number Sense Organization and Structure 	<ul style="list-style-type: none"> Patterns Problem Solving ✓ Reasoning Technology Visualization 		

SUGGESTIONS FOR ASSESSMENT

SUGGESTED LEARNING
RESOURCES

Print

Senior 4 Consumer Mathematics (45S) Part VI: A Course for Distance Learning.
Winnipeg, MB:
Manitoba Education,
Training and Youth,
2002.
— Module 5, Lesson 4

See the alternate budget form and exercises in *Senior 4 Consumer Mathematics: A Course for Distance Learning* developed for distance education.

Print

Senior 4 Consumer Mathematics (45S) Part VI: A Course for Distance Learning.
Winnipeg, MB:
Manitoba Education,
Training and Youth,
2002.
— Module 5, Lesson 2

PRESCRIBED LEARNING
OUTCOMES

D-7 interpret Net Worth
Statements

SUGGESTIONS FOR INSTRUCTION

Net worth provides a benchmark from which progress in achieving financial goals can be monitored.

Example

Anne talks to her financial advisor. The following is information she gives her advisor:

- she lives in a \$90,000.00 home on which there is an outstanding mortgage of \$70,000.00
- she owns a \$25,000.00 car on which she still owes \$12,000.00 (the loan was for three years)
- Anne has \$30,000.00 in a registered pension plan and \$5000.00 in savings bonds
- she has a credit card balance of \$1575.00
- she has \$990.00 in her chequing account and \$2000.00 in a savings account

Prepare a Net Worth Statement and a Debt-Equity Ratio for Anne.

A blank copy of this form is provided in the Blackline Masters section of this document. This will help students work out their net worth and debt-equity ratio. Alternatively, students can create and save a template on the computer.

- | | |
|----------------------------|--------------------------|
| ✓ Communications | Patterns |
| ✓ Connections | Problem Solving |
| ✓ Number Sense | ✓ Reasoning |
| Organization and Structure | Technology Visualization |

— continued

SUGGESTIONS FOR ASSESSMENT

Project

Prepare a Net Worth Statement and a Debt-Equity Ratio for an individual with the following assets and liabilities:

- lives in a \$110,000.00 house
- has a \$75,000.00 mortgage
- owns a \$21,000.00 car
- owes \$12,000.00 on her car, with a four-year car loan
- has \$15,000.00 in a registered pension plan and \$2500.00 in savings bonds
- has a credit card balance of \$1335.00
- has \$1015.00 in her chequing account and \$1700.00 in a savings account

SUGGESTED LEARNING RESOURCES

Print

Senior 4 Consumer Mathematics (45S) Part VI: A Course for Distance Learning.
 Winnipeg, MB:
 Manitoba Education, Training and Youth,
 2002.
 — Module 5, Lesson 5

**PRESCRIBED LEARNING
OUTCOMES**

D-7 interpret Net Worth
Statements
– *continued*

SUGGESTIONS FOR INSTRUCTION

STATEMENT OF NET WORTH

ASSETS (WHAT YOU OWN)

1. Liquid/Current Assets

i) Bank accounts	<u>\$ 2,990.00</u>	
ii) Near cash		
TOTAL Liquid Assets		<u>2,990.00</u>

2. Semi-Liquid Assets

i) Mutual Funds	<u> </u>	
ii) Stocks/Bonds	<u>5,000.00</u>	
iii) RRSPs	<u> </u>	
iv) RPPs	<u>30,000.00</u>	
TOTAL Semi-Liquid Assets		<u>35,000.00</u>

3. Non-Liquid Assets

i) Principal Residence	<u>90,000.00</u>	
ii) Vehicles	<u>25,000.00</u>	
iii) Other	<u> </u>	
TOTAL Non-Liquid Assets		<u>115,000.00</u>

TOTAL ASSETS \$152,990.00

LIABILITIES (WHAT YOU OWE)

4. Short-Term Debt

i) Credit card debt	<u>\$ 1,575.00</u>	
ii) Short-term loans	<u>12,000.00</u>	
TOTAL Short-Term Debt		<u>13,575.00</u>

5. Long-Term Debt

i) Mortgage	<u>70,000.00</u>	
ii) Other	<u> </u>	
TOTAL Long-Term Debt		<u>70,000.00</u>

TOTAL LIABILITIES 83,575.00

NET WORTH \$152,990 – \$83,575 \$ 69,415.00

DEBT-EQUITY RATIO 19.6%

$$= \left(\frac{\text{total liabilities} - \text{mortgages}}{\text{net worth}} \right) \times 100$$

SUGGESTIONS FOR ASSESSMENT

SUGGESTED LEARNING
RESOURCES

Blackline Masters

TORONTO STOCK EXCHANGE (TSE)

- incorporated in 1878 with fewer than 10 stocks listed
- 1914: ceased trading for three months during World War I
- 1977: TSE begins first computerized trading system
- To be listed on the TSE, a company must have at least one million freely traded shares worth at least \$2,000,000, and these must be held by at least 300 shareholders.
- TSE 300 is an “index” giving the average performance of the top 300 companies, representing all investment sectors: mining, oil and gas, industrial
- Bull Market: stock prices are rising
- Bear Market: stock prices are dropping

STOCK MARKET CHALLENGE

You have been given \$5000 in “pretend” money, and you are challenged to beat your classmates at playing the stock market. You may buy one, two, or three stocks, and you may keep some of the money “liquid” (leave as cash).

Each Tuesday, we will examine the performance of your investment portfolio, and keep a record of its weekly movement. This record could become part of your mathematics portfolio. The stock can be tracked through the listings in the newspaper, or through the Internet <www.tse.com>—clicking onto the “quote lookup”). After six weeks, sell your stocks, and see who made the most money.

Pick up to three stocks and list the information for the stocks below.

Company name	TSE symbol	Price/share	Number of shares	Cost of shares
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Cash left over			_____	
Total Portfolio Value			\$5000	

On a separate page, give a short description of each of your companies (i.e., where the head office is located, the sector it is in, the type of business it conducts—oil, gold, telecommunications, etc., its yearly high and low prices, etc.). This information can be found on the following websites: <www.tse.com>—clicking onto “listed companies directory” or <www.fin-info.com>.

TSE TRACKING CHART										
Stock Name	TSE Symbol	Cost/Share	No. of Shares	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Value
Cash										
		Total Portfolio Value =								
Notes:										

STATEMENT OF NET WORTH

ASSETS (WHAT YOU OWN)

1. Liquid/Current Assets

- i) Bank accounts _____
- ii) Near cash _____
- TOTAL Liquid Assets _____

2. Semi-Liquid Assets

- i) Mutual Funds _____
- ii) Stocks/Bonds _____
- iii) RRSPs _____
- iv) RPPs _____
- TOTAL Semi-Liquid Assets _____

3. Non-Liquid Assets

- i) Principal Residence _____
- ii) Vehicles _____
- iii) Other _____
- TOTAL Non-Liquid Assets _____

TOTAL ASSETS _____

LIABILITIES (WHAT YOU OWE)

4. Short-Term Debt

- i) Credit card debt _____
- ii) Short-term loans _____
- TOTAL Short-Term Debt _____

5. Long-Term Debt

- i) Mortgage _____
- ii) Other _____
- TOTAL Long-Term Debt _____

TOTAL LIABILITIES _____

NET WORTH _____

DEBT-EQUITY RATIO = $\left(\frac{\text{total liabilities} - \text{mortgages}}{\text{net worth}} \right) \times 100$ _____