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**Knowledge Rich Curriculum Plan**

Year 10 Higher+ Number 2



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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this…* | **Assessment**  |
| **To learn how to solve problems involving percentages**  | * Students will know how to solve multi-step worded problems involving percentages
* Students will know how to solve problems involving simple interest
* Students will know that VAT is tax you have to pay when you buy goods or services
* Students will know that the standard rate of VAT in the UK is 20%.
 | **Interest -** a fee paid for borrowing money or other assets or an amount earned by saving money in a bank account that pays it**VAT – Value Added Tax** – a tax that is applied to the purchase price of certain goods, services and other taxable supplies that are bought and sold within the UK. Standard VAT is 20%. | * Students should already know how to calculate percentages of amounts
* Students should already know how to increase and decrease by a percentage
 | Exam Prep 2 |
| **To learn how to calculate percentage change, profit and loss** | * Students will know how to calculate percentage change, percentage profit and percentage loss both with and without a calculator (as appropriate)
* Students will know that $percentage change=\frac{change}{original}×100$
* Students will know that $percentage profit=\frac{profit}{expense}×100$
* Students will know that $percentage loss=\frac{loss}{expense}×100$
 | **Profit –** a financial gain, the difference between the amount earned and the amount spent in buying, operating, or producing something | * Students should already know how to convert fractions to percentages
 | Exam Prep 2 |
| **To learn how to solve problems involving reverse percentages** | * Students will know how to find the original amount given the final amount after a percentage increase or decrease (reverse percentages), including VAT both with and without a calculator (as appropriate)
 |  | * Students will know how to solve proportion problems using the unitary method
 | Exam Prep 2 |
| **To learn how to calculate compound interest and depreciation** | * Students will know how to calculate a repeated percentage change including compound interest and depreciation
* Students will know how to determine the number of years interest has been accrued for given the starting and end value
* Students will know how to work out the interest rate when compound interest has been accrued for a given number of years, given the starting and end amounts
 | **Interest -** a fee paid for borrowing money or other assets or an amount earned by saving money in a bank account that pays it**Compound Interest –** the interest on a loan or deposit that accrues on both the initial principal and the accumulated interest from previous periods.**Depreciation –** a decrease in the value**Accumulated –** built up over time**Accrued –** received**Initial –** starting/original amount **Annum –** year | * Students will need to know how to increase by a percentage
* Students will need to know how to convert percentages into decimals
* Students will need to know how to solve linear equations using inverse operations
 | Exam Prep 2 |
| **To learn how to calculate income tax** | * Students will know how to carry out income tax calculations;
* Students will need to be able to calculate percentages with and without a calculator.
* Students will need to be able to calculate with the 4 operations.
 | **Tax –** a compulsory contribution to state revenue, levied by the government on workers' income and business profits, or added to the cost of some goods, services, and transactions. | * Students should already know how to find percentages of amounts
 | Exam Prep 2 |