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| Year | **8** |
| Topic | **Developing Number Sense** |
| **LO** | **Key aim/title/objective of the lesson?**  **These may stretch over a number of lessons as appropriate** |
| 1 | Know and use mental addition and subtraction strategies for integers |
| 2 | Know and use mental multiplication and division strategies for integers |
| 3 | Know and use mental strategies for decimals |
| 4 | Know and use mental strategies for fractions |
| 5 | Use factors to simplify calculations |
| 6 | Use estimation as a method for checking mental calculations |
| 7 | Use known number facts to derive other facts |
| 8 | Use known algebraic facts to derive other facts |
| 9 | Know when to use mental strategy, formal written or a calculator |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |
| 15 |  |
| Key vocabulary and/or key reading - Addressed in lessons through discussing definitions.  Compensation, Number Line, Addition, Subtraction, Associative, Commutative, Partition, Multiply, Divide, Factors, Place value, Estimate, Tenths, Hundredths, Thousandths, Whole, Equal parts, Numerator, Denominator, Equivalent, Calculation, Rounding, Significant figures, Overestimate, Underestimate, Addend, Product, Quotient, Equation, Expression, Equal, Equality, Mental, Calculator, Formal, Efficient, Interpret.  Numeracy Opportunities | |

How does this topic build on ***prior*** learning?

* Revisiting and building upon KS2 National Curriculum requirements.
* Developing effective mental strategies around solving problems with number
* Unit 6: Solving problems with addition and subtraction
* Unit 7: Solving problems with multiplication and division
* Unit 8: Fractions and percentages of amounts

How does the work during this topic prepare for future learning?

* A good number sense is required across maths topics to solve problems efficiently and effectively
* Allows an understanding and being able to recognise mathematical mistakes in working out of more complex methods
* Estimation

How will learning be **assessed** and **feedback** provided in this scheme?

* End of block White Rose assessments to RAG LO understanding
* Individualised feedback through marking and assessment next steps

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| **Personal Development** | |
| How is this topic developed beyond the classroom? E.g.**learning passport?** | * Effective mental strategies for calculations will be used in everyday life * Homework: Total up a small shop in using mental methods whilst shopping with parents |
| How are **Careers/ IAG** links built into this lesson sequence? | * A class discussion on when in a career it will be beneficial to have competent mental strategies to complete calculations * Number sense is beneficial in all careers and jobs |
| **Relationship Sex and Health Education.** | * Financial health: Ensure that examples and work have a financial aspect to them to promote the skills needed to achieve healthy finances. |
| **Fundamental British Values** (democracy, the rule of law, individual liberty and respect and tolerance) | * Being an active citizen and understanding that pupils are as equally responsible for their learning as the teacher * Children with poor number sense don’t enjoy maths and won’t spend time being creative with and exploring numbers |

