TeeJay Publishers

Curriculum for Excellence

Course Planner - Level 3

Based on our CfE Books 3a and 3b

To help schools develop their courses, **TeeJay Publishers** has produced a ***Course Planner*** for CfE **Level 3.**

This ***Planner*** from **TeeJay** provides substance to what the content of each level includes, and gives an indication as to what is required at that level, with some basic examples where necessary.

It provides the basis of a course based on TeeJay's **Books 3a** and **3b** and includes a final column which will allow planners to list practical activities, ICT Resources and specific methodologies. (*These can be **typed** into the boxes provided*).

Note :-

- All of the work for **CfE Level 2** comes from our **CfE Book 3a** and **CfE Book 3b**
- TeeJay suggests that it would be preferable to progress though the books (*in the order of your choice*) and use this document as a check-list to make sure that the work of CfE has been covered.
- At the beginning of each **Book 3a** is a **Chapter 0** which revises and consolidates all the work completed in **CfE Level 1** .
- The book contains a set of answers for all the exercises. This allows for pupil self checking or for peer marking.
- At the end of each Chapter of the books is a "**Revist-Review-Revise**" assessment. These could be used as diagnostic tools either before starting or after completing a topic.
- Each of our books can be supplemented by using our **Homework/Assessment Photocopiable Packs**, (ready Late 2012).
- The course is also supplemented and supported by **TeeJay's CfE Level 3 Assessment/Diagnostics Pack**. (Assessments are listed in **purple**).

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Progression

Here is **TeeJay's updated** interpretation of how pupils might progress from Primary to Secondary.
We imagine there will be 6 fairly distinct groups, as shown in the table below.
Check **www.teejaypublishers.co.uk** for updates of this progress chart in light of any new information about the Level criteria.

End of P7	S1	S2	S3	S4	S5/6
Pupil has NOT completed Level 1 →	Continue with Level 1	Complete Level 1 + *Start Access 3*	*Access 3*	*National 4* or * *vocational course*	Complete *National 4* or * *vocational course*
Pupil has just completed Level 1 →	Start level 2	Complete Level 2 *Start Access 3*	Start *National 4* *Assess Access 3*	Complete *National 4* or **vocational course*	* *vocational course*
Pupil has NOT completed Level 2 →	Complete Level 2	Topics from Level 3 (*Assess Access 3*)	Start *National 4*	Complete *National 4* *Assess*	*National 5* or * *vocational course*
Pupil just completed Level 2 →	Begin Level 3	Complete Level 3 or (*Start National 4*)	Start *National 4* or (*Complete National 4*)	Complete *National 4* or (*Start National 5*)	*National 5* (*Complete &Start Higher*)
Pupil is working on Level 3 (completed Level 2 mid P7) →	Complete Level 3	Start *National 4*	Begin *National 5* (*Assess National 4*)	Complete *National 5* *Externally Assess*	*Two year Higher*
Pupil is working on Level 3 (completed Level 2 P6) →	Complete Level 3 (*topics from Nat 4*)	Begin *National 5* (*Assess National 4*)	Complete *National 5* *Externally Assess*	Start *Higher* *Unit 1 (start 2)*	Complete *Higher* *Advanced Higher*

Schools will vary in the timings of the above, but basically this should hopefully help with planning progression from P7 to S5/6

* Notice that we have no mention of Level 4. This is likely to be superseded by secondary schools tackling *National 4* or *5*.

Number, money and measure page 1

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Estimation and Rounding	Round to 1, 2 or 3 decimal places. Round to any number of significant figures. Know how many significant figures a number has. Estimate answers by rounding to 1 sig. fig. e.g. 59360 ÷ 216 is approximately 60000 ÷ 200 = about 300 checking answers using this approximation technique. **(MNU 3-01a)**	Ch 1 pages 7-8 Ch 1 pages 9-10 Ch 1 pages 9-10 Ch 1 page 11	Review 2 Pgs 24-25 Review 2 Pgs 24-25 Review 2 Pgs 24-25 Review 2 Pgs 24-25	TeeJay CfE Assessment MNU 3-01a	☐ ☐ ☐ ☐ ☐
Numbers and number processes *including addition, subtraction, multiplication and negative numbers.*	Solve problems involving add^{n}, sub^{n}, mult^{n} or div^{n} of any whole numbers and any decimals using various methods - mental, non-calculator and calculator. Explain what method is being used. **(MNU 3-03a)**	Ch2 - pages 13-19	Review 2 Pgs 24-25	TeeJay CfE Assessment MNU 3-03a	☐ ☐
	Contextualised problems involving multiplying and dividing by multiples of 10, 100, 1000 without calculator. Use brackets to make an expression correct e.g Insert brackets to make 3 + 2 x 5 = 25 correct **(MNU 3-03b)** *** Bomdas has been introduced to Level 3 from **(MTH 4-03b)**	Ch2 - pages 18-19 Ch2 - page 20	Review 2 Pgs 24-25 Review 2 Pgs 24-25	TeeJay CfE Assessment MNU 3-03b	☐
	Add/subtract/divide/multiply using negative numbers (including double negative) with and without contextualisation. **(MNU 3-04a)**	Ch4 - pages 32-40	Review 4 Pgs 46-47	TeeJay CfE Assessment MNU 3-04a	☐

Number, money and measure page 2

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Multiples, factors and primes	*Find the lowest common multiple (l.c.m.) and the highest common factor (h.c.f.) of a set of two (or more) numbers.* *Use h.c.f. and l.c.m. in contextualised problems. e.g. synchronising flashing lights.* ***(MTH 3-05a)***		*Ch 3 - pages 26-29* *Ch 3 - pages 26-29*	**TeeJay CfE Assessment MTH 3-05a**	☐ ☐ ☐
	Identify a prime number (up to 100). *Reduce any number to a product of prime factors.* *e.g. 45 = 5 x 3 x 3* *80 = 2 x 2 x 2 x 2 x 5 .* ***(MTH 3-05b)***		*Ch 3 - pages 30-31* *Ch 3 - page 32*	**TeeJay CfE Assessment MTH 3-05b**	☐ ☐ ☐
Powers and Roots	*Introduce square numbers and square roots.* *Introduce basic powers.* $2^3 = 2 \times 2 \times 2 = 8$ $3^3 = 3 \times 3 \times 3 \times 3 = 81$ $\sqrt{36} = 6, \quad \sqrt{1000000} = 1000$ ***(MTH 3-06a)*** ***Square Roots has been introduced to Level 3 from* ***(MTH 4-06a)***		*Ch 1 - pages 8-9* *Ch 1 - page 10*	**TeeJay CfE Assessment MTH 3-06a**	☐

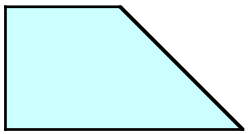
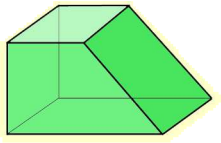
Number, money and measure page 3

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Fractions decimal fractions and percentage *including ratio and proportion.*	*Extend the range of percentages used.* *Convert any fraction, decimal or percentage into a fraction decimal or percentage.* *Find a fraction or percent- age of a quantity with or without a calculator.* *e.g. 75% of £240 => 3/4 of £240 = £180* ***(MNU 3-07a)***	*(Ch 6 pgs 46-49)* *(Ch 6 pgs 50-51)* *(Ch 6 pgs 50-51)*	*Review 10 Page 104* *Review 10 Page 104* *Review 10 Page 104*	**TeeJay CfE Assessment MNU 3-07a**	☐ ☐ ☐ ☐
	Extend fraction equivalencies. *Add/subtract basic fractions.* • $\frac{1}{2}+\frac{3}{4}$, • $4\frac{1}{2}-2\frac{1}{3}$. ***(MTH 3-07b)***	*(Ch 9 page 78* *(Ch 9 pgs 79-86)*	*Review 7 Page 74* *Review 7 Page 74* *Ch8 - all (Extension Work)*	**TeeJay CfE Assessment MTH 3-07b**	☐ ☐ ☐
	Convert between top heavy fractions and mixed numbers. • $4\frac{3}{4}=\frac{19}{4}$ • $\frac{13}{5}=2\frac{3}{5}$ ***(MTH 3-07c)***	*(Ch 9 pgs 79-81)*	*Review 7 Page 74*	**TeeJay CfE Assessment MTH 3-07c**	☐ ☐
	Introduction to basic proportion. e.g. • *1 pencil costs 12p. What do 5 pencils cost ?* • *5 pens cost 45p. How much for one ?* *Pupils should be able to solve problems involving direct proportion. e.g.* • *10 cakes cost £23·50. How much for 3 cakes ?* ***(MNU 3-08a)***	*(Ch 11 - all)* *Ratios - Extension*	*Review 9 Page 95* *Ch10 Pages 96-98* *Ch10 Pages 99-100* *Ch10 Pages 101-102 (Extension - Graphs)*	**TeeJay CfE Assessment MNU 3-08a**	☐ ☐ ☐

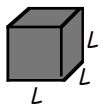
Number, money and measure page 4

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Money	*Be able to choose the best value for money for an option/contract/service.* *e.g. best currency exchange* *best mobile phone contract* *best plumber service* *(£20 call out fee and £25 per hour or .....)* ***(MNU 3-09a)***		*Ch 2 Pages 15-16* *Ch 2 Pages 13-14* *Ch 2 Pages 17-20* *Ch 2 Page 21 (Credit Card Extn)*	**TeeJay CfE Assessment MNU 3-09a**	☐ ☐ ☐
	Managing and budgeting money. *Introduction to wages and deductions, (including Net Income).* *Hourly rate, piecework, bonuses, overtime, salaries annual, weekly, monthly.* *Explanation and use of deductions.* *Knowledge of what the deductions are for and what they go towards paying* *Hire Purchase and loans/mortgages* ***(MNU 3-09b)*** **** Net Income has been introduced to Level 3 from* ***(MNU 4-09b)***	*See Finance Units* *(Ch 13 pgs 113-115)* *(Ch 13 pgs 116-121)* *(Ch 13 pgs 122-123)* *(Ch 13 pgs 122-123)* *See Finance Units*	*Review 1 Page 12* *Review 1 Page 12* *Review 1 Page 12* *Review 1 Page 12*	**TeeJay CfE Assessment MNU 3-09b**	☐ ☐ ☐ ☐ ☐ ☐
Time	*Solve, using TDS formulae, basic time-distance-speed problems including half and quarter hours. e.g.* • *I walk an average speed of 4 km/hr. How far do I walk in one and a quarter hours ?* • *A plane flies at 320 km/hr. How long will it take to cover a distance of 800 km ?* • *A car travels 80 miles in one and a quarter hours. Calculate its average speed.* *Simple time-distance-(speed) graphs.* ***(MNU 3-10a)***	*(Ch 15 pgs 133-140)* *(Ch 15 pgs 133-140)* *(Ch 15 pgs 133-140)* *(Ch 15 pgs 133-140)* *(Ch 15 pgs 141-143)*	*Review 12 Page 139* *Review 12 Page 139* *Review 12 Page 139* *Review 12 Page 139* *Review 12 Page 139*	**TeeJay CfE Assessment MNU 3-10a**	☐ ☐ ☐ ☐ ☐

Number, money and measure page 5

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Measurement	*Choose appropriate units and formulae to solve practical problems involving 2D and 3D shapes. e.g.*	*(Ch 8 - all)*	*Review 6 Pgs 64-65*		☐
	Find the area of a rectangle, square, triangle, kite, rhombus, parallelogram, trapezium etc	*(Ch 8 pgs 67-74)*	*Review 6 Pgs 64-65*		☐
	Circumference and area of circles using formulae.	*(Ch 10 pgs 88-94)* *(Ch 14 pgs 125-130)*	*Review 11 Pgs 117*		☐
	Find the volume of a cube/cuboid/triangular prism. ***(MNU 3-11a)***	*(Ch 12 pgs 104-111)*	*Review 6 Pgs 64-65*		☐
				TeeJay CfE Assessment MNU 3-11a	☐
	Use formulae to find the area of a simple composite 2D shape. 	*(Ch 8 pgs 75-76)*	*Review 6 Pgs 64-65*		☐
	Use formulae to find the volume of a simple composite 3D shape.  ***(MTH 3-11b)***	*(Ch 12 pgs 107-109)*	*Review 6 Pgs 64-65*		☐
				TeeJay CfE Assessment MNU 3-11b	☐
Mathematics - its impact on the world, past, present and future	*Work as a group to :-* • *research a famous Mathematician e.g. Pythagoras, and the work he is known for,* • *investigate a mathematical topic e.g. Statistics, Taxation, Household Budgeting....* *Deliver a short presentation on whichever you choose.* ***(MTH 3-12a)***	*Practical Work*			☐

Number, money and measure page 6

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Patterns and relationships	*Look at more complex patterns involving square numbers e.g. $P = n^2 + 1$, and look further into triangular number patterns, like finding the 20th triangular or the connection between square and triangular numbers.* *More problem type linear patterns of the form $P = mD + c$, expressing them in words and symbols.* ***(MTH 3-13a)***		*Ch 4 Pages 36-37* *Ch 4 Pages 38-44*	**TeeJay CfE Assessment *MTH 3-13a***	☐ ☐ ☐
Expressions and equations	*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 $b = 3$* *Evaluate $2x^2$ when $x = 3$.* *Expand brackets $3(x + 1)$ and simplify expressions like $5(2x + 4) + 2x - 1$* ***(MTH 3-14a)*** *** The Distributive Law has been introduced to Level 3 from* ***(MNU 4-14a)***	*(Ch 7 pgs 54-55)* *(Ch 7 pgs 62-64)* *(Ch 7 pgs 60-61)* *(Ch 7 pgs 56-57)*	*Review 4 Pgs 46-47* *Review 4 Pgs 46-47* *Review 4 Pgs 46-47* *Review 4 Pgs 46-47*	**TeeJay CfE Assessment *MTH 3-14a***	☐ ☐ ☐ ☐
	Construct/solve equations from given information . *Solve inequalities like ... $2a + 4 > 11$, $\frac{1}{2}x - 1 \leq 3$.* *Further equation solving e.g.* • *$6x - 16 = 2x$,* • *$5x - 2 = 3x + 10$,* • *$2(x + 4) = 14$,* • *$4(2x - 1) = 28$* ***(MTH 3-15a)*** **** More complicated equations and inequalities have been introduced to Level 3 from* ***(MTH 4-15a)***	*(Ch 7 pgs 58-59)*	*Ch 5 Pages 48-49* *Ch 5 Page 53* *Ch 5 Pages 49-52*	**TeeJay CfE Assessment *MTH 3-15a***	☐ ☐ ☐
	Construct a formula from a diagram or a written problem and evaluate it. *e.g. given $F = \frac{9}{5}C + 32$, find F when $C = 20$. or .....* *Write a formula for the volume V of a cube and use it to find V when $L = 5$.* ***(MTH 3-15b)*** 	*(Ch 7 pgs 62-64)* *(Ch 7 pgs 62-64)*	*Review 4 Pgs 46-47* *Review 4 Pgs 46-47*	**TeeJay CfE Assessment *MTH 3-15b***	☐

Shape, position and movement page 7

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Properties of 2D shapes and 3D objects	*With the aid of a ruler and a protractor, make accurate drawings of quadrilaterals, making careful use of the information given.* *With the added use of a pair of compasses, make accurate drawings of triangles (given two sides and included angle; given two angles and a side; given 3 sides) and any quadrilateral.* *Recognise and know the names of regular polygons, (up to the decagon or dodecagon).* ***(MTH 3-16a)***		*Ch 7 Pgs 67-70* *Ch 7 Pgs 71-72* *Ch 7 Pgs 66-67*	**TeeJay CfE Assessment MTH 3-16a**	☐ ☐ ☐
Angles, symmetry and transformations	*Know that :- the sum of the 3 angles in a triangle = 180°; angles round a point add to 360°; angles making up a straight angle add to 180°.* *Supplementary and complementary angles.* *Vertically opposite (X shape), corresponding (F shape) and alternate (Z shape) angles, involving parallel lines.* *Be able to calculate angles in diagrams using all these.* ***(MTH 3-17a)***	*(Ch 3 pgs 27-29)* *(Ch 3 pgs 23-24)* *(Ch 3 page 26)* *(Ch 3 page 30)*	*Review 5 Page 55* *Review 5 Page 55* *Ch 6 Pgs 56-60* *Review 5 Page 55* *Ch 6 Pgs 61-62*	**TeeJay CfE Assessment MTH 3-17a**	☐ ☐ ☐ ☐ ☐
	Understand and use bearings in drawings. *With given infor-mation involving distance, (often with a scale) along with bearings, use a ruler and a pro-tractor to make a drawing of a journey and answer questions from your drawing.* ***(MTH 3-17b)***		*Ch 6 Pgs 91-92* *Ch 6 Pgs 91-92*	**TeeJay CfE Assessment MTH 3-17b**	☐ ☐ ☐
	Enlarge/Reduce a shape or picture (double, treble, half/ quarter size etc). *Given a model and a scale, make a scale drawing, take a measurement from it and scale up to obtain "real" measurements. The model or sketch often contains an angle - protractor is required.* ***(MTH 3-17c)***		*Ch 9 Pgs 82-83* *Ch 6 Pgs 84-85* *Ch 6 Pgs 86-90*	**TeeJay CfE Assessment MTH 3-17c**	☐ ☐ ☐

Shape, position and movement page 8

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Angles, symmetry and transformations *...contd*	*Read the coordinates of a point or plot a point on a 4 quadrant grid. e.g. (-2,-5).* *Given some points, be able to select another point to form a recognised shape.* *Reflect a shape in the x-axis or the y-axis.* ***(MTH 3-18a)*** **** Plotting/reading points in all 4 quadrants has been introduced to Level 3 from* ***(MNU 4-18a/b)***	*(Ch 5 pgs 41-42)* *(Ch 5 pgs 41-42)* *(Ch 5 pgs 43-44)*	*Review 8 Page 81*	**TeeJay CfE Assessment *MTH 3-18a***	☐
	Introduce Rotational (Turn) and Translational (Slide) Symmetry. *Recognise that a shape has turn symmetry and state its "order". - half, quarter .....* *Be able to rotate a shape 180° around a point.* *Be able to determine which shapes "tile the plane" by surrounding the given shape with congruent shapes.* ***(MTH 3-19a)*** **** Simple rotational symmetry has been introduced to Level 3 from* ***(MTH 4-19a)***		*Ch 11 Pgs 105-106 (Revision Line Sym)* *Ch 11 Pgs 107-109* *Ch 11 Pgs 107-109* *Ch 11 Pgs 110-111* *Ch 11 Pgs 112-114*	**TeeJay CfE Assessment *MTH 3-19a***	☐

Information handling page 9

Outcome	Definition	Book 3a	Book 3b	Comments/Methodology/Other Resources	√
Data and analysis	*Discuss as a group or as a class the problems involved in carrying out a real life survey as a statistician.* *Use a computer program like excel to input data and draw appropriate graphs.* ***(MNU 3-20a)***		*Ch 12 Page 135* *Practical Work*	**TeeJay CfE Assessment MTH 3-20a**	☐ ☐ ☐
	Discuss with students the problems statistitians have when collecting data - *e.g. - in the 60's there was a bias in phoning people to exact info on their political persuasion as only the middle classes had phones.* *Introduce mean, median, mode and range from a data set to help analyse data.* *Awareness of which "average" is most appropriate.* ***(MTH 3-20b)*** **** Mean, median, mode and range have been introduced to Level 3 from* ***(MTH 4-20b)***		*Ch 12 Page 135* *Ch 12 Pges 128-131* *Ch 12 Pges 128-131*	**TeeJay CfE Assessment MTH 3-20b**	☐ ☐ ☐ ☐
	Further work on displaying data in tables, databases, spreadsheets, bar graphs and line graphs. *Construct a pie chart where data is given in percentages or as raw data.* *Draw/interpret simple stem and leaf diagrams* ***(MTH 3-21a)***		*Ch 12 Pges 118-123* *Ch 12 Pges 124-127* *Ch 12 Pges 132-134*	**TeeJay CfE Assessment MTH 3-21a**	☐ ☐ ☐ ☐
Ideas of chance and uncertainty	*More complicated probability such as :-* • *probability of a score of 7 when rolling two dice* • *probability of three heads when 3 coins are tossed.* *From a given probability, determine how many times an event should occur in a given number of attempts.* *Discuss probability and prediction in the real world.* *e.g. weather forecasting.* *The work of a statistician in health work, politics, population sampling etc.* ***(MNU 3-22a)*** *Predicting, from a given probability, how often an event will occur, has been introduced to Level 3 -* ***(MNU 4-22a)***		*Ch 13 Pges 140-145* *Ch 13 Pges 140-145* *Ch 13 Pges 140-145* *Discussion*	**TeeJay CfE Assessment MNU 3-22a**	☐ ☐ ☐

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Curriculum for Excellence

Level 3 Course Planner - Following Book Order

Based on TeeJay's **Books 3a and 3b** along with TeeJays **Assessment Pack** for **Level 3**.

Book Chapters are listed **FIRST** and CfE Outcomes are then Associated and Tied up with the relevant Chapters.

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Book 3a

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
0		1-6	Revision/Consolidation/Diagnosis of all Level 2 work		
1	Rounding	7-8	Rounding to any number of decimal places	*(MNU 3-01a)*	
		9-10	Rounding to a required number of significant figures	*(MNU 3-01a)*	
		11	Estimate/check answers using rounding to 1 (or 2) significant figures	*(MNU 3-01a)*	
		12	**Revisit - Review - Revise !**		Attempt TeeJay's *MNU 3-01a* Diagnostic Assessment
2	Whole Numbers	13-15	Solve a variety of problems by choosing and using addn, subn, multn or divn	*(MNU 3-03a)*	
		16-17	Mental methods used in addn, subn, multn and divn, explaining method used	*(MNU 3-03a)*	
		18-19	Multiplication/Division by multiples of 10, 100, 1000	*(MNU 3-03b)*	
		20	Problems using BOMDAS (BODMAS)	*(MTH 4-03b)*	
		21-22	**Revisit - Review - Revise !**		Attempt TeeJay's *MNU 3-03b* Diagnostic Assessments
3	Angles	23-24	Complementary and Supplementary Angles	*(MTH 3-17a)*	
		25	Angle round a point = 360°	*(MTH 3-17a)*	
		26	Vertically Opposite Angles	*(MTH 3-17a)*	
		27-29	Angles in a Triangle	*(MTH 3-17a)*	
		30	Mixed Exercise	*(MTH 3-17a)*	
		31	**Revisit - Review - Revise !**		
4	Integers	32-34	Negative numbers in context - Money, temperature, time, etc	*(MNU 3-04a)*	
		35-36	Adding and Subtracting Integers including the double negative	*(MNU 3-04a)*	
		37-38	Multiplying and Dividing Integers including 2 or more negatives	*(MNU 3-04a)*	
		39	Mixed exercise	*(MNU 3-04a)*	
		40	**Revisit - Review - Revise !**		Attempt TeeJay's *MNU 3-04a* Diagnostic Assessment
5	Coordinates	41-42	Plotting/Reading Points in all 4 quadrants of coordinate diagram	*(MTH 3-18a)*	
		43-44	Reflection over the x and y axes	*(MTH 4-18a/b)*	
		45	**Revisit - Review - Revise !**		

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
6	%ages/Fractions and Decimals	46-47	Percentages without a calculator including Mental Work	(MNU 3-07a)	
		48-49	Percentages using a calculator	(MNU 3-07a)	
		50-51	Linking Fractions <--> Decimals <--> Percentages	(MNU 3-07a)	
		52-53	**Revisit - Review - Revise !**		Try TeeJay's *MNU 3-03a* and *MNU 3-07a* Diag Assessments
7	Algebra	54-55	Simplify Expressions like $3x + 5y - 4x - y$	(MTH 3-14a)	
		56-57	Expand Brackets* and simplify $5(2x + 5) - 2(3x - 4)$	(MTH 3-14a/4-14a)	
		58-59	Equation Solving up to $x + 3 = 7$, $3x = 15$, $3x - 4 = 11$, $2(x + 3) = 20$	(MTH 3-15a/4-15a)	
		60-61	Evaluate simple formulae using substitution e.g $2x^2$ when $x = -3$	(MTH 3-15b)	
		62-64	Construct a formula from a diagram and evaluate it :- $V = l \times b \times h$, $F = {}^9/_5C + 32$	(MTH 3-15b)	
		65-66	**Revisit - Review - Revise !**		Try TeeJay's *MTH 3-14a* and *MTH 3-15b* Diag Assessment
8	Perimeter/Area	67-68	Revise Areas and Perimeters of Squares, Rectangles and Triangles	(MNU 2-11c)	
		69-71	Area of a Rhombus and a Kite	(MNU 3-11a)	
		72-73	Area of a Parallelogram	(MNU 3-11a)	
		74	Area of a Trapezium	(MNU 3-11a)	
		75-76	Composite Areas	(MTH 3-11b)	
		77	**Revisit - Review - Revise !**		
9	Fractions	78	Revision of Fractions - Equivalence and Simplifying	(MNU 2-07b)	
		79-81	Converting Mixed to Top Heavy and vice versa	(MNU 3-07c)	
		82-83	Adding and Subtracting Mixed Fractions with same denominators	(MTH 3-07b/c)	
		84-85	Adding and Subtracting Mixed Fractions with different denominators (all)	(MTH 3-07b/c)	
		86	A Problem with Subtraction	(MTH 3-07b/c)	
		87	**Revisit - Review - Revise !**		Try TeeJay's *MTH 3-07b/c* Diag Assessment
10	The Circle 1	88	Circumference of a Circle (Practical)	(MNU 3-11a)	
		89-90	Circumference of a Circle $C = \pi D$ $(C = 2\pi r)$	(MNU 3-11a)	
		91-92	Problems involving circumference, including half and quarter circles	(MTH 3-11b)	
		93-94	Calculating the Diameter or Radius of a Circle, knowing its Circumference	(Extension Work)	
		95	**Revisit - Review - Revise !**		

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
11	Ratio	96-97	Understanding Ratio	*(Extension Work)*	
		98-100	Simplifying Ratio	*(Extension Work)*	
		100-102	Solving problems using Ratio	*(Extension Work)*	
		103	**Revisit - Review - Revise !**		
12	Volumes	104-106	Revise Volumes of Cubes and Cuboids including Composites	*(MNU 2-11c)*	
		107-109	Volumes of Triangular Prisms including Composites	*(MNU 3-11a)*	
		110-111	Liquid Volume - Capacity including conversion Litres <--> millilitres	*(MTH 3-11b)*	
		112	**Revisit - Review - Revise !**		
13	Money	113-115	Wages and salaries - Hourly rates, Annual/Monthly/Weekly Pay	*(MNU 3-09b)*	
		116-119	Bonuses, Piecework, Commission	*(MNU 3-09b)*	
		120-121	Overtime	*(MNU 3-09b)*	
		122-123	Gross Pay, Deductions and Net Pay* - Understanding what deductions are	*(MTH 4-09b)*	
		124	**Revisit - Review - Revise !**		Try TeeJay's *MNU 3-09b* Diagnostic Assessment
14	The Circle 2	125-126	Area of a Circle $A = \pi r^2$ (Practical)	*(MNU 3-11a)*	
		126-127	Area of a Circle $A = \pi r^2$	*(MNU 3-11a)*	
		128-130	Problems involving Areas of Circles, half-circles and quarter-circles	*(MTH 3-11b)*	
		131-132	**Revisit - Review - Revise !**		Try TeeJay's *MNU 3-11a* and *MTH 3-11b* Diagnostic Assessment
15	Time	133-134	Revise basic Time - Distance - Speed calculations for whole hours	*(MNU 2-10c)*	
		135-136	Using quarter and half hours in TDS Calculations	*(MNU 3-10a)*	
		137-140	Converting Hours and Minutes to Decimals and Vice Versa	*(MNU 3-10a)*	
		141-143	Simple Time-Distance-Speed Graphs	*(MNU 3-10a)*	
		144	**Revisit - Review - Revise !**		Try TeeJay's *MNU 3-10a* Diagnostic Assessment
	Answers	145-151	Answers to all exercises		

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
0	Revision	1-7	Revision/Diagnosis of Book 3a		
1	Powers & Roots	8-9 10 11	Squares, Cubes and Powers (Indices) Square* (and Cube Roots - Extn) **Revisit - Review - Revise !**	*(MTH 3-06a)* *(MTH 4-06a)*	Attempt TeeJay's *MTH 3-06a* Diagnostic Assessment
	(Review 1)	12	*Money, (Ch 13) from Book 3a.*		
2	Money	13-14 15-16 17-20 21 22-23	Foreign Exchange Best Buys Best Deal - plumber's service, call out charges etc. Credit and Debit Cards **Revisit - Review - Revise !**	*(MNU 3-09a)* *(MNU 3-09a)* *(MNU 3-09a)* *(MNU 3-09a)*	Try TeeJay's *MNU 3-09a* Diagnostic Assessment
	(Review 2)	24-25	*Rounding, (Ch 1) and Whole Numbers, (Ch 2) from Book 3a.*		
3	Multiples & Factors	26-27 28-29 30-31 32 33	Multiples and Lowest Common Multiple Factors and Highest Common Factor Prime Numbers Prime Decomposition **Revisit - Review - Revise !**	*(MTH 3-05a)* *(MTH 3-05a)* *(MTH 3-05b)* *(MTH 3-05b)*	Try TeeJay's *MTH 3-05a* and *MTH 3-05b* Diag Assessment
	(Review 3)	34-35	*%, Fractions and Decimals without a Calculator, (Ch 6) from Book 3a.*		
4	Patterns & Relationships	36-37 38-40 41-44 45	Revise Sequences and Patterns Simple Linear Patterns of the form P = mD and Linear Graphs $y = mx$ Further Linear Patterns of the form P = mD + c and Linear Graphs $y = mx + c$ **Revisit - Review - Revise !**	*(MTH 3-13a)* *(MTH 3-13a)* *(MTH 3-13a)*	Attempt TeeJay's *MTH 3-13a* Diagnostic Assessment
	(Review 4)	46-47	*Algebra, (Ch 7) and Integers, (Ch 4) from Book 3a.*		

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
5	Algebra 2	48-49	Revise Basic Equation Solving using various methods up to $3x - 4 = 11$	*(MTH 3-15a)*	
		49-52	Further Equations $6x - 2 = 4x + 10$, $2(3x - 1) = 20$, $\frac{1}{2}x - 2 = 6$*	*(MTH 3-15a)*	
		53	Solving Inequalities like $3x - 5 > 10$, $\frac{1}{3}x + 3 \leq 12$*	*(MTH 4-15a)*	
		54	**Revisit - Review - Revise !**		Attempt TeeJay's *MTH 3-15a* Diagnostic Assessment
	(Review 5)	55	*Angles, (Ch 3) from Book 3a*		
6	Angles	56-58	Corresponding Angles (*F* - Angles)	*(MTH 3-17a)*	
		59-60	Alternate Angles (*Z* - Angles)	*(MTH 3-17a)*	
		61-62	Problems involving All Angles	*(MTH 3-17a)*	
		63	**Revisit - Review - Revise !**		Attempt TeeJay's *MTH 3-17a* Diagnostic Assessment
	(Review 6)	64-65	*Perimeter & Area, (Ch 8) and Volumes, (Ch 12) from Book 3a.*		
7	2 - Dimensions	66-67	Recognise and know the names of polygons up to dodecagons	*(MTH 3-16a)*	
		67-70	Accurately draw triangles given appropriate 3 pieces of information	*(MTH 3-16a)*	
		71-72	Use Ruler and Protractor to draw accurate quadrilaterals	*(MTH 3-16a)*	
		73	**Revisit - Review - Revise !**		Attempt TeeJay's *MTH 3-16a* Diagnostic Assessment
	(Review 7)	74	*Fractions, (Ch 9) from Book 3a.*		
8	Fractions	75-76	Multiplying Fractions including Mixed Numbers	*(Extensions Work)*	
		77-78	Dividing Fractions including Mixed Numbers	*(Extensions Work)*	
		79	Mixed problems including all 4 operations	*(Extensions Work)*	
		80	**Revisit - Review - Revise !**		
	(Review 8)	81	*Coordinates, (Ch 5) from Book 3a.*		

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
9	Scale Drawings and Bearings	82-83	Enlarge and Reduce a shape or figure (Double, Half, Treble, Quarter)	*(MTH 3-17c)*	
		84-85	Using Scale Drawings to Calculate Lengths	*(MTH 3-17c)*	
		86-87	Making Basic Scale Drawings	*(MTH 3-17c)*	
		88-90	Scale Drawings involving use of a Protractor	*(MTH 3-17c)*	
		91-92	Drawing and Interpreting Scale drawings involving bearings	*(MTH 3-17b/c)*	
		93-94	**Revisit - Review - Revise !**		Try TeeJay's *MTH 3-17b* and *MTH 3-17c* Diag Assessment
	(Review 9)	95	*Ratio, (Ch 11) from Book 3a.*		
10	Proportion	96-97	Proportional Sharing	*(MNU 3-08a)*	
		98	Proportion - Basic Unitary Proportion	*(MNU 3-08a)*	
		99-100	Direct Proportion - Knowing the cost of x, find the cost of y	*(MNU 3-08a)*	
		101-102	The Graph of Direct Proportion	*(Extension Work)*	
		103	**Revisit - Review - Revise !**		Attempt TeeJay's *MNU 3-08a* Diagnostic Assessment
	(Review 10)	104	*%, Fractions and Decimals with a Calculator, (Ch 6) from Book 3a.*		
11	Symmetry	105-106	Revision of Line Symmetry	*(MTH 2-19a)*	
		107-109	Rotational Symmetry incl. Half Turn - Order of rotational Symmetry*	*(MTH 4-19a)*	
		110-111	Be able to rotate a shape by 180° around a point*	*(MTH 4-19a)*	
		112-114	Translational Symmetry and Tiling	*(MTH 3-19a)*	
		115-116	**Revisit - Review - Revise !**		Attempt TeeJay *MTH 3-19a* Diagnostic Assessment
	(Review 11)	117	*Circles 1, (Ch 10) and Circles 2, (Ch 14) from Book 3a.*		

Ch	Heading	Pgs	Topics	CfE Outcomes	Comments/Methodology/Assessments
12	Statistics	118-120	Bar Graphs and Line Graphs,	*(MNU 2-20a)*	
		121-123	Spreadsheets	*(MNU 3-20a)*	
		124-125	Interpreting Pie-chart	*(MTH 3-21a)*	
		126-127	Drawing Pie-chart from Raw Data or Percentages	*(MTH 3-20b)*	
		128-129	Averages - Mean and Range of a data set	*(MTH 4-20b)*	
		130-131	Averages - Median and Mode of a data set	*(MTH 4-20b)*	
		132-134	Stem-and-Leaf Diagrams	*(MTH 3-21a)*	
		135	Problems when collecting/using data - Conducting a survey	*(MNU 3-20a)*	
		136-138	**Revisit - Review - Revise !**		Try TeeJay's *MTH 3-21a* and *MTH 3-20b* Diag Assessment
	(Review 12)	139	*Time, (Ch 15) from Book 3a.*		
13	Probability	140-141	Revision of simple Probability	*(MNU 3-22a)*	
		141-142	Harder Probability - Prob of total of 7 when rolling 2 die, Prob of 3 head etc	*(MNU 3-22a)*	
		143-145	Probability as a Fraction	*(MNU 4-22a)*	
		146-147	Extension to Probability - Independent and Dependant Events	*(Extension Work)*	
		148	**Revisit - Review - Revise !**		Attempt TeeJay's *MNU 3-22a* Diagnostic Assessment
14	Revision - Level 3	149-154	*Revision of Level 3 work for Diagnostic Assessment - CfE Level 3*		
	Answers	155-163	Answers to all exercises * Topics listed with a star have been brought forward from Level 4 - We believe they lie better in Level 3. The brown *(Review)* exercises provide revision of the topics met in Book **3(a)**		