

# TEEJAY PUBLISHERS

Curriculum For Excellence - Mathematics (Apr '09)

SECOND LEVEL

An attempt to tie up - Curriculum for Excellence - 5 to 14 Strands - TeeJay Books A to E (and Beyond) for the 2nd Level.

Curriculum for Excellence is about introducing a more modern approach to the delivery of a comprehensive mathematics education to pupils, a need for a change of emphasis in the teaching methodology (particularly in the Secondary Sector) and making children more accountable for what, how and when they learn the fundamentals of Mathematics and Arithmetic (Numeracy).

The basic order of the actual curriculum cannot really be altered, since mathematics and numeracy are, by their nature sequential, the only change possibly being in whether a new topic is introduced, or a former one dropped or in there being a change in emphasis or in the required depth.

Here, we attempt to help schools and teachers by tying up the curricular content of the new Curriculum for Excellence with that outlined in the former 5-14 strand checklist. We will, where possible, suggest alternative approaches to the introduction of a topic, but that is generally down to the individual skills of the class teacher.

The problem lies in the "vagueness" of the outcomes, For example :-

I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate. **MNU 101A**

Questions are "up to what value ? - single digits, 100's, 1000's 100000's ? What operations ? Degree of Accuracy "?

No answer is forthcoming in the document - Is it then up to the teacher to decide ? - Remember that Level 1 covers the three year period from P2 to P4 - Quite a range from which the teacher has to interpret both the content and the depth.

We will try to put our own slant on it and will detail as much as we can - (but we will obviously update this as more information becomes available).

Remember :- TeeJay provides, as do most other publishers, simply a RESOURCE - not a COURSE.

\*\* (Over 2200 schools in Scotland, (out of 2500), now use our resources and/or textbooks)\*\*.

## Mathematics Framework

CfE Level	Stage	5-14 Level/Qualification	TeeJay Resources
Early	Pre school to P1 (or later ?)	(About $\frac{2}{3}$ of Level A)	Book A
First	P2 to P4 (or earlier/later ?)	(A) and B + $\frac{2}{3}$ of Level C)	(Book A) Book B and $\frac{2}{3}$ of Book C)
Second	P5 to P7 (or earlier/later ?)	(C) and D and Most (all) of E	(Book C) Book D and $\frac{2}{3}$ (all) of Book E)
3rd/4th	S1 to S3 (or earlier ?) The 4th level equates to SCQF* (Grade 4) i.e. Int1/General	(D & E) and some of Book F or E and New General (or equivalent to Intermediate 1)	Books D and E (Some/all of Book F) TeeJay's books G3 and G4 (or Int 1) Possibly A New "General" Textbook
Senior	S4 to S6 (and beyond)	New Advanced General Credit or Intermediate 2 Higher & Adv Higher	TeeJay's IC1 and IC2 TeeJay's Advanced Higher Notes (Possible New TeeJay Higher Book)

### \* THE SCOTTISH CREDIT AND QUALIFICATIONS FRAMEWORK

SCQF Level	SQA National Units, Courses and Group Awards	Higher Education	Scottish Vocational Qualifications
12		Doctorates	
11		Masters	**SVQ 5
10		Honours Degree *Graduate Diploma/Certificate	
9		Ordinary Degree *Graduate Diploma/Certificate	
8		Higher National Diploma Diploma of Higher Education	**SVQ 4
7	Advanced Higher	Higher National Certificate Certificate of Higher Education	
6	Higher		**SVQ 3
5	Intermediate 2 Credit Standard Grade		**SVQ 2
4	Intermediate 1 General Standard Grade		**SVQ 1
3	Access 3 Foundation Standard Grade		
2	Access 2		
1	Access 1		

\*These qualifications are differentiated by volume of outcomes and may be offered at either level.  
**\*\*Scottish Vocational Qualifications (SVQs)** are currently being credit-rated.  
 The results are available on [www.scaf.org.uk](http://www.scaf.org.uk) and [www.sqa.org.uk](http://www.sqa.org.uk).

## SECOND LEVEL

P5 - P7 (or earlier)

Mid-Level C to Mid-Level E

The following 7 pages, (pages 4 - 10), give a detailed outline of how we, at TeeJay Publishers, think the **curricular content** of the new Curriculum for Excellence can be covered using the 5 - 14 National Guidelines Document in conjunction with TeeJay's Maths Books (mid) C to (mid) E.

The following points should be noted :-

- Our Textbooks provide what we believe is a sound and imaginative Resource - (*it is not a Course*) - it is not a scheme of work, rather it supports and enhances the work done in class, developed in the school by the practising class teacher.
- The Second Level stretches from P5 to P7, so this is our interpretation of the depth and pace of the course. It is difficult, without greater details, to accurately predict how much and how far into a topic a teacher should take class, but we have attempted to do so.
- We have studied closely the 5 - 14 curricular content, as outlined in the document, and in nearly every case we discovered there to be a fairly close correlation between what is required for CfE and what is present in 5 - 14 (and in our resources).
- Hence, schools should not, (*and in the present economic situation cannot*), be expected to consider purchasing a new set of resources when, (as 2200 schools will agree), the Teejay Textbooks and the Homework, Assessments, Consolidation/Revision and Mental photocopiable resources already provide a more than adequate solution.
- We do not expect you to use a mixture of Books C, D and E just to follow a particular order. This is unwieldy and unworkable. Rather, you should continue to use 1 Level at a time - that was the very reason TeeJay produced the books, (to follow a single level in its entirety).
- In the few instances where a new topic is being introduced, (e.g. in the development of use of bank cards and budgeting) TeeJay will develop the topic, (possibly as a set of free downloadable photocopy sheets), or will try to source an alternative set of suitable resources).
- Some of materials from our S3/4 General books (e.g. probability) will be made available as free-standing chapters to download and use from our web-site later.

We hope the details below are of use to Head Teachers in their course planning, and to class teachers in their implementation of the new Curriculum for Excellence at the Second Level.

## Second Level

(P5 - P7 or possibly P6)

(End of Level C, plus D and some/most of E)


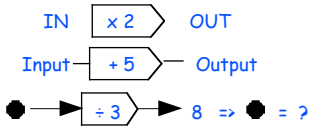


\*\*\* This is **NOT** meant as any form of course outline. It is simply an attempt to show that, by continuing to follow the (curricular) content and the order of 5 to 14, (preferably using TeeJay's Resources), schools will have also covered the curricular content of the 2nd level of Curriculum for Excellence.

### Number, Money and Measure

	Curriculum for Excellence Outcomes	5-14 equivalent (Level C)	5-14 equivalent (Level D)	5-14 equivalent (Level E)	TeeJay Resources
<b>Estimating &amp; Rounding</b>	I can use my knowledge of rounding to routinely estimate the answer to a problem, then after calculating, decide if my answer is reasonable, sharing my solution with others. <b>MNU 2-01a</b>	Round 3 digit whole number to nearest ten (e.g. when estimating/checking calculations like :-  134 + 23 is about 130 + 20 (= 150)	Round any number to the nearest unit, 10 or hundred when estimating/checking calculations like :-  737 + 188 is about 700 + 200 (= 900)	Round any number to the 1 decimal place and using this to check calculations of the form :-  7.253 + 8.174 is about 7.3 + 8.2 = .....	C - Chapter 5 (60 - 62)  D - Chapter 1 and 3 (21 - 22, 39 - 40)  E - Chapter 2 (30 - 31)
<b>Number and Number Processes</b> <i>including Addition Subtraction Multiplication &amp; Division and Negative numbers</i>	I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value. <b>MNU 2-02a</b>	Whole numbers up to 10000 (count, order, read/write). Decimals to 2 places when reading/recording money and using calculator displays :-  2 pounds & 5 pence = £2.05	Whole numbers up to 100000 (count, order, read/write) and up to 1 million (read/write only). Equivalence between decimals & fractions in applications involving money and measurement Use 1m 35 cm = 1.35 m	Decimals to 3 decimal places (practical applications in measurement)	C - Chapters 1 and 3 (8 - 10, 26 - 28)  D - Chapter 1 and 3 (9 - 10, 33 - 40)  E - Chapter 1 and 2 (9 - 10, 25 - 29)
	Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. <b>MNU 2-03a</b>	Add/Sub <u>mentally</u> 1 digit whole numbers to/from whole no. up to 3 digits No Calculator for 2 digits to/from up to 3 digit whole number. Mult/Div <u>mentally</u> within 10 times tables. and 2/3 digit number by 10 No calcr - 2 digits (whole) by single digit. Calcr 2 or 3 digits by 1 or 2 digit (whole) in applications money/measure to £20.	Add/Sub <u>mentally</u> 2 digit whole numbers and beyond (multiples of 10 & 100) No Calculator for up to 4 digits. Mult/Div <u>mentally</u> for whole no's with up to 4 digits by single digit. With calcr - for whole number with 4 digits by 2 digit number. - in applications in number measurement & money	Simple addition and subtraction of positive and negative numbers in applications such as temperature and banking work	C - Chapters 1 and 3 (11 - 16, 28 - 30)  D - Chapter 1, 3 and 6 (11-25, 41-44, 66-74)  E - Chapter 1 and 2 (11 - 24, 30 - 42)
	I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods. <b>MNU 2-03b</b>		With/without a calculator for up to 4 digits, at most to 2 decimal places. No Calc - for number (4 digits) at most 2 dec places by a single digit number. With calcr - for number (4 digits) with 2 dec places at most by 2 digit number. - in applications in number measurement & money	Add/Sub <u>mentally</u> 2 digits including decimals like (7.3 + 8.2) No Calculator for 4 digits (2 dec places) With calcr - any no. up to 3 dec places Mult/Div <u>mentally</u> for any number by multiple of 10 (x 20, ÷ 300, x 4000) No Calculator for 4 digits (2 dec places) by a single whole number With calcr - (3 d.p.s at most in answer)	D - Chapter 6 and 9 (70 - 74, 106 - 114)  E - Chapter 2 and 4 (32 - 42, 49 - 52)
	Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. <b>MTH 2-03c</b>		All above in solving problems in context in applications in number measurement & money	All above in solving problems in context in applications in number measurement & money	C - Chapters 1 and 3 various  D - Chapter 1, 3 and 6 various  E - Chapter 1 and 2 various

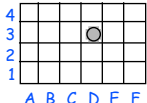
	I can show my understanding of how the number line extends to include numbers less than zero and have investigated how these numbers occur and are used. <b>MNU 2-04a</b>			Work with negative numbers in application (e.g. temperature, dates, banking)	E - Chapter 5 (59 - 66)
<b>Multiples Factors &amp; Primes</b>	Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers. <b>MTH 2-05a</b>	Patterns formed from multiplication tables and division. The link between 3 and 9 times tables etc.	Look at sequences like 1, 2, 2, 3, 5, 8, 13, .....	Multiples, Factors and Prime Numbers	C - Chapters 13 (152)  D - Chapter (167 - 169)  E - Chapter 13 (162 - 167)
<b>Fractions Decimals &amp; Percentages</b>	I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems. <b>MNU 2-07a</b>	Having dealt with halves and quarters at Levels A/B, now work with thirds, fifths, eights and tenths and simple equivalences 1 half = 2 quarters) pract applications	Work with all previous fractions plus twentieths, fiftieths, hundredths) and equivalences among these and decimals (in applications) Recognise and be able to change between simple fractions, decimals and percentages. - their equivalences.	Decimals to 3 places (practical applications in measurement)	C - Chapters 10 (109 - 112)  D - Chapter 11, 13 (128 - 129), (143 -144)  E - Chapter 6 (67 - 69)
	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. <b>MNU 2-07b</b>	Find simple fractions (1/3, 1/5, 1/10) of quantities involving 1 or 2 digits	Find simple fractions (1/7, 3/4, 4/5, 60/100) of quantities involving at most 4 digits. Work with simple percentages (shading, etc) - recognising what a percentage is .	All widely used fractions and equivalence among these and decimals (in applications ). Be able to find <b>mentally</b> widely used fractions and percentages of whole number quantities. (75% of £120 = 3/4 of £120 = .....) With a calculator, find any percentage of a quantity, rounding where needed.	C - Chapters 10 (113 - 119)  D - Chapter 11, 13 (132 - 134), (145-147)  E - Chapter 6 (69 - 78)
	I have investigated how a set of equivalent fractions can be created, understanding the meaning of simplest form, and can apply my knowledge to compare and order the most commonly used fractions. <b>MTH 2-07c</b>		Simplifying basic fractions and percentages like (6/8, 15/20, 80/100)	Simplifying fractions and percentages like (6/8, 15/20, 80/100, 45%, 90%) and using this to calculate ( <b>mentally</b> ) fractions & percentages of quantities.  Order simple fractions To look at and develop.	C - Chapters 10 (113 - 119)  D - Chapter 11 (130 - 131)  E - Chapter 6 (69 - 78)

	Curriculum for Excellence Outcomes	5-14 equivalent (Level C)	5-14 equivalent (Level D)	5-14 equivalent (Level E)	TeeJay Resources
<b>Money</b>	I can manage money, compare costs from different retailers, and determine what I can afford to buy. <b>MNU 2-09a</b>	Use coins/notes to £5 worth or more, including exchange	Use all UK coins/notes to £20 worth or more, including exchange	(Use relationships between currencies to do simple calculations)	C - Chapters 3 (26 - 34) D - Chapter 9 (106 - 114) E - Chapter 4 (49 - 58)
	I understand the costs, benefits and risks of using bank cards to purchase goods or obtain cash and realise that budgeting is important. <b>MNU 2-09b</b>			The concept of Budgeting and using bank cards to be developed from TeeJay Level F and Int-2-Credit Books 1 and 2 for use, in simplified form, by those tackling <b>MNU 212K</b> . Will be posted on our web-site later.	To be developed
	I can use the terms profit and loss in buying and selling activities and can make simple calculations for this. <b>MNU 2-09c</b>			Profit and Loss to be developed from TeeJay's General Maths book 3G for use, in simplified form, by those tackling <b>MNU 213K</b> . Will be posted on our web-site later.	Derived from TeeJay's General Book 2G Page 182 - 184
<b>Time</b>	I can use and interpret electronic and paper-based timetables and schedules to plan events and activities, and make time calculations as part of my planning. <b>MNU 2-10a</b>	Use 12 hour times for simple timetables Times of TV programmes Conventions for recording time :- 1.40 am = twenty to two in the morning Use of calendars. Recording of dates 05.03.07, 5/3/07 5th March 2007	use 24 hour times and equate with 12 hour times		C - Chapters 4 (35 - 42) D - Chapter 3 (45 - 46) E - Chapter 3 (43)
	I can carry out practical tasks and investigations involving timed events and can explain which unit of time would be most appropriate to use. <b>MNU 2-10b</b>	Simple timed activities for 1 - 5 minute periods	Time activities in seconds using a stopwatch	Time activities in seconds using a digital stopwatch in seconds, tenths and hundredths of a second	D - Chapter 4 (49 - 51) E - Chapter 3 (46 - 48)
	Using simple time periods, I can give a good estimate of how long a journey should take, based on my knowledge of the link between time, speed and distance. <b>MNU 2-10c</b>	Work with hours and minutes for short durations such as morning break	Calculate durations in hours and minutes, mentally if possible	To be developed from Teejay's Level F Time (distance, speed chapter), and/or from Maths Book 3G for those tackling <b>MNU 216 L</b> . Will be posted on our web-site later.	C - Chapters 4 (43 - 49) D - Chapter 4 (47 - 48) E - Chapter 3 (44 - 45)  Materials to be developed from Level F and Bk 3G


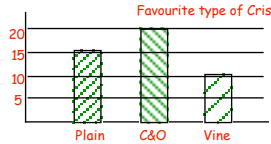
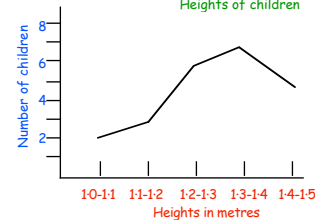
<b>Measurement</b>	I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure. <b>MNU 2-11a</b>	estimate lengths and heights in easily handled standard units :- m, 1/2 m, 1/10 m and cm	Estimate small weights, small areas and small volumes in easily handled standard units	Estimate area in square cm and metres.	C - Chapter 12, (137- 138), D - Chapter 14, 17 (148-150), (180-181) E - Chapter 10 (123 - 124)						
	I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems. <b>MNU 2-11b</b>	Measure in standard units - - weight, accuracy extended to 20g weights - know 1 kg = 1000 g - volumes litre 1/2 litre and 1/4 litre Select approp measuring devices and units, metre tape or stick - metres or centimetres.	Measure in standard units - - small length in mm of buildings in m - weights to include your own in kg - volumes - accuracy extended to small containers in ml - know 1 litre = 1000 ml. Measure areas of R.A.T.'s on grids. Select approp weighing devices & units	Work with sq km, hectares when approp. Read scales on measuring devices.	C - Chapter 12, 15 (139-142), (160-164) D - Chapter 14, 17 (151 - 153), (182-183) E - Chapter 10 (118 - 122)						
	I can explain how different methods can be used to find the perimeter and area of a simple 2D shape or volume of a simple 3D object. <b>MNU 2-11c</b>	Measure the areas of shapes composed of rectangles/squares or irregular shapes using tiles or grids in square centimetres or metres Understand and measure volumes litre, 1/2 litre, 1/4 litre.	Calculate perimeters of simple straight-sided shapes by adding lengths. Find areas of right-angled triangles on cm squared grids. Measure volumes in small ml containers. Volumes of cuboidal shapes using cubes	Calculate using rules areas of rectangles and squares. Calculate volumes of cubes and cuboids using rules.	C - Chapter 12, 15 (143-146), (164-172) D - Chapter 14, 17 (154 - 163), (184-185) E - Chapter 10, 16 (125 - 131), (183-193)						
<b>Mathematics Impact on the world past, present and future</b>	I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions. <b>MTH 2-12a</b>	To be developed or sourced	To be developed or sourced	To be developed or sourced							
<b>Patterns &amp; Relationships</b>	Having explored more complex number sequences, including well-known named number patterns, I can explain the rule used to generate the sequence, and apply it to extend the pattern. <b>MTH 2-13a</b>	Work with patterns & relationships within and among multiplication tables e.g the link between the 3 and the 9 times tables	Continue and describe more complex sequences like 3, 7, 11, 15, 19, ..... 67, 61, 56, 50, 44, .... 1, 1, 2, 3, 5, 8, 13, ....	Continue and describe sequences involving square and triangular numbers Find specific items in a sequence Understand prime numbers. Find rules to connect posts and rails :- 	C - Chapter 13 (148-153) D - Chapter 15 (164 - 171) E - Chapter 11 (132-145)						
<b>Expressions &amp; Equations</b>	I can apply my knowledge of number facts to solve problems where an unknown value is represented by a symbol or letter. <b>MTH 2-15a</b>	Find the missing numbers in statements like $4 + * = 7$ , $4 \square 5 = 20$ . (Level B) Use simple function machines for operations like doubling, halving, adding or subtracting 	Recognise and explain simple relationships (between 2 sets of numbers or objects) Equilateral triangles  <table border="1" data-bbox="1176 1284 1534 1396"><thead><tr><th>Side length</th><th>Perim of triangle</th></tr></thead><tbody><tr><td>1 cm</td><td>3 cm</td></tr><tr><td>2 cm</td><td>6 cm</td></tr></tbody></table> To find the perimeter you multiply the length of the side by 3	Side length	Perim of triangle	1 cm	3 cm	2 cm	6 cm	Use a function machine in reverse for inverse operations. Solve equations/inequations like :- $x - 4 = 7$ , $2N + 3 = 9$ , $x + 3 > 5$ Find relationships for 2 sets of numbers $N \text{ -----} \rightarrow 3N$ Describe rules to connect posts and rails 	C - Chapter 7 (81-88) D - Chapter 7 (75 - 86) E - Chapter 8 (92-103)
Side length	Perim of triangle										
1 cm	3 cm										
2 cm	6 cm										

## Shape, Position & Movement

	Curriculum for Excellence Outcomes	5-14 equivalent (Level C)	5-14 equivalent (Level D)	5-14 equivalent (Level E)	TeeJay Resources
<b>Properties of 2D Shapes and 3D Objects</b>	Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment. <b>MTH 2-16a</b>	Collect, discuss and make use of 2D and 3D shapes. Identify 2D shapes within 3D shapes	Collect, discuss and make use of 2D and 3D shapes. Discuss 2D and 3D shapes with reference to faces, edges, vertices, diagonals, sides and angles. Recognise pentagons & hexagons Identify and name equilateral and isosceles triangles. Understand radius, diameter, circumference.	Use properties of 2D & 3D shapes. Discuss side, angle, diagonal properties of all square, rectangle, rhombus, kite, parallelogram and trapezium . Define & classify quadrilaterals. Relate diameter & circumference (practical work only).	C - Chapter 8, 14 (89-98), (154-156) D - Chapter 10, 16 (115-123), (172-174) E - Chapter 20 (234-240)
	Through practical activities, I can show my understanding of the relationship between 3D objects and their nets. <b>MTH 2-16b</b>	Recognise 3D shapes from 2D drawings.	Make 3D models, solid and skeletal, including using nets (cube/cuboid only)	Make 3D models, solid and skeletal, including using nets (triangular prism, pyramid and tetrahedron)	C - Chapter 14 (154-156) D - Chapter 16 (175-179) E - Chapter 20 (234-240)
	I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources. <b>MTH 2-16c</b>	Draw circles using a variety of methods  Draw circles using a variety of methods	Make 3D models, solid and skeletal, Draw or copy 2D shapes (with a view to tiling the plane) Draw circles using a variety of methods	Given 3 sides, two sides and included angle or two angles and a side, be able to draw triangles.	C - Chapter 14 (157-158) D - Chapter 10, 16 (124-125), 175-179) E - Chapter 14, 20 (168-174), (234-240)

	Curriculum for Excellence Outcomes	5-14 equivalent (Level C)	5-14 equivalent (Level D)	5-14 equivalent (Level E)	TeeJay Resources
<b>Angle, Symmetry and Transformation</b>	I have investigated angles in the environment, and can discuss, describe and classify angles using appropriate mathematical vocabulary. <b>MTH 2-17a</b>	Know that a right angle is $90^\circ$ Use right, acute, obtuse to describe an angle. Know that a "straight" angle is $180^\circ$	Be confident in the use of the terms right, acute, obtuse to describe an angle.	Use reflex to describe angles. (Understand vertically opposite angles and that they are equal) - Level 3 ? (Use the properties of angles formed by a line crossing parallel lines - Level 3 (Know the sum of the 3 angles of any triangle is 2 right angles ( $180^\circ$ ))- Level 3	C - Chapter 9 (101-108) D - Chapter 8 (87-89) E - Chapter 12 (146-148)
	I can accurately measure and draw angles using appropriate equipment, applying my skills to problems in context. <b>MTH 2-17b</b>		Can draw and measure angles accurately within 5 degrees. Be able to measure 3 figure bearings.	Use reflex to describe angles. Measure angles accurately.	C - Chapter 7 (81-88) D - Chapter 8 (90-93)
	Through practical activities, which include the use of technology, I have developed my understanding of the link between compass points and angles and can describe, follow and record directions, routes and journeys using appropriate vocabulary. <b>MTH 2-17c</b>	Describe the main features of a familiar journey or route. Create paths on squared paper described by instructions such as Forward 5, right $90^\circ$ , forward 7, left $90^\circ$ , ..... (using programmable toys, or computer graphics .....)	Give directions for a route or journey. Use 8 point compass rose. Introduce 3 figure bearings.	Understand and use bearings in drawings	C - Chapter 11 (120-129) D - Chapter 8 (98-105) E - Chapter 17 (202-207)
	Having investigated where, why and how scale is used and expressed, I can apply my understanding to interpret simple models, maps and plans. <b>MTH 2-17d</b>			Use bearings and distances to produce accurate scale drawings of routes.. Draw triangles, etc. to scale to represent objects and situations involving heights, ( <i>angles</i> ) and distances. (Scales like 1 cm represents 1 km etc.)	E - Chapter 17 (194-201)
	I can use my knowledge of the co-ordinate system to plot and describe the location of a point on a grid. <b>MTH 2-18a</b>	Level B - Use grid references to read or plot location on a grid. => D3 	Use a coordinate system to locate a point on a grid (2, 3), (0, 4) etc...	Use coordinates to plot points in all 4 quadrants :- (-2, 5), (3, -2) ... Calculate distances along grid lines.	C - Chapter 11 (130-134) D - Chapter 12 (136-142) E - Chapter 6 (63-65)
	I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns. <b>MTH 2-19a</b>	Find lines of symmetry of shapes drawn on squared grids. Complete the "other" half of a simple symmetrical shape or pattern on a grid.	Identify and draw lines of symmetry, generally up to 4. Create symmetrical shapes.	(Determine whether or not a shape has rotational symmetry).* (Level 4) Move a tile or shape on a squared grid in order to translate, reflect or rotate the shape.* (Not mentioned in outcomes).	C - Chapter 2 (17-25) D - Chapter 2 (26-32) E - Chapter 7 (79-81), +(82-91)*

# Information Handling

	Curriculum for Excellence Outcomes	5-14 equivalent (Level C)	5-14 equivalent (Level D)	5-14 equivalent (Level E)	TeeJay Resources
<b>Data &amp; Analysis</b>	Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading. <b>MNU 2-20a</b>	Can interpret from displays/databases <ul style="list-style-type: none"> <li>by retrieving specific records</li> <li>by identifying the most and the least frequent items</li> <li>and/or by using computer packages</li> </ul>	Can interpret from a range of displays and databases. by retrieving information subject to one condition (e.g. "Which children are taller than 130 cm?")	Can interpret from an extended range of displays, (diagrams, tables, graphs, pie charts) and databases retrieving info subject to more than 1 condition. (e.g. "Which children are taller than 130 cm and heavier than 40 kg). Describe the main features of a graph to show awareness of the significance of the information. (e.g. given graph of water level in harbour, say what's happening).	C - Chapter 2 (69-80) D - Chapter 5 (52-65) E - Chapter 9 (108-117)
	I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way. <b>MNU 2-20b</b>	Collect data from a task using simple yes/no questionnaires from a survey. Use grouped tally marks.  Enter data into a table using row and column headings. Use databases where teacher defines the headings or fields. Use a computer package where appropriate.	Collect data from a task including a questionnaire which allows several responses. (What do you buy from the tuck-shop)? Display using diagrams and tables. (Crisps, Sweets, Fruit, Juice on Mon Tue Wed Thu Fri) etc Use databases or spreadsheets with up to 3 fields defined by the pupils. Use a computer package where appropriate.	Collect data from a task including <ul style="list-style-type: none"> <li>practical experiments</li> <li>surveys using questionnaires</li> <li>sampling using simple strategy.</li> </ul> (Estimate how much water lost from dripping tap in 1 week by measuring loss in 1 hour) Design and use diagrams and tables. Design and use a database or spreadsheet - fields designed by pupils. Use a computer package if possible.	C - Chapter 2 (69-80) D - Chapter 2 (52-65) E - Chapter 9 (108-117)
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology. <b>MTH 2-21a</b>	Construct a table or chart. Construct a bar graph with axes graduated in multiple units  Use a computer package where possible	Construct graphs (bar, line, freq. polygons and pie charts) using simple fractions or decimals from continuous data that has been grouped  Use a computer package where possible	Construct straight line and curved graphs for continuous data where there is a relationship such as direct proportion - travel, temperature, growth graphs. Construct a pie chart where data is given in percentages. Use a computer package where possible.	C - Chapter 2 (69-80) D - Chapter 2 (52-65) E - Chapter 7 (79-81), +(82-91)*
<b>Ideas of Chance &amp; Probability</b>	I can conduct simple experiments involving chance and communicate my predictions and findings using the vocabulary of probability. <b>MNU 2-22a</b>				TeeJay's Book 36, Chapter 18 will be posted as a free download on our web-site later for introduction at Levels D and E.