CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Compound interest and financial calculations

Level 2

1. Lesson objectives

- Calculate a percentage change without a calculator
- Understand the difference between simple and compound interest
- Calculate a repeated percentage change using multipliers
- Use a double number line to see the common mathematical structure of percentage questions

2. Functional Skills Level 2 content

Measures, shape and space
13 Calculate amounts of money, compound interest, percentage increases, decreases and discounts including tax and simple budgeting

3. Lesson plan

This is an overview of the lesson. More notes can be found in the notes in the lesson slides.

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Discuss	To assess and develop learners' non-calculator percentage methods	10	Introduce the context of the lesson and the objectives. In pairs, learners to fill in the missing working for each method. Encourage learners to explain how each method works. Which method would they use?	Slides 1–3 Handout 1
Explore 1	To check the misconception that to calculate two percentage increases, you add the percentages	10	Explain the two approaches and ask learners if they are different. In pairs, learners to work out both methods and compare.	Slides 4–5 Handout 2 Mini whiteboards
Discuss	To understand the difference between simple and compound interest	5	Learners work through an example with the tutor that shows 'compound interest' simply means earning interest on your savings, and also, eventually, on the interest that those savings earn.	Slide 6

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Model	To model the use of multipliers to calculate a percentage change	10	Emphasise that the original amount is 100%. What percentage are we trying to find out? If learners are not familiar with finding multipliers between two numbers, go through some examples so they are comfortable using a calculator to divide backwards to find the multiplier. Whilst the slide leads towards the standard formula for compound interest, it is more important that learners develop a strong understanding of the process first. What would be different if it was simple interest?	Slide 7
Explore 2	To see the effect of simple or compound interest on a savings account	25	In pairs, learners build on their confidence with the differences in approaches between simple and compound interest. Highlight to learners the difference between the final amount in the accounts and the interest earned. Ensure that other factors are highlighted that might affect Danny's decision (e.g. min. deposit required, length of time that money needs to be left in the account).	Slides 8–9 Handout 3 Mini whiteboards
Model	To understand how having mixes of interest rates is similar and different from the previous examples	5	In the same way as on Slide 7, model how to put the information correctly on the DNL and identity what needs to be found out. Learners should be more confident with how to find the multipliers even if they change within a question.	Slide 10

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Explore 3	To link a percentage increase to a multiplier and the effect of repeating this increase	10	In pairs, learners to match the statements in sets of three. They will have to fill in the missing sections.	Slides 11–12 Handout 4
Exam question	To apply the learning to exam questions	10	There is a non-calculator and a calculator exam question. Learners could be directed to complete one or both of these questions.	Slides 13–16 Handout 5
Review	To summarise the key learning points	5	Review what was learned during the lesson: identifying what value is the original 100% and what percentage the new amount is, and how to find and use multipliers to find the missing value. Review the learning objectives for the lesson. • Do learners feel more confident tackling percentage questions now? • For which questions do they need more practice?	Slide 17