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| **Ch** | **Topic** | **Course Tasks** | **Key Skills** | **Experiences & Outcomes** |
| **6** | **Percentages/****Fractions/****Decimals** **P46-53** | * Loop cards – Percentages

 ( trays in Base )* Tarsia – Percentages MNU 3-07a ( Breakout room )
* **CFE book- endangered species**
 | Extend the range of percentages used.Convert any fraction, decimal or percentage intoa fraction decimal or percentage.Find a fraction or percentage of a quantitywith or without a calculator.e.g. 75% of £240 => 3/4 of £240 = £180 | **MNU** **3-07a**I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real life situations.  |
| **7** | **Algebra****P54-66****Active Assessments**:-Equal & opposite | * Common factor Mix-N-Match (filing cabinet)
* Sage-N- Scribe ( Programme folder)
* [Online practice](http://www.mathsrevision.com/index_files/Maths/Presentations/S2_Presentations/S2_Multiplying_Out_And_Factorising_MIA.xls)

**Challenge & Breadth - Equation Challenges 1,2 & 3**( Breakout room ) | Simplify expressions by collecting like terms e.g. 3x + 4y + 5x - y = 8x + 3y.Construct/evaluate simple formulae using substitution e.g. Find the value of 2a – 5b, when a = 10 and b = 3Evaluate 2x2 when x = 3.Expand brackets 3(x + 1) and simplify expressions like 5(2x + 4) + 2x – 1 | **MTH 3-14a**I can collect like algebraic terms, simplify expressions and evaluate using substitution. |
| Construct/solve equations from given information .Solve inequalities like ... 2a + 4 > 11, x – 1 ≤ 3.Further equation solving e.g.• 6x – 16 = 2x, • 5x – 2 = 3x + 10,• 2(x + 4) = 14, • 4(2x – 1) = 28 | **MTH 3-15a**Having discussed ways to express problems or statements using mathematical language, I can construct, anduse appropriate methods tosolve, a range of simple equations. |
| Construct a formula from a diagram or a writtenproblem and evaluate it.e.g. given F = C + 32, find F when C = 20. or Write a formula for the volume V of acube and use it to find V when L = 5. | **MTH 3-15b**I can create and evaluate a simple formula representing information contained in a diagram, problem or statement. |
| The Distributive Law has been introduced to Level 3 | **MTH 4-14a**Having explored the distributive law in practical contexts, I can simplify, multiply and evaluate simple algebraic terms involving a bracket. |
| More complicated equations and inequalities have been introduced to Level 3 | **MTH 4-15a**Having discussed the benefits of using mathematics to model real-life situations, I can construct and solve inequalities and an extended range of equations. |
| **8** | **Perimeter/****Area****P67-77** | * [www.mathsrevision.com](http://www.mathsrevision.com/)
* [Practice online](http://www.mathsrevision.com/index_files/Maths/Presentations/S2_Presentations/S2_Level_F_Area_Of_Quadrilaterals.xls)
* 2D shapes loop cards
* **CFE book – Paving**

  | Find perimeter by adding lengths and area bycounting squares.Use of formulae (rules) to find the perimeter andarea of a rectangle, square or right angled triangle. | **MNU 2-11c**I can explain how different methods can be used to find the perimeter and area of a simple 2D shape orvolume of a simple 3D object. |
| Choose appropriate units and formulae to solvepractical problems involving 2D and 3D shapes. e.g.Find the area of a rectangle, square, triangle, kite, rhombus, parallelogram, trapezium etc | **MNU 3-11a**I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task and using a formula to calculate area or volume when required. |
| Use formulae to find the area of a simplecomposite 2D shape.Use formulae to find the volume of a simplecomposite 3D shape. | [**MTH 3-11b**](file:///%5C%5CSNH-CC4-001.stninianshs.internal%5CRMStaff%5CStaff%20Resources%5CMathematics%5CNEW%20Programmes%20of%20work%20S1-2%5CCfe%20level%203-4%20%20Programme%203%5CCfE%20and%20programmes%20of%20work%20updated%20MAY%202009%5CAngus%20Council%20Numeracy%5CCfE%20Properties%20of%202D%20Shapes%20and%203D%20Objects%20MTH_Angus.doc)Having investigated different routes to a solution, I can find the area of compound 2D shapes and the volume of compound 3D objects, applying my knowledge to solve practical problems |
| **9** | **Fractions****P78-87** | * Dominoes – Basic addition ( trays in Base )
* Dominoes – Fractions/Decimals equivalence (trays in Base )
* Equivalence Trios - Fraction/Decimals/% ( trays in Base )
* Loop cards – Fractions (trays in Base )
* Cycle cards - Fraction/Decimals/% ( trays in Base )
* Expert groups – Fractions (filing cabinet )
 | Multiply/Divide numerator & denominator by same number to obtain equivalent fractions.Find simple fractions of quantities :- e.g. 3/5 of 20 g.Link fractions, decimals and %’s, changing from one to either of the other two.Solve money and other word problems involving above, sometimes with the use of a calculator. | **MNU 2-07b**I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method. |
| Extend fraction equivalencies.Add/subtract basic fractions. | **MTH 3-07b**By applying my knowledge of equivalent fractions and common multiples, I can add and subtract commonly used fractions. |
| Convert between top heavy fractions andmixed numbers. | **MTH 3-07c**Having used practical, pictorial and written methods to develop my understanding, I can convert between whole or mixed numbers and fractions. |
| **10** | **The Circle 1****P88-95****Active Assessments**:-Circle time | * [www.mathsrevision.com](http://www.mathsrevision.com/)
* [Practice online](http://www.mathsrevision.com/index_files/Maths/Presentations/S2_Presentations/S2_Circles_Practice.xls)
 | Choose appropriate units and formulae to solvepractical problems involving 2D and 3D shapes. e.g.Circumference of circles using formulae. | **MNU 3-11a** I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task and using a formula to calculate area or volume when required. |
| Use formulae to find the area of a simplecomposite 2D shape. | **MTH 3-11b**Having investigated different routes to a solution, I can find the area of compound 2D shapes and the volume of compound 3D objects, applying my knowledge to solve practical problems.  |