

Binogi in Your Math Classroom

Grade 8 (ON) - Financial Literacy
Lesson: Simple Interest



Supported by



Resource Guide for Teachers

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Please visit:

<https://escapeprojects.ca/> for additional resources and information.

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Grade 8 - F1.4 Financial Literacy

: Example of Learning Objectives and Big Ideas

Overall Expectation

F1. demonstrate the knowledge and skills needed to make informed financial decisions

Specific Expectation

F1.4 determine the growth of simple and compound interest at various rates using digital tools, and explain the impact interest has on long-term financial planning

Learning Objectives

To calculate simple interest to solve problems.

Big Ideas

Understanding simple interest helps one make financial decisions when saving and budgeting for big expenses.

Assessment

1. Assessment FOR

: Diagnostic questions, Minds On, Action, Consolidation

2. Assessment AS: Consolidation

F1.4 Mathematical Terms and Resources/Materials

Vocabulary

simple interest, saving, borrowing, interest, interest rate

Pair/Group Activities

Please follow your school's **Covid-19 safety protocols** for any pair/group activities.

Language Friendly Pedagogy

At the beginning of the lesson, students will be invited to add key terms in their [Concept Detective](#) and add any new words that they come across throughout the lesson.

Binogi Related Resources

Video: [Simple Interest](#)

Additional Binogi Videos Connected to this Unit

[Compound Interest](#)

[Percent](#)

[Pay Now or Later?](#)

At the beginning of class... (5 ~ 10 min)

1. Share learning objectives - *To calculate simple interest to solve real world problems.*
2. Co-create success criteria
 - Sample :
 - I can explain the benefits of simple interest.
 - I can calculate simple interest using the simple interest formula.
3. Ask the students to add the following words in their [Concept Detective](#) which they will fill out throughout the lesson: *interest, interest rate, simple interest, percentages, borrow, lend, and any new terms they learned*
4. Diagnostic Questions: Teachers should systematically start with 2 or 3 diagnostic questions by

a) using one of the concepts of simple interest (percentage): **What is 20% of \$100?**

b) using the previous year's specific expectations

: **What are societal and personal factors that influence your decision making?**

Grade 6	Grade 7	Grade 8
	F1.4 identify various societal and personal factors that may influence financial decision making, and describe the effects that each might have	F1.4 determine the growth of simple and compound interest at various rates using digital tools, and explain the impact interest has on long-term financial planning

Minds On

Task Component	Instruction	Assessment Focus Look Fors	Notes
<p>Before (Activation/ Review) ~5-10 mins</p>	<p>1. What is the better deal? \$20 off or 20% off? Why? Explain your thinking/strategies.</p>	<p>How do students represent their understandings and linkages between concepts?</p> <p>How does the activity connect to, and help prepare students for problem solving?</p> <p>How are you interacting with your students?</p>	<p>Teacher records answer / wonderings / understandings. Asks students to elaborate/explain their responses with the class.</p>

Action

Task Component	Instruction	Assessment Focus Look Fors	Notes
<p>During (Working on it) ~20 mins</p>	<ol style="list-style-type: none"> 1. Watch <u>Simple Interest</u> on Binogi. <i>(the currency is in Euros)</i> : Pause at 2:20 and formula of simple interest, using the information from the video, write "$C = P(1 + r \times t)$" and explain that this formula shows how to calculate interest as a percentage, where C is future value, P is principal, r is interest rate and t is interest period. 2. After the video, do Think-pair-share, the discuss with the class: : Do Binogi quizzes. : What does it mean to be a 'borrower' and a 'lender'? : How would 'simple interest' help the <u>borrower</u> in planning finances? : How would 'simple interest' help the <u>lender</u> in planning finances? : How is each person benefitting and why? 	<p>What role do I and my students play during the problem solving process?</p> <p>What strategies do we predict students will use to do the math?</p> <p>What strategies are students using to do the math?</p>	<p>Have your students watch the videos in the language of their choice.</p> <p>Record students' thoughts.</p> <p>Think-pair-share: student think on their own first, then share with their partner, then with the class.</p>

Consolidation

Task Component	Instruction	Assessment Focus Look Fors	Notes
<p>After (Reflecting/Connecting/Consolidating)~15 mins</p>	<p>1. You want to buy the new Apple iPhone 12 that costs \$999. You found out Apple is offering to pay by instalment:</p> <ol style="list-style-type: none">1) Option 1: pay in 4 instalments with 1.5% interest.2) Option 2: pay in 6 instalments with 1.75% interest.3) Pay upfront: \$999 plus 13% tax. <p>Which option would you choose and why? Explain by showing your work.</p> <p>2. Complete the Concept Detective; Ask students whether they can add new vocabulary.</p>	<p>How are you consolidating student learning? Which strategy was used (Congress, Gallery Walk, Bansho, etc.) and why?</p> <p>How do you determine what should be highlighted? How is it connected to the learning goal/expectations? How is student thinking annotated?</p> <p>What roles do you and your students take on during the consolidation?</p>	<p>Both option 1 and 2 lead to the same amount at the end of the period. Students can opt for each of them depending on their personal preferences: less time holding on to debt, lower rate overall.</p>

Extension/Differentiation/Modification

Task Component	Instruction	Assessment Focus Look Fors:
<p>- Individual Practice: A question(s) for extension that students can do independently to assess understanding of the concept(s)</p> <p>- Differentiation (Modifications/ extensions)</p>	<p>- Explore various saving account plans from different banks. Compare and contrast, then choose a bank and a saving account plan from the chosen bank. Explain your choice.</p> <ol style="list-style-type: none">1) TD: https://www.td.com/ca/en/personal-banking/products/bank-accounts/savings-accounts/2) CIBC: https://www.cibc.com/en/personal-banking/bank-accounts/savings-accounts.html3) RBC: https://www.rbcroyalbank.com/accounts/savings-accounts.html4) BMO: https://www.bmo.com/main/personal/bank-accounts/savings-accounts/	<p>How does the individual practice question relate to the problem, skills or strategies? Why is the individual practice question important for teachers and students?</p> <p>Are there any other strategies that can be used to differentiate instruction?</p>

Parents and Community Connection

Home Assignment

: Concept Detective - students can complete any terms they did not complete and add any mathematical terms they wish to include in their glossary with their parents

: Students watch the Binogi video they watched in class at home with their parents either in English or in one of the provided languages (there is an option for subtitles). Discuss.

: After the video, have students and family members brainstorm their own question and ways to answer the question

