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**Knowledge Rich Curriculum Plan**

Year 10 Intermediate – Percentages



| **Lesson Objective** | **Intended Knowledge:**  *Students will know that…* | **Tiered Vocabulary** | **Prior Knowledge:**  *In order to know this, students need to already know that…* | **Assessment** |
| --- | --- | --- | --- | --- |
| **To learn how to solve problems involving percentages using a calculator** | * Students will know how to calculate a percentage of a quantity or measurement with a calculator - they will know how to locate and use the percentage button * Students will know how to increase and decrease an amount of measurement by a percentage with a calculator * Students will know how to solve more complex worded problems involving fractions and percentages using a calculator * Students will be able to calculate simple interest |  | * Students will need to know how to find fractions and percentages of amounts |  |
| **To learn how to express one amount as a percentage of another and calculate percentage change** | * Students will know how to express a given number as a percentage of another number by first writing as a fraction and then converting to a percentage. Students will know how to do this both with and without a calculator. * Students will know how to calculate percentage change |  | * Students will need to know how to convert a fraction into a percentage both with and without a calculator |  |
| **To learn how to calculate percentage profit and loss** | * Students will know how to calculate the value of a profit or loss and use it to determine percentage profit or loss * Students will know that * Students will know that | **Profit –** a financial gain, the difference between the amount earned and the amount spent in buying, operating, or producing something  **Expense –** the cost incurred in or required for something. | * Students will need to know how to calculate how much profit or loss has been incurred |  |
| **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) | **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 will need to know how to multiply by 100 |  |
| **To learn how to calculate with compound interest and depreciation.** | * Students will know how to calculate compound interest and depreciation. * Students will know how to solve problems involving compound interest and depreciation | **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 |  |