

Lesson 10

Chapter 1: Investing concepts

Recommended course: Grade 9 destreamed math

Recommended course code: MTH1W

Strand: Financial literacy

Time: One 75-minute period

Topic: Understanding your investment returns



Curriculum Connections

OVERALL EXPECTATIONS:

F1. Financial Decisions: Demonstrate the knowledge and skills needed to make informed financial decisions

B3. Number Sense and Operations: Apply an understanding of rational numbers, ratios, rates, percentages and proportions, in various mathematical contexts, and solve problems.

SPECIFIC EXPECTATIONS:

F1.2 Identify financial situations that involve appreciation and depreciation, and use associated graphs to answer related questions.

F1.3 Compare the effects that different interest rates, lengths of borrowing time, ways in which interest is calculated and amounts of down payments have on the overall costs associated with purchasing goods or services, using appropriate tools.

B3.5 Pose and solve problems involving rates, percentages and proportions in various contexts, including contexts connected to real-life applications of data, measurement, geometry, linear relations and financial literacy.

21ST CENTURY/GLOBAL COMPETENCIES:

- Digital literacy: Selecting and using appropriate digital tools to collaborate, communicate, create, innovate and solve problems.
- Critical thinking and problem solving: Detecting patterns, making connections and transferring or applying what has been learned in a given situation to other situations, including real-world situations.
- Communication: Effectively conveying ideas, information and data through various mediums, including written, oral and visual communication.
- Collaboration and teamwork: Students learn from others and contribute to their learning as they co-construct knowledge, meaning and content.
- Financial literacy: Understanding basic financial concepts and the ability to make informed financial decisions.

Assessment and evaluation

Success criteria:

Students will

- use stock indexes to calculate return on hypothetical investments
- explain the difference between earning investment returns from a change in the price of the asset (realized/unrealized capital gains/losses) and earned income (interest and dividends)
- use scenarios involving hypothetical investors to understand and compare time-weighted vs. dollar-weighted returns and cumulative vs. annualized returns
- compare returns across different investment funds

Assessment tools: (Assessment FOR/AS learning)

- Questioning.
- Observation.
- Presentation.
- Debate.

Prior learning

Prior to this lesson, students will have an understanding of

- how to calculate rate of change
- basic asset classes, including cash, equities, bonds, crypto, real estate

Instructional strategies

- Direct instruction.
- Teacher modelling.
- Problem-based learning.
- Real-world examples.
- Class discussion.
- Presentation.
- Scaffolding.
- Questioning.

Materials and resources

- Computer, speakers, classroom digital video projector, internet access.
- Video: Money Gains, "[Investment returns.](#)"
- PowerPoint Presentation: "Investment returns."
- Student handout of PowerPoint slides (options to share digitally rather than printing).
- Student devices, classroom computers or shared computers, tablets, laptops, etc.
- Access to Office Online (free to all students) and Google Finance.



MINDS ON (20 minutes)

Note: All instructions, along with visual aids, will be explained by the teacher and also presented visually on PowerPoint slides.

1. The teacher will go through Slides 2 and 3, and explain to students the practices of initial public offering (IPO) and a stock split (five minutes).
2. Explain the instructions for the Minds on activity (Slide 4):
 - a. In partners, choose a brand you like that is publicly traded (search here).
 - b. What was the IPO price (price they were first sold for at their initial public offering)?
 - c. What is the current price?
 - d. If you invested \$1,000 in the IPO, what would your return on investment be in dollars if you sold today?
 - e. What would your ROI be as a percentage?
 - f. What would you do with the money?
3. Go through the example using Nike on Slide 5. **Update the stock price of Nike before the lesson.**
4. Give students five minutes to do the research and calculations.
5. Go around the class and have partners share their ROI and what they would do with their gains. Discover which stock has had the greatest return (ten minutes).

ACTION (20 minutes)

1. Watch Money Gains, "Understanding your investment returns."
2. Go through PowerPoints Slides 6–11, using the example with Tom, Jill and Adam to explain to students
 - investment returns
 - the two components of investment returns
 - the difference between time-weighted return and dollar-weighted return
 - the difference between cumulative and annualized returns

CONSOLIDATION AND CONNECTION (40 minutes)

Investigation (Slide 12):

1. Instruct students to choose two of their favourite companies that are publicly traded on the stock market and complete the following chart using Google Finance.

| Company name and ticker symbol | Description of company | Current stock price | Annual % gain/loss | Five-year % gain/loss | In which period over the past five years did the price fluctuate the most? Why? |
|--------------------------------|-------------------------------|---------------------|--------------------|-----------------------|---|
| Example: Nike NKE | Athletic footwear and apparel | \$121.55 | +18.5% | +49.185% | Feb–March 2020: Drop because of Covid June 2021: Nike projects full-year sales of more than \$50 billion, riding on pent- up demand. The company's fourth quarter revenue nearly doubled, topping \$12 billion for the first time. |
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2. Go through the Nike example with students. Show students how to locate the information they need from [Google Finance](#).
3. Give students ten minutes to fill in their charts.
4. Debrief (Slide 13): Ask students to form groups of four or five:
 - a. Share your investment choices and determine who had the highest return and who had the lowest return in each group.
 - b. One representative from each group will share the findings with the class.
 - c. Discuss trends related to the highest and lowest performers.

Homework

Optionally, students can write a response or prepare an oral response to the following discussion prompt: "If you had \$1,000 to invest today, what would you invest in and why? Relate your response to the trends and concepts discussed in class today."

Accommodations

- Chunking/scaffolding:
 - When explaining each task, the teacher will model with the examples provided on the lesson PowerPoint. The PowerPoint will be posted for students to refer to and/or a handout with the slides will be provided to students.
 - The teacher will model how to use Google Finance.
- Students can be supported throughout these discussions through teacher prompts.
- Differentiated instruction:
 - Content will be provided auditorily and visually.
 - Differentiation through letting students choose which investment fund to investigate.
- Provide organizers/notes: Students will be provided with a handout with the template of the chart they are to complete, along with the example.
- Students with anxiety about presenting may be accommodated by either presenting from their seat or presenting privately to the teacher.
- Peer learning partners: Strategic heterogeneous grouping (grouping students of various abilities) will help to better encourage conversation and collaboration learning skills as they help and advocate for each other in understanding and communicating their ideas.
- Extra time/adjust pace:
 - Students can complete the task for homework if needed.
 - The teacher can be available for extra help.



References

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