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| **Key Topics and Learning Sequence**  |
| **= First Steps** |  **= Moving On** |  **= Stretch** |  **= Challenge** |
| **1. Understanding Decimal Multipliers**1. You can convert between percentages, decimals and fractions
2. You can find one amount as both a fraction and a percentage of another amount
3. You can find a percentage of an amount using a decimal multiplier
4. You can find a percentage bigger than 100%, using a decimal multiplier.
 | **2. Calculating a Percentage Increase and Decrease**1. You can increase or decrease by a percentage by adding or subtracting to the original amount.
2. You can find a decimal multiplier greater and less than 1 for increasing or decreasing by a percentage
3. You can calculate repeated percentage changes, using multipliers
4. You can use decimal multipliers to increase by more than 100%
 | **3. Calculating Percentage Change**1. You draw a bar model that compares a new value to the original value
2. You can find a percentage change by calculating the multiplier used to make the change
3. You can use the multiplier to state what a percentage change is (including for a decrease)
4. You can calculate percentage change when it is more than 100%.
 |  **4. Finding Reverse Percentages**1. You can draw a bar model to represent a reverse percentage problem
2. You can represent a percentage change problem with an equation involving a variable and a multiplier
3. You can calculate an original amount in a percentage change problem in more than 1 way
4. You can calculate an original amount in a repeated percentage change problem
 | **5. Calculating Simple and Compound Interest**1. You can explain what interest is and how it works
2. You can calculate simple interest given an original amount and an interest rate
3. You can calculate compound interest given an original amount and an interest rate
4. You can explain the difference between compound and simple interest
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| **How does this unit fit into your mathematical learning journey?** | **Further Exploration, Enrichment and Cultural Capital** |
| This Unit builds on work from **Years 7 & 8**, where we first learn about percentages. You then learnt about how to find a certain percentage without a calculator in **Year 8**. This unit now, leads on from these ideas as we look at how decimals can help to calculate percentages faster, more efficiently etc. These ideas are crucial in **KS4** where we look at **multi-step questions.** | **Reading:** ‘Con Tricks’ <https://nrich.maths.org/1441> **Enrichment:** Explore how percentages are used in the internet/media, then complete the nrich task – Trusting the Tabloids <http://nrich.maths.org/12172>**Cultural Capital:** Visit the Bank of England and see how understanding percentages has such an impact with your money and financial stability in the UK <https://www.bankofengland.co.uk/museum/inside-the-museum> |

**LPS Mathematics: Year 9 Unit 4 – Calculator Percentages**

 **Enquiry Question: Are Credit Cards a rip-off?**

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**Date: Initial Thoughts:**

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**Date: New Thoughts:**

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**Date: Final Thoughts:**

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