

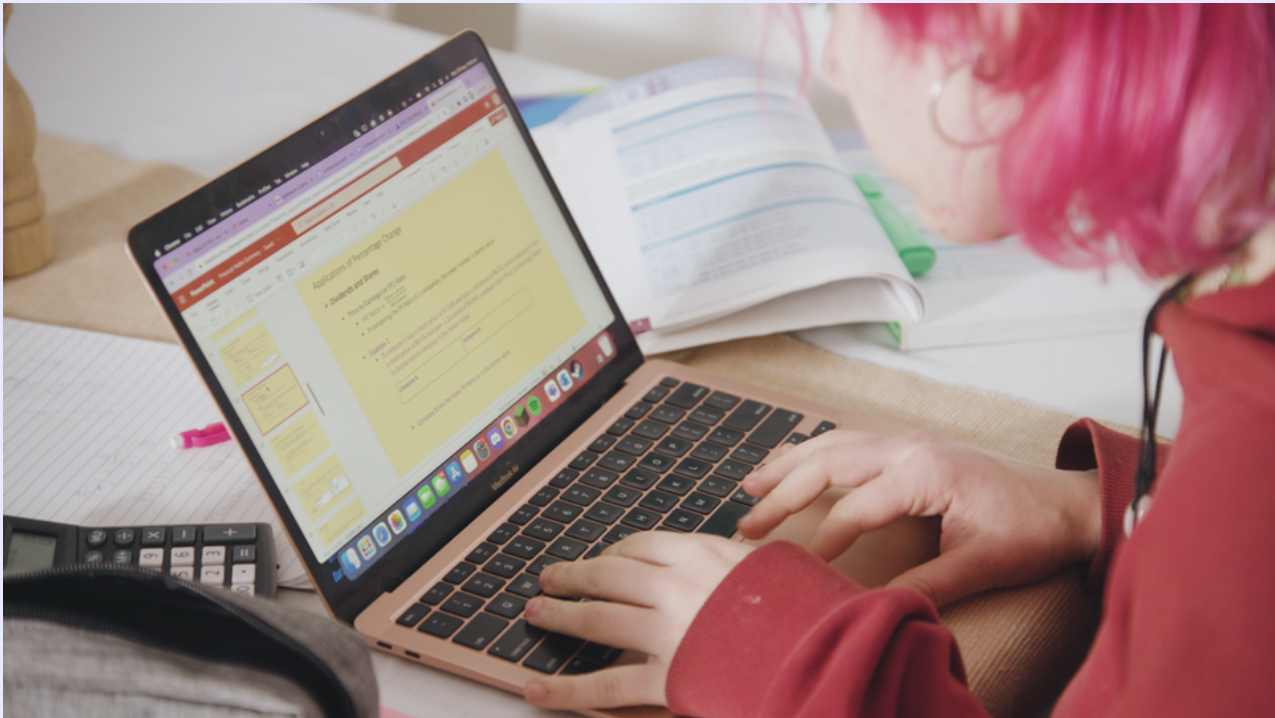
Beyond Money: Financial Decisions for Life

# Introduction to Simple Interest



# About this video

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BEYOND MONEY: FINANCIAL DECISIONS FOR LIFE

## Introduction to Simple Interest

Why do lenders charge interest? And how is it calculated? With practical examples and clear definitions of the principal, rate and duration of a loan, this video illustrates how consumers pay back more than they borrow, sometimes considerably so. With on-screen calculations helping to illustrate key concepts, this is essential viewing to boost the financial confidence of the next generation of earners and consumers.

### Essential question:

How can I calculate simple interest payments using a formula?

### Key vocabulary:

simple interest

principal

repayment

interest rate

### Learning intention:

Calculate simple interest, principal, interest rate or time of a loan using the simple interest formula.

# Before watching

## Make Predictions & Activate Prior Knowledge

Write the table on the board and ask students: 'Which of these is a better deal?'

<b>Option 1:</b> Loan of \$10,000 repaid over 5 years at 8% interest	<b>Option 2:</b> Loan of \$10,000 repaid over 8 year at 5% interest?
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Ask students to explain which one they chose and why. We will come back to this after watching the video and actually calculate the payments and total interest on each option.

# Whilst watching

Tell students that they will discuss the concept after watching the video. Advise them to use the Cornell Notes graphic organiser provided or a concept map to take notes.

They can also use the interactive video to engage in critical thinking about the video content.

## Watching as a class



Watch the interactive video as a class and ask students to respond to the prompts throughout the interactive.

## Watching individually



Have students watch the interactive created for immediate feedback and solo viewing.

# After watching

The following activities can be used to extend your students' learning.

## Activity 1: Understanding Credit Cards

Revisit the two options from the **Before watching** activity. Now that students know how to calculate simple interest (SI), use the formula from the video to work out the total interest repaid on each loan and decide which is the better deal.

Formula:  $SI = \frac{P(\text{rincipal}) \times R(\text{ate}) \times T(\text{ime})}{100}$

<p><b>Option 1:</b> Loan of \$10,000 repaid over 5 years at 8% interest</p> <p><b>Teacher Solutions:</b> <math>SI = \frac{(10,000)(8)(5)}{100} = \\$4,000</math></p>	<p><b>Option 2:</b> Loan of \$10,000 repaid over 8 years at 5% interest?</p> <p><b>Teacher Solutions:</b> <math>SI = \frac{(10,000)(5)(8)}{100} = \\$4,000</math></p>
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Explain to students that since they both have the same total interest repaid, the better deal will depend on whether they would prefer to have lower payments spread over longer time or higher payments spread over less time.

### Enable



Provide students with the expanded formula to help support their understanding and working out, along with some examples and tips to calculate.

### Extend



Students can work out annual repayments for each loan.

Answers:

- Option 1:  $\$4,000/5 = \$800$  per year
- Option 2:  $\$4,000/8 = \$500$  per year



## Activity 2: The Loan Game

Students are to create cards out of cardstock or paper in three different colours to represent **principal**, **interest**, and **time**. There should be 10-20 cards in each colour (e.g. blue = principal, green = rate, red = time).

- Write numbers on each card. I.e.
  - \$2,000, \$400,000, etc. for principal
  - 4.2%, 7.6%, etc. for interest
  - 10 years, 8 years, etc. for time
- Place students into groups of three. Each student pulls one card of a different colour. Each group should have pulled a total of three cards, one of each colour.
- The group calculates the total simple interest and the annual repayments for the variables they have chosen.

### Enable



Provide students with a colour-coded formula that matches the colours of the cards (e.g. Simple Interest =  $\frac{PRT}{100}$ )

Students will know what numbers to fill into the formula by matching the coloured number to the coloured cards.

### Extend



Give students total SI (Simple Interest) amounts and principal amounts and have them come up with different combinations of rates and times that will generate the given SI amount (e.g. \$3,000 SI on a \$15,000 loan).

## Conclusion

Ask students to respond to the essential question posed at the beginning of the lesson.

Ask if they still have any questions about the content presented in the video. Discuss and answer these questions as a class.