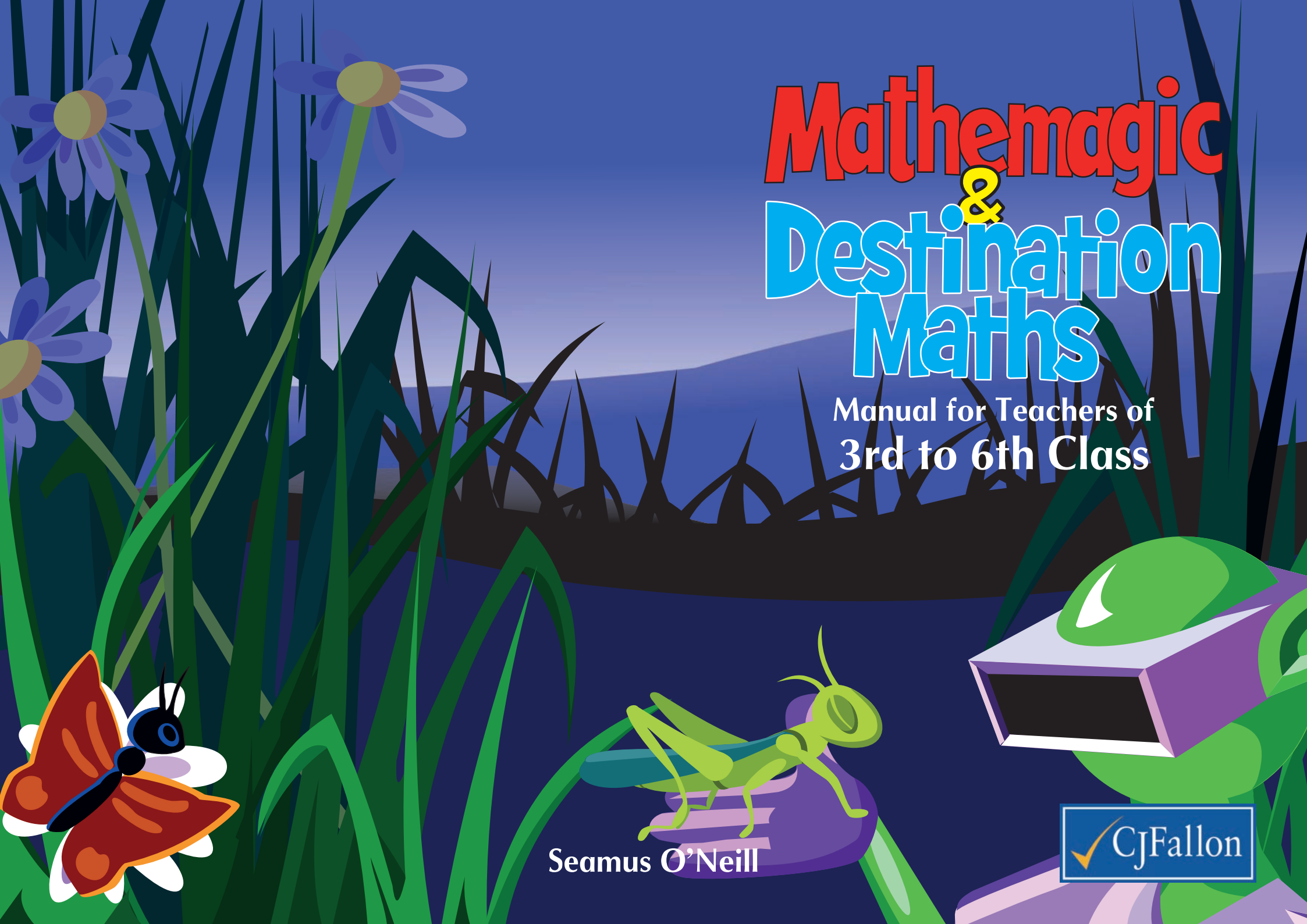
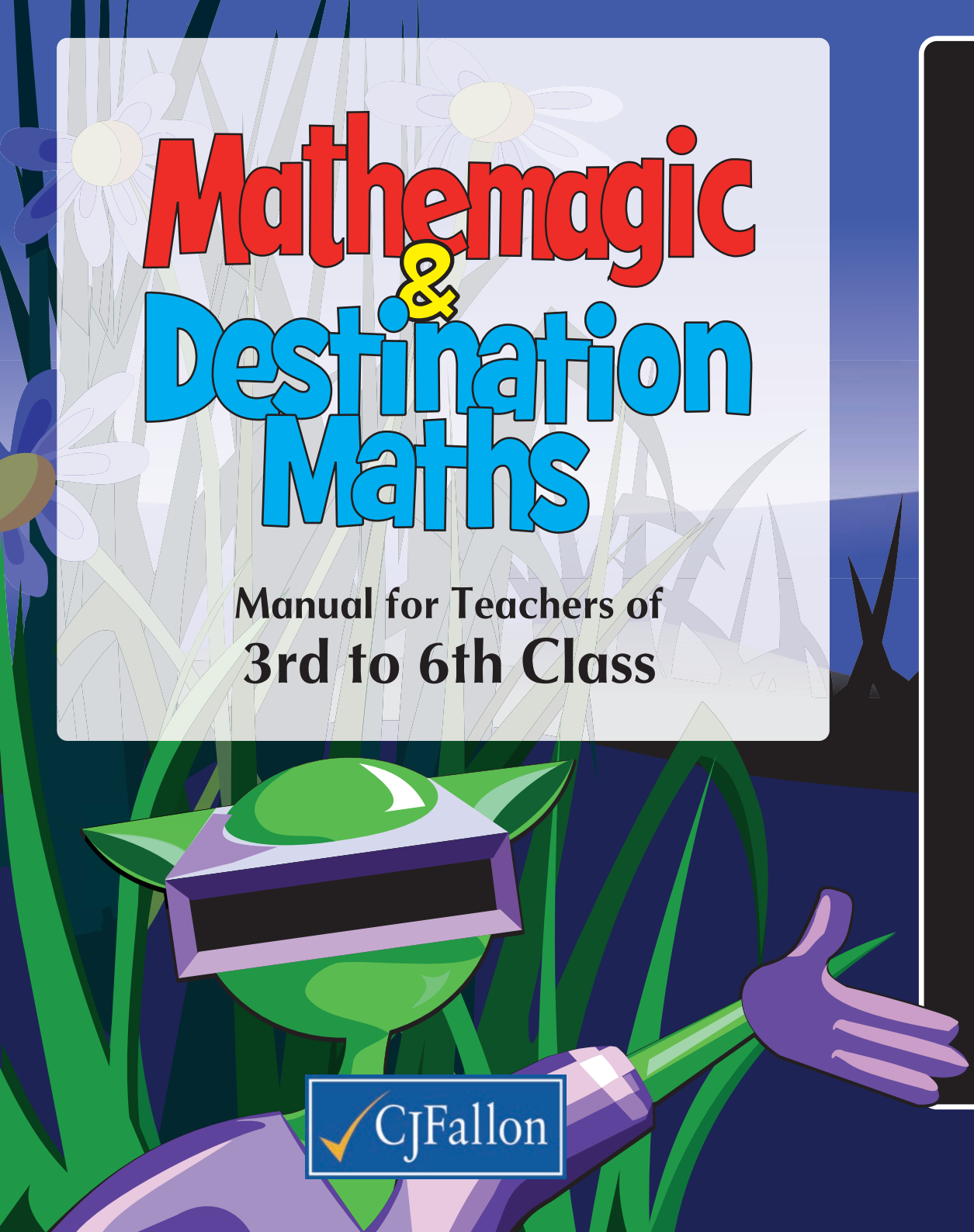

Mathemagic
&
Destination
Maths
Manual for Teachers of
3rd to 6th Class
Seamus O'Neill
CJFallon

Mathemagic & Destination Maths

Manual for Teachers of 3rd to 6th Class



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CONTENTS

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Mathemagic & Destination Maths

Manual for Teachers 3rd to 6th Class

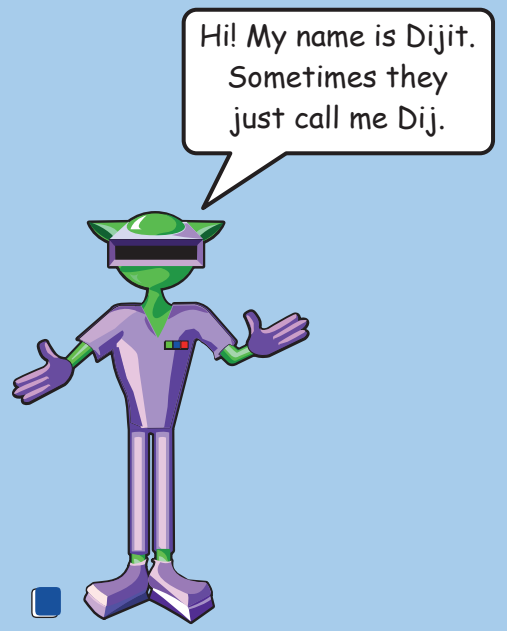
Destination Maths offers pupils an enjoyable means of developing and consolidating crucial mathematical concepts and skills.

The 'Quick Start Guide' will help you to get started with *Destination Maths* and shows how it can be used in conjunction with our **Mathemagic** series.

We have revised the bulk of *Destination Maths* to support the objectives of the revised Irish Primary Maths curriculum but it is worth noting that there are some aspects that are not directly applicable. These have been included because they may offer opportunities for extension and enrichment and may also provide support in managing differentiation in the classroom. *Destination Maths* supports all levels of mathematical ability in a clear, attractive and challenging manner.

To acquaint yourself with the layout of *Destination Maths,* we suggest you start with the five step tour. Once you become familiar with its layout, you will be better able to locate the *Destination Maths* tutorials that correspond with the lessons in **Mathemagic**.

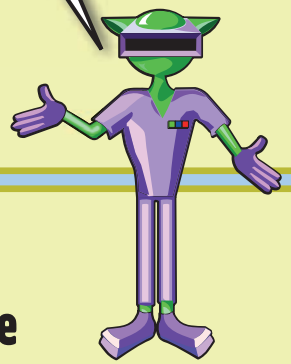
Quick Start Guide . . .



This manual is targeted primarily at *Destination Maths Course 3* for teachers at 3rd to 6th Class. The previously published manual which covers *Destination Maths Course 1* and *Course 2* is intended for teachers from Infants to 2nd Class. Teachers of 3rd Class should consult both manuals as there is much content in Course 2 that supports the 3rd Class curriculum. On pages 7 and 8 of this manual we will outline the sections of *Destination Maths Courses 2 and 3* which link in with **Mathemagic Book 3**.

Quick Start Guide to Destination Maths . . . . .

We start with a 5-step tour of Destination Maths.



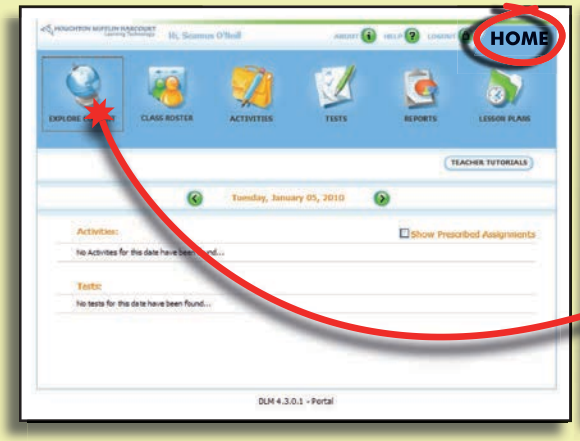
1

www.destinationmaths.ie

Step 1. Login

2 Teacher's Home Page and Explore Content page

This is the **Teacher's Home Page.**



Click the **Explore Content** link.

This is the **Explore Content** page.

Step 2. Launch the Course

Click **Destination Maths Course 3.**

3 Main menu

This is the main menu of **Course 3.**
Course 3 has six tabs across the top.
Each tab opens a Module.

This exit icon brings you back to the **Explore Content** page.

Step 3. Choose a Module

Click the first tab: **Numbers and Number Sense.**

. . and how to link it with Mathemagic

4 Module menu

This module has **2 Units**.
Unit 1. Large and Small Numbers
Unit 2. Numbers as Factors

This door exit icon brings you back to the **Explore Content** page.

Step 4. Choose a Unit

Click the Unit: **Large and Small Numbers.**

5 Unit menu (the Tutorials)

This unit has **3 Tutorials.**
Tutorial 1. Whole Numbers to One Million
Tutorial 2. Ordering and Rounding Whole Numbers
Tutorial 3. Negative Whole Numbers

Step 5. Choose a Tutorial

Click the T-button  to choose the Tutorial: **Whole Numbers to One Million.**

The Quick Start Guide continues on next page with navigation essentials.

Tutorial 1 links with Place Value and **Big Numbers** beginning on page 7 of **Mathemagic 3**, **Mathemagic 4**, **Mathemagic 5** and **Mathemagic 6**. The teacher will know how far into the tutorial to take the children at any class level.

How to navigate a tutorial
in Destination Maths Courses 3 and 4

Navigation Essentials

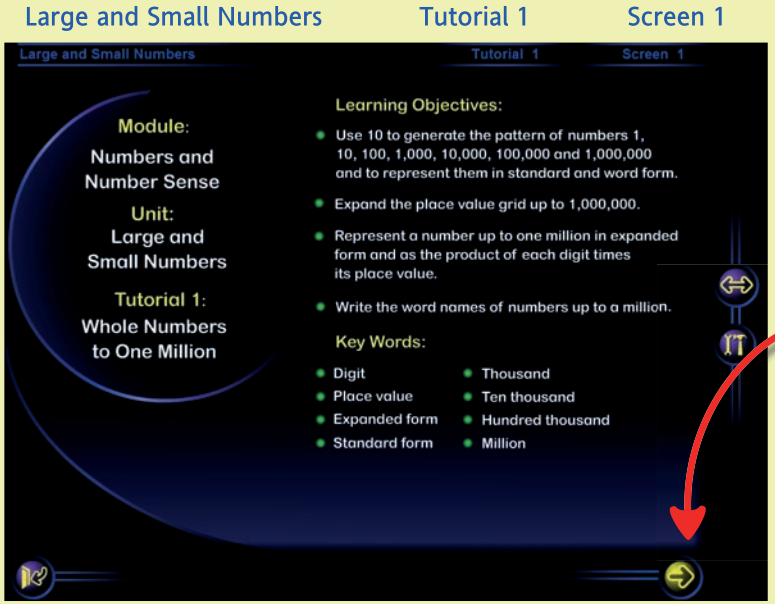
After login . . .

Choose Course 3

Choose the Module
Numbers and Number Sense

Choose the Unit
Large and Small Numbers

Choose the Tutorial
Whole Numbers to One Million



The Learning Objectives Screen

The initial screen sets out the 'Learning Objectives' and 'Key Words' which will be covered in the tutorial. The bullet points give a useful overview of the tutorial which is divided into *screens* or lessons. Screens can be easily accessed through the **navigation panel** which is pictured and explained below.

Starting a Tutorial

Click the 'continue' button at the bottom right of the screen to start and work through a tutorial.

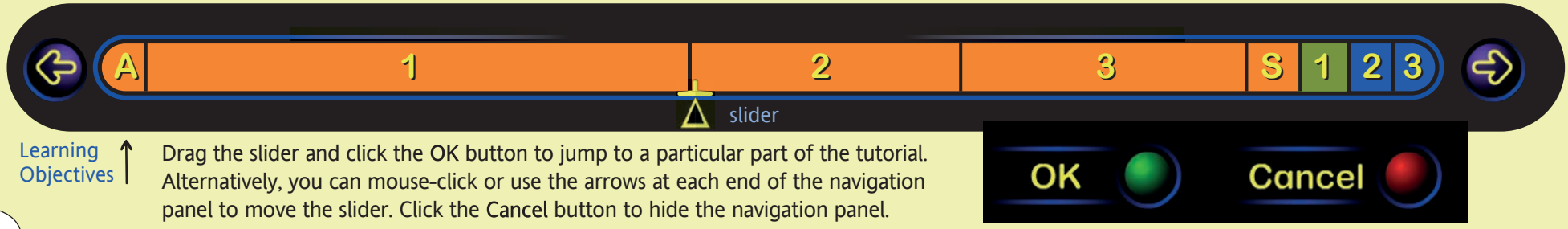
Bringing up the Navigation Panel

To bring up the navigation panel click the button with the double arrow on the right of the screen.

When you click this button you find a glossary of the Maths terms used in the Course as well as a calculator.

The Navigation Panel

The navigation panel makes it easy to locate a specific screen in the tutorial.



Drag the slider and click the **OK** button to jump to a particular part of the tutorial. Alternatively, you can mouse-click or use the arrows at each end of the navigation panel to move the slider. Click the **Cancel** button to hide the navigation panel.

. . . and use the Navigation Panel

to link-in Mathemagic

The Tutorial

" . . We know that 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 are the first ten whole numbers . . "

". . We call the symbols from zero to nine 'digits'. That means that 10 is the first two-digit whole number. . "

"What else, do you think is true about the number ten?" (Click on your answers)

"You're right. Ten is not equal to one plus zero. Ten is equal to the sum of ten ones and ten is equal to ten times one."

". . . a dinosaur is about ten times the size of Dijit . . . "

Frame 1

Frame 2

Frame 3

Frame 4

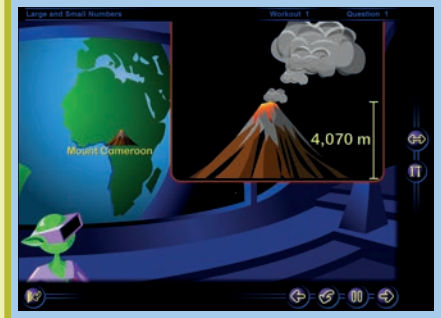
Frame 5

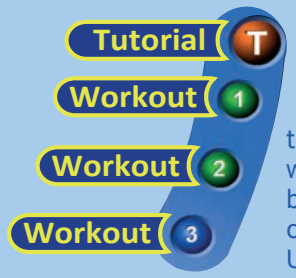
The example above shows some of the narration and the first five *frames* of tutorial 1. In all, there are almost eighty frames spread across the three screens of this tutorial, forty-two frames in Screen 1 alone. The navigation buttons make it easy to go back to the previous frame, to repeat the current frame, to pause the tutorial or to advance quickly to the next frame.

previous frame | repeat current frame | pause tutorial | next frame

There are many interactive situations in each tutorial where the student is asked to **click** or **drag** in response to a prompt or question (*e.g.* frame 3 above) or to type **input** at the keyboard.

The Workouts





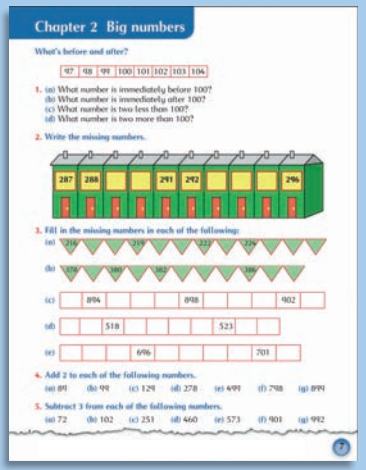
the workout buttons on the Unit Menu

As well as the tutorials there are 'workouts' to test, challenge or consolidate the students' comprehension of the topic which has been covered. Each workout is set in a new and interesting context. The workout buttons can be found on the unit menu. The workouts can also be accessed direct from the navigation panel.

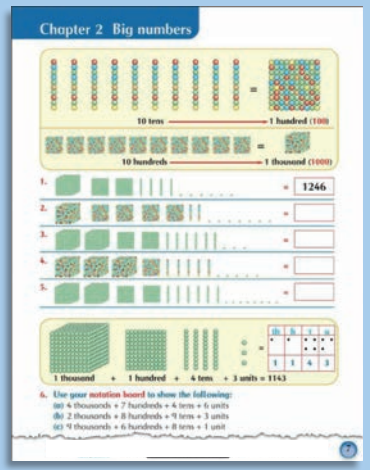
How Mathemagic Links-in

Destination Maths

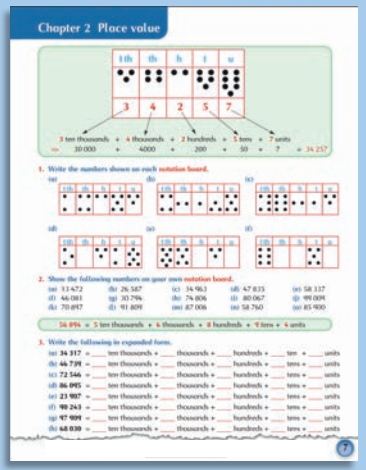
A tutorial in *Destination Maths* will cover several strand units of the Irish Revised Primary Maths Curriculum and span the content of several pages of **Mathemagic.** Sometimes a tutorial will straddle the unit objectives of two or more class levels. Teachers will want to break a tutorial into shorter teaching units to link-in pages of the text book with *Destination Maths*. The slider in the navigation panel can be used to pinpoint which frames begin or end a tutorial session.



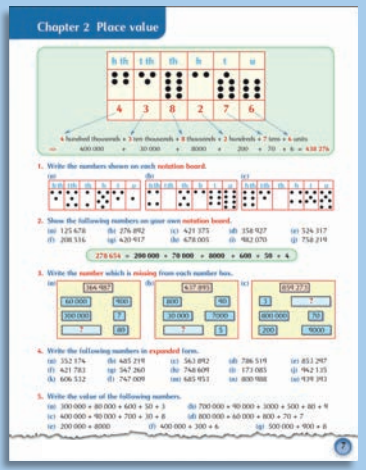
Book 3: pages 7 - 12



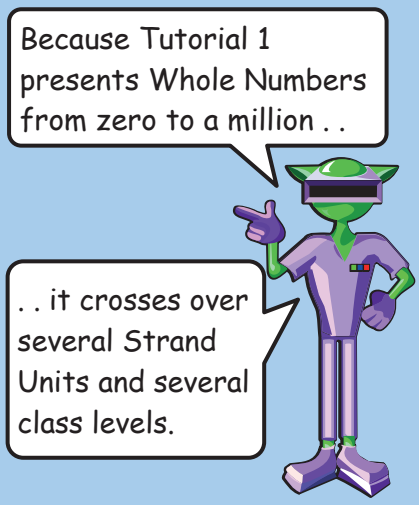
Book 4: pages 7 - 10



Book 5: pages 7 - 10



Book 6: pages 7 - 12



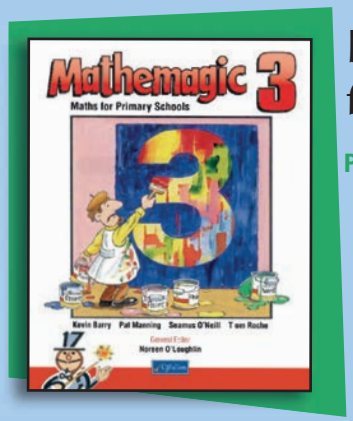
Tutorial 1

Screen 1 generates the pattern of numbers 1, 10, 100, 1,000, 10,000, 100,000 and 1,000,000 and shows how to represent them in standard and word form. The teacher can use the slider and navigation buttons to mark the frames that fall within the curriculum objectives of the class.

Screen 2 introduces the Place Value chart from 2-digit to 7-digit numbers and shows how to represent big numbers in their expanded form.

Screen 3 develops the use of the Place Value chart up to one million and shows how to write the word names for large numbers.

There are frames in each screen that support the maths programme at each class level. Using the slider, it is possible to link the frames with one of the **Mathemagic** books for 3rd, 4th, 5th or 6th Class.



Number Strand Units for 3rd Class

Place Value: The child should be enabled to . .

- explore and identify place value in whole numbers to 999
- read, write and order three-digit numbers
- round whole numbers to the nearest ten or hundred
- explore and identify place value in decimal numbers to one place of decimals

Addition and subtraction: The child should be enabled to . .

- add and subtract, without and with renaming within 999
- know and recall addition and subtraction facts
- solve word problems involving addition and subtraction

Multiplication: The child should be enabled to . .

- develop an understanding of multiplication in repeated addition and vice versa
- explore, understand and apply the zero, commutative and distributive properties of multiplication

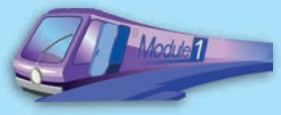
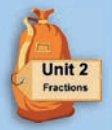
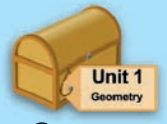
Division: The child should be enabled to . .

- develop an understanding of division as sharing and repeated subtraction, with and without remainders
- develop and/or recall division facts within 100

continued

Please consult the Quick Start Guide for Infants to 2nd Class pages 8 - 9

Destination Maths Course 2

		Strand Units	Links with Mathemagic Book 3
 Module 1: Unit 1	 Numbers to 999 — Session 3	Place Value: H T & O (to 999)	pages 7, 8
	Session 4	Expanded form of H T & O (max 699)	pages 12, 15
	Session 5	Comparing numbers (max 599)	pages 9, 10, 11
 Module 2: Unit 2	 Fractions — Session 1	Fractions: of a Whole, of a Group	pages 47, 48, 50, 51, 52, 93, 94, 95, 96 Reminder: Thirds and fifths are not on the curriculum for 3rd Class.
Module 3: Unit 1	 Geometry — Session 1	Area	pages 87, 88, 89, 90
	Session 2	Capacity & Volume	pages 115, 116, 117, 118
 Module 3: Unit 2	 Measurement — Session 1	Time	pages 83, 84, 85, 86, 151, 152, 153, 154
	Session 2	Money: 1, 5, 10, 20, 50c and Eurocoins	pages 139, 140, 141, 142, 143

Division (3rd class) continued

- divide a one-digit or two-digit number by a one-digit number, without and with remainders
- solve and complete practical tasks and problems involving division of whole numbers

Fractions: The child should be enabled to . .

- identify fractions and equivalent forms of fractions with denominations of 2, 4, 8, 10
- compare and order fractions and position on the number line
- calculate a fraction of a set
- calculate a unit fraction of a number, given a unit fraction of the number
- solve and complete practical tasks and problems

Decimals: The child should be enabled to . .

- identify tenths and express in decimal form
- order decimals on the number line

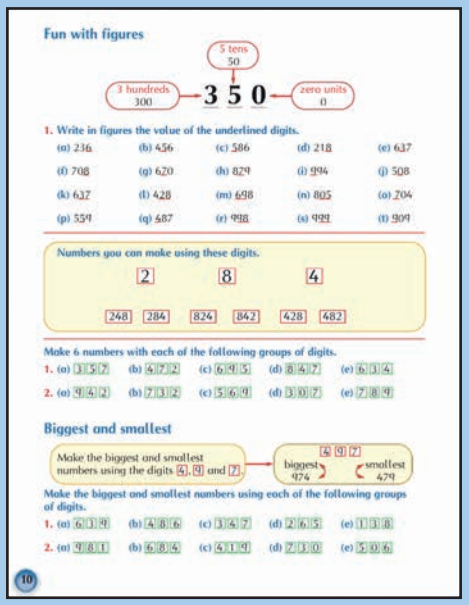
Algebra strand units for **Third Class**:

Number patterns and sequences: The child should be enabled to . .

- explore, recognise and record patterns 0 - 999
- explore, extend and describe sequences
- use patterns as an aid for memorisation of number facts

Number sentences: The child should be enabled to . .

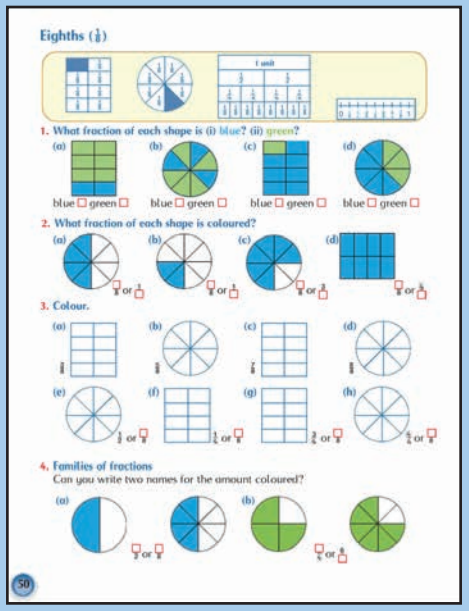
- translate an addition or subtraction number sentence with a frame into a word sentence
- solve one-step number sentences



Most of the teaching objectives of Destination Maths Course 3 extend beyond the 3rd Class curriculum. The following table points to the parts of Course 3, Modules A, B and C that can be easily linked with pages of Mathemagic Book 3.

Destination Maths Course 3*

Strand Units	Mathemagic Book 3
Module A Numbers and Number Sense — Tutorial 1 (part) **Unit 1: Large and Small Numbers** Place Value: H T & O (to 999)	pages 7, 8, 9, 10, 11, 12
Module B Operations with Numbers — Tutorial 1 (part) **Unit 1: Whole Number Sums** Addition of 3-digit numbers to 999	pages 13, 14
Module C Fractions — Tutorial 1 (part) **Unit 1: Proper Fractions** Fractions on a fraction wall	pages 47, 50



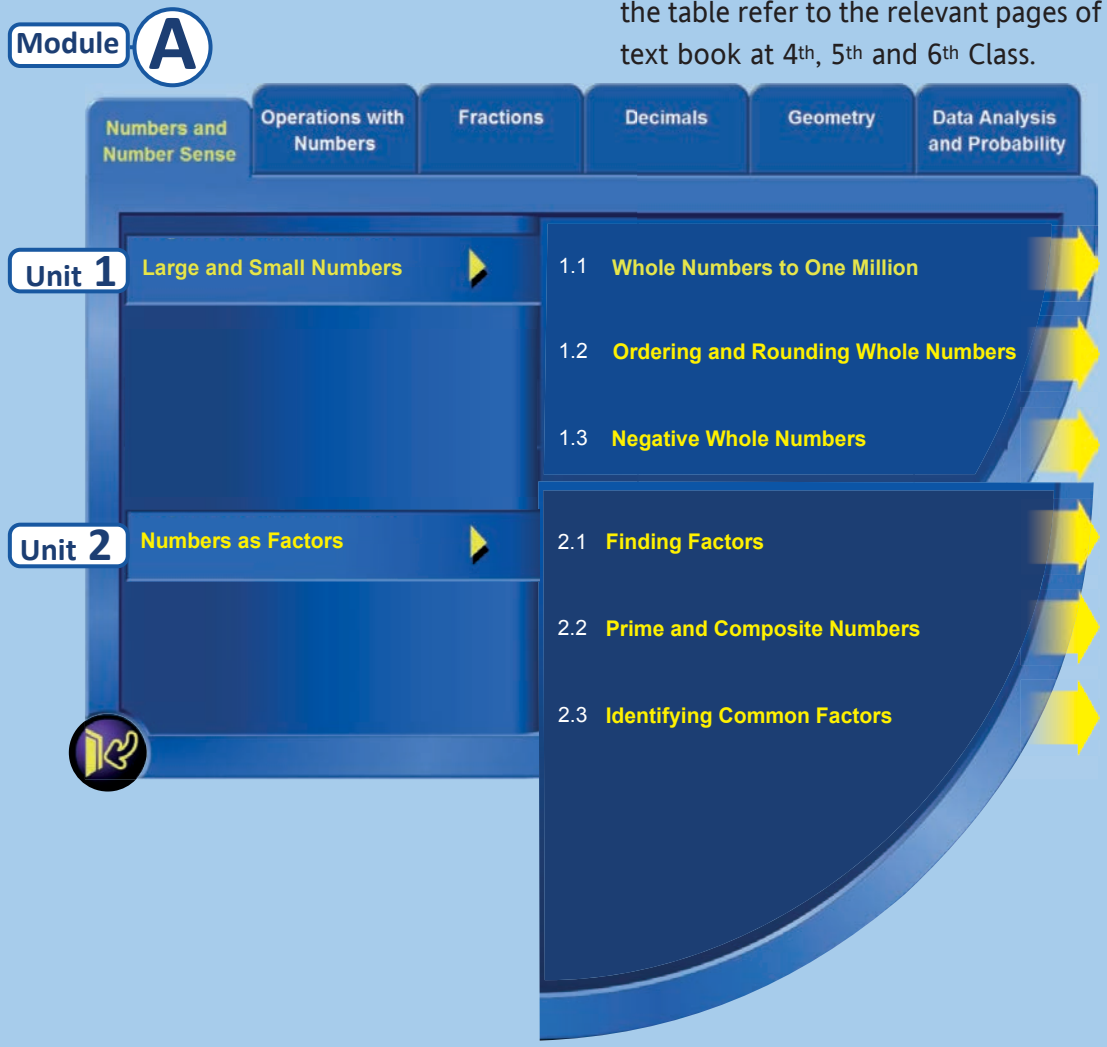
*The teacher might use the remaining parts of these tutorials for the purpose of extension and enrichment.

Destination Maths Course 3 for 4th, 5th and 6th Class

Destination Maths Course 3 consists of 6 modules:

A. Number and Number Sense
B. Operations with Numbers
C. Fractions
D. Decimals
E. Geometry
F. Data Analysis and Probability

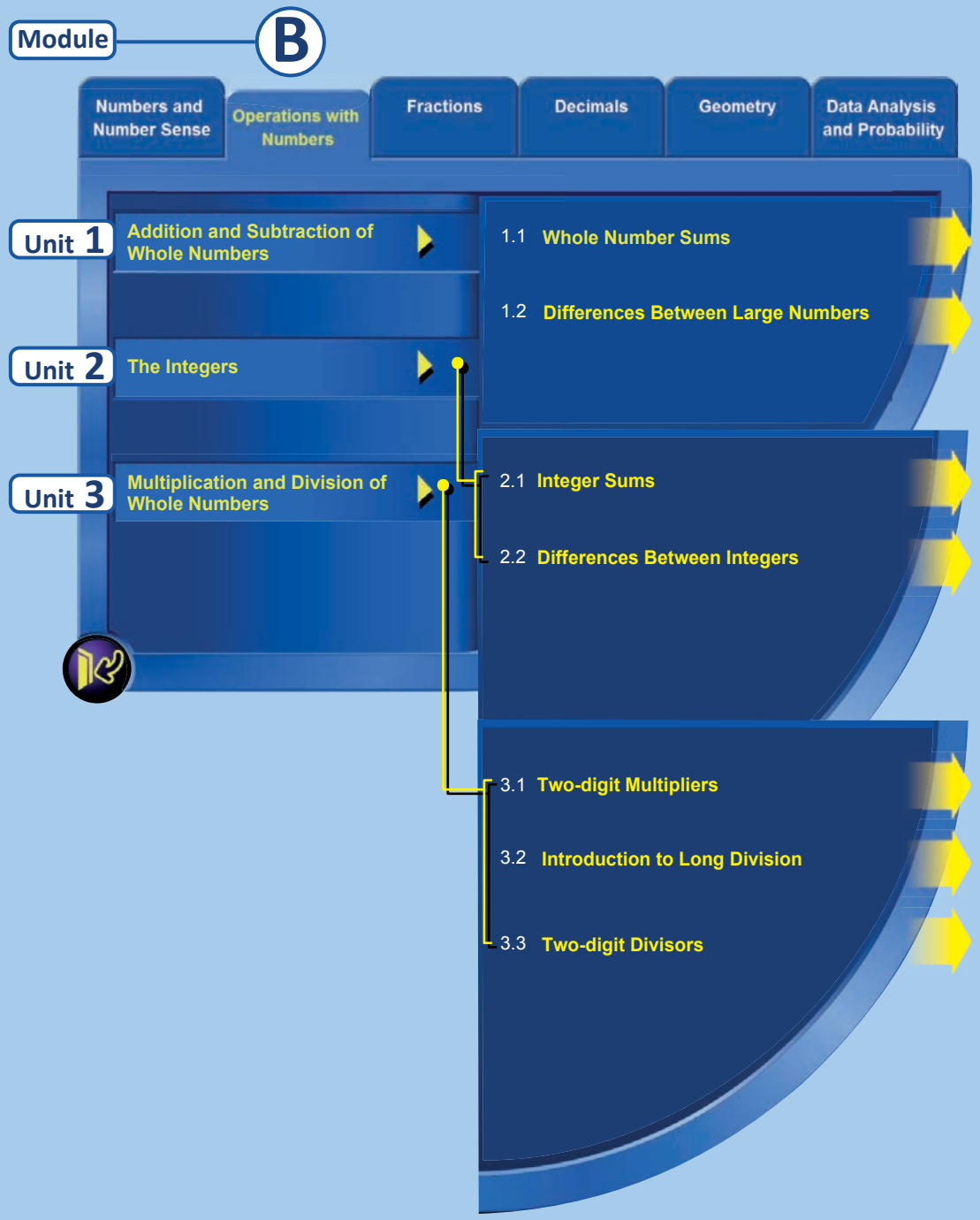
Click a tab to open a module. Module A is pictured showing its two units and six tutorials. The numbers in the table refer to the relevant pages of the Mathemagic text book at 4th, 5th and 6th Class.



4th Class Mathemagic 4	5th Class Mathemagic 5	6th Class Mathemagic 6
7, 8, 9	7, 8	7, 8
--	9, 10	9, 10, 11
--	127, 128, 129	125, 126
--	70, 71, 122, 123	67, 68, 69, 70
--	70, 71, 72, 73, 74	--
--	--	67, 68, 69, 70

Example: Mod. A - 1.2: Screen 1

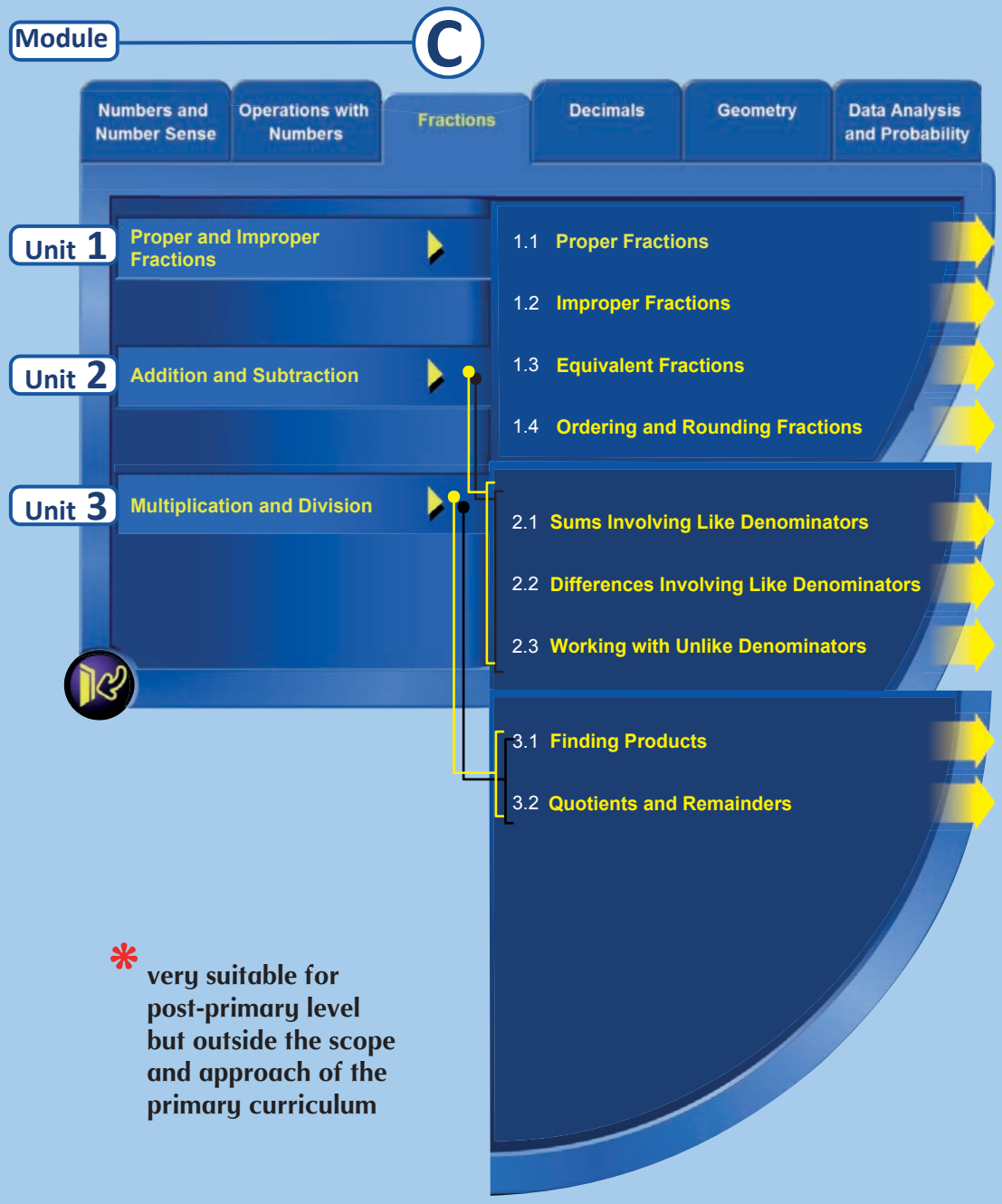
Rounding and Ordering the size of population in the states of Utah, Colorado, Arizona and New Mexico



4th Class Mathemagic 4	5th Class Mathemagic 5	6th Class Mathemagic 6
11	11	--
12	12, 13, 14, 15	--
--	127, 128, 129	125, 126
--	--	127, 128
24, 25, 87, 88, 107, 108, 109	--	--
104, 105, 106	--	--
--	31, 32, 33, 34, 35, 36	--

Example: Mod. B - 1.2
Screen 2

Differences between the height of the world's highest mountains, Mt. Everest and K-2

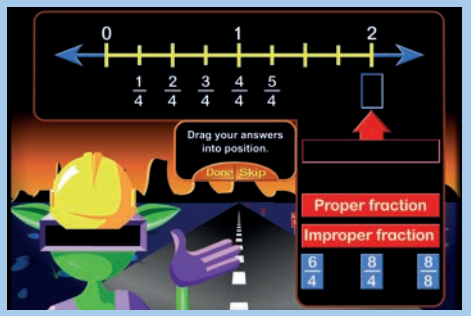


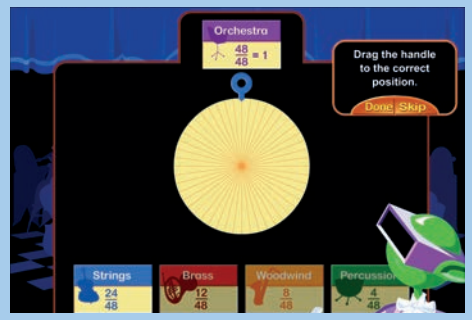
4th Class Mathemagic 4	5th Class Mathemagic 5	6th Class Mathemagic 6
41	37	--
--	39	--
--	40	--
--	--	33, 34, 35
--	47, 48	--
--	48	--
--	49, 50	36
--	--	37
--	--	43 *

* very suitable for post-primary level but outside the scope and approach of the primary curriculum

Example 1: Mod. C - 1.2 Screen 2

"How would you label this point on a number line? Drag your answer into position."





Example 2: Mod. C - 1.3 Screen 1

"How would represent the number of musicians in the strings section of the orchestra? Drag the handle."

Module D

Numbers and Number Sense | Operations with Numbers | Fractions | Decimals | Geometry | Data Analysis and Probability

Unit 1 Introduction
- 1.1 Tenths, Hundredths, Thousandths
- 1.2 Ordering and Rounding

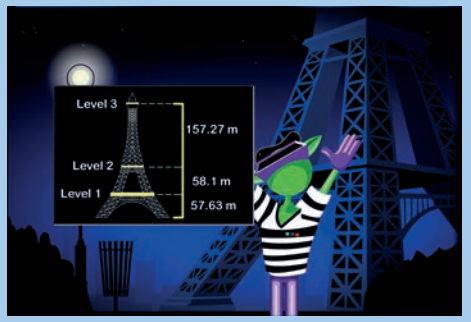
Unit 2 Addition and Subtraction
- 1.3 Ratios, Decimals and Percents
- 2.1 Adding Decimals
- 2.2 Subtracting Decimals

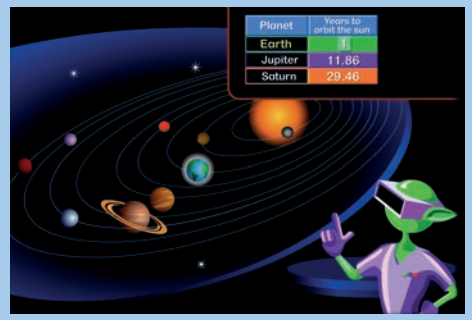
Unit 3 Multiplication and Division
- 3.1 Multiplying Decimals
- 3.2 Dividing Decimals by Whole Numbers

4th Class Mathemagic 4	5th Class Mathemagic 5	6th Class Mathemagic 6
57, 58	57, 58, 59, 60	--
--	--	58
--	--	87, 88, 89, 90
78, 79	61	--
79	61	--
139	--	73, 74, 75, 76
140	85, 86, 87, 88	--

Example 1: Mod. D - 2.1 Screen 2

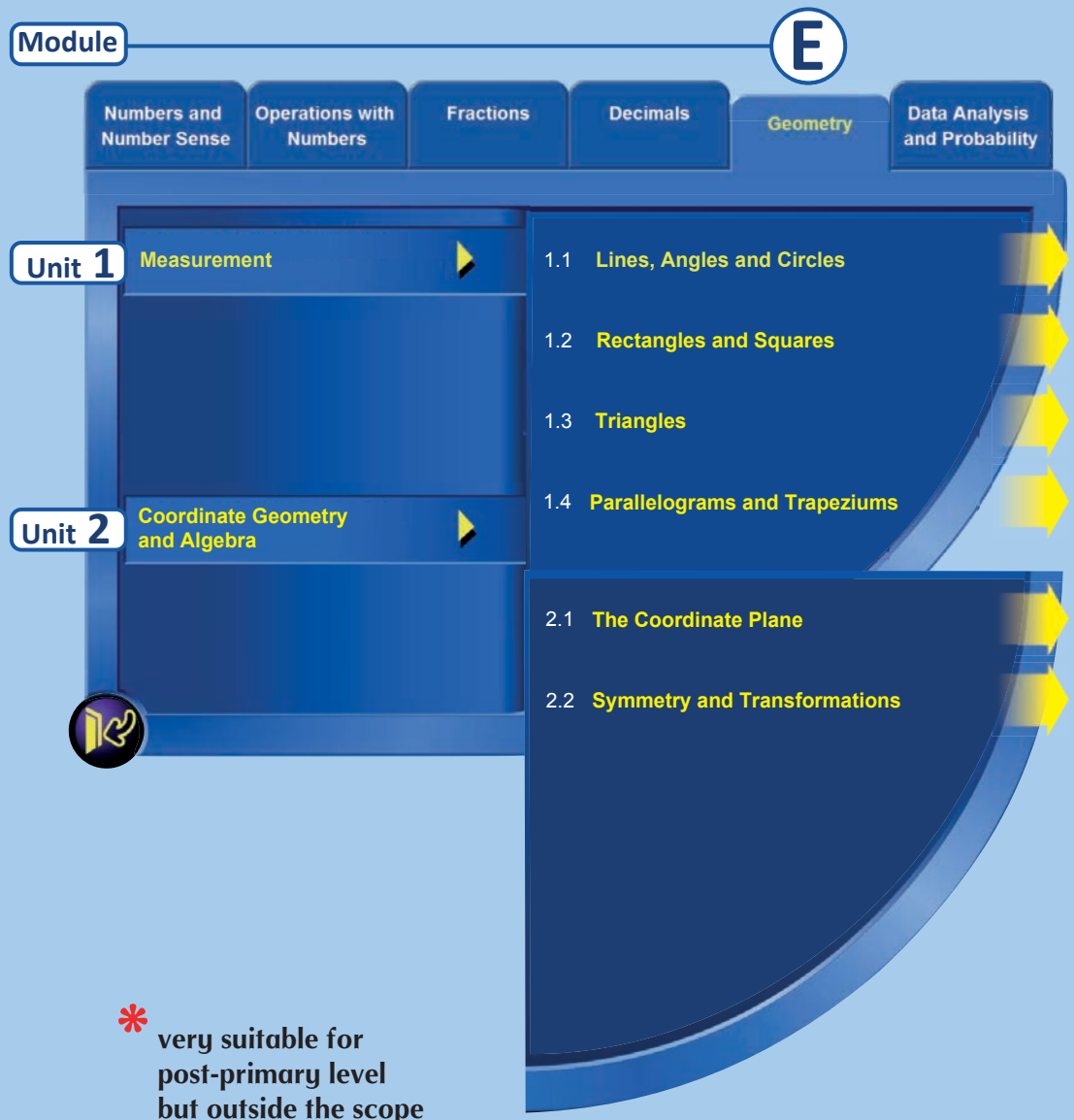
Finding the height of the top viewing level of the Eiffel Tower by adding decimals.





Example 1: Mod. D - 2.2 Screen 1

Finding the difference between the number of years it takes Saturn and Jupiter to orbit the Sun.

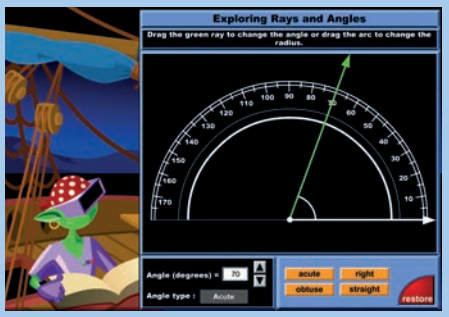


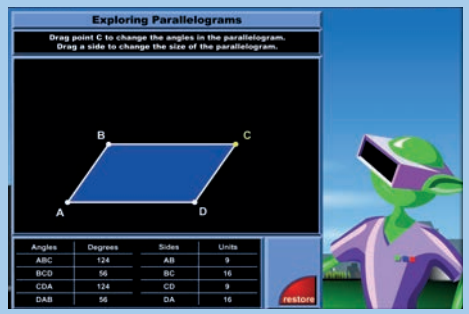
4th Class Mathemagic 4	5th Class Mathemagic 5	6th Class Mathemagic 6
39, 40	53, 54, 55, 56	25, 26, 27, 28
--	--	-- *
--	--	-- *
--	53, 54, 55, 56	25, 26, 27, 28 *
--	--	50, 51, 52 *
--	--	-- *

* very suitable for post-primary level but outside the scope and approach of the primary curriculum

Example 1: Mod. E - 1.1: Screen 3

An interactive frame to study angles, degrees and use of a protractor





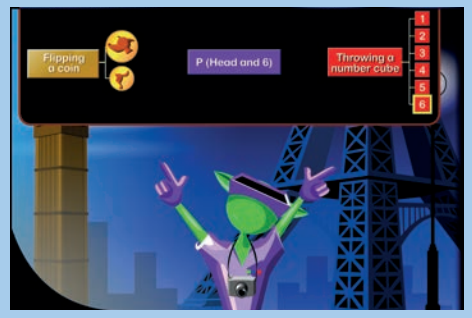
Example 2: Mod. E - 1.4: Screen 1

An interactive frame to study the angles and sides of quadrilaterals

4th Class Mathemagic 4	5th Class Mathemagic 5	6th Class Mathemagic 6
--	--	17, 18, 19, 20 *
167	168, 169	167, 168, 169 *

Example: Mod. F - 1.1: Screen 1

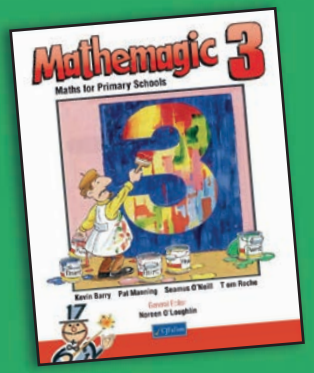
A 'dot-plot' (pictogram) using symbols to represent the heights of all the players on a basketball team.



Example: Mod. F - 1.2: Screen 2

Flipping coins and tossing dice to study the outcomes.

* very suitable for post-primary level but outside the scope and approach of the primary curriculum

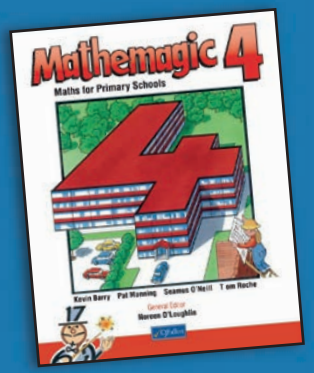


Quick Reference Page for Teachers of Third Class

Destination Maths Courses 2 and 3

textbook pages: concept		Pages in this Booklet: pages:	location of the interactivity in Courses 2 and 3
7 - 11	Place value: Hundreds, Tens & Units: numbers to 999	7	Course 2: Module 1: Unit 1: Session 3
		8	Course 3: Module A: Unit 1: Tutorial 1 (Screen 1)
12, 15	Expanded from of H, T and U: numbers to 699	7	Course 2: Module 1: Unit 1: Session 4
13 - 14	Addition of H, T and U	7	Course 2: Module 1: Unit 1: Session 5
		8	Course 3: Module B: Unit 1: Tutorial 1 (Screen 1)
47 - 48	Fractions on a Fraction Wall: halves, quarters	7	Course 2: Module 2: Unit 2: Session 1
		8	Course 3: Module C: Unit 1: Tutorial 1 (includes extension work) *
50 - 52	Fractions on a Fraction Wall: halves, quarters, eighths	7	Course 2: Module 2: Unit 2: Session 1
		7	Course 3: Module C: Unit 1: Tutorial 1 (includes extension work)
83 - 86	Time	7	Course 2: Module 3: Unit 2: Session 1
87 - 90	Area	7	Course 2: Module 3: Unit 1: Session 1
93 - 96	Fractions on a Fraction Wall: tenths	7	Course 2: Module 2: Unit 2: Session 1
		7	Course 3: Module C: Unit 1: Tutorial 1 (includes extension work)
115 - 118	Capacity & Volume	7	Course 2: Module 3: Unit 1: Session 2
139 - 143	Money	7	Course 2: Module 3: Unit 2: Session 2
151 - 154	Time	7	Course 2: Module 3: Unit 2: Session 1

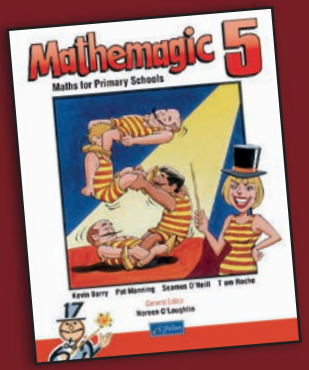
* Note: Thirds and fifths are not on the curriculum for 3rd Class.



Quick Reference Page for Teachers of Fourth Class

Destination Maths Course 3

textbook pages: concept		Pages in this Booklet pages:	location of the interactivity in Course 3
7- 9	Place value Th, H, T & U: numbers to 9999	9	Course 3: Module A: Unit 1: Tutorial 1 (Screen 1)
11	The sum of large numbers: three-digit numbers	10	Course 3: Module B: Unit 1: Tutorial 1 (Screen 2, includes extension work)
12	Differences between large numbers: four-digit numbers	10	Course 3: Module B: Unit 1: Tutorial 2 (Screen 1)
24 - 25	Multiplication of whole numbers: one digit by two digits	10	Course 3: Module B: Unit 3: Tutorial 1 (Screen 1)
39 - 40	Lines: lines, line segments, rays	13	Course 3: Module B: Unit 3: Tutorial 1 (Screen 1)
41	Fractions on a Number line: halves, thirds, quarters	11	Course 3: Module C: Unit 1: Tutorial 1 (Screen 1, includes extension work)
57 - 58	Decimals: tenths, hundredths	12	Course 3: Module D: Unit 1: Tutorial 1 (Screen 1, includes extension work)
78 - 79	Adding decimals: tenths, hundredths	12	Course 3: Module D: Unit 2: Tutorial 1 (Screen 1, includes extension work)
79	Subtracting decimals: tenths, hundredths	12	Course 3: Module D: Unit 2: Tutorial 2 (Screen 1, includes extension work)
87 - 88	Multiplication of whole numbers: two digits by two digits	10	Course 3: Module B: Unit 3: Tutorial 1 (Screen 2)
104 - 106	Introduction to long division	10	Course 3: Module B: Unit 3: Tutorial 2 (Screens 1 and 2)
139	Multiplying decimals: one-digit multipliers	12	Course 3: Module D: Unit 3: Tutorial 1 (Screen 1)
140	Dividing decimals: one-digit divisors	12	Course 3: Module D: Unit 3: Tutorial 2 (Screen 1, includes extension work)
167	Looking at Chance: toss a coin	14	Course 3: Module E: Unit 1: Tutorial 2 (Screen 1, includes extension work)

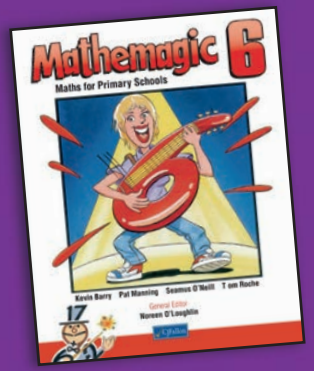


Quick Reference Page for Teachers of Fifth Class

Destination Maths Course 3

textbook pages: concept		Pages in this Booklet: pages:	location of the interactivity in Course 3
7, 8	Place value Th, H, T & U: numbers to 99999	9	Course 3: Module A: Unit 1: Tutorial 1 (includes extension work)
9, 10	Rounding large numbers: numbers to 99999	9	Course 3: Module A: Unit 1: Tutorial 2 (Screen 1, includes extension work)
11	The sum of large numbers: numbers to 99999	10	Course 3: Module B: Unit 1: Tutorial 1 (Screen 2, end section)
12	Differences between large numbers: four-digit numbers	10	Course 3: Module B: Unit 1: Tutorial 2 (Screen 2)
31 - 35	Division: three-digit numbers by two-digit numbers	10	Course 3: Module B: Unit 3: Tutorial 3 (Screens 1 and 2)
37	Proper fractions: the number wall and number line	11	Course 3: Module C: Unit 1: Tutorial 1 (Screens 1 and 2)
39	Improper fractions: top heavy fractions / mixed numbers	11	Course 3: Module C: Unit 1: Tutorial 2 (Screens 1 and 2)
40	Equivalent fractions: different names / same value	11	Course 3: Module C: Unit 1: Tutorial 3 (Screens 1 and 2)
47 - 48	Addition of fractions: with like denominators	11	Course 3: Module C: Unit 2: Tutorial 1 (Screens 1 and 2)
48	Subtraction of fractions: with like denominators	11	Course 3: Module C: Unit 2: Tutorial 2 (Screens 1 and 2)
49, 50	Working with fractions: with unlike denominators	11	Course 3: Module C: Unit 2: Tutorial 3 (Screen 1, includes extension work)
53 - 56	Lines, angles and degrees: measuring degrees	13	Course 3: Module E: Unit 1: Tutorial 1 (Screens 1 and 2, includes extension work)
57 - 60	Decimals: tenths, hundredths, thousandths	12	Course 3: Module D: Unit 1: Tutorial 1 (Screens 1 and 2)
61	Adding decimals: tenths, hundredths, thousandths	12	Course 3: Module D: Unit 2: Tutorial 1 (Screens 1 and 2)
61	Subtracting decimals: tenths, hundredths, thousandths	12	Course 3: Module D: Unit 2: Tutorial 2 (Screens 1 and 2, includes extension work)
70, 71	Factors: finding factors	9	Course 3: Module A: Unit 2: Tutorial 1 (Screens 1 and 2, includes extension work) *
85 - 88	Dividing decimals: divide by whole numbers only	12	Course 3: Module D: Unit 3: Tutorial 2 (Screens 1 and 2, includes extension work)
122, 123	Area: integrated with teaching factors	9	Course 3: Module A: Unit 2: Tutorial 1 (Screens 1 and 2, area integrated with factors) *
127 - 129	Directed numbers: adding signed numbers	10	Course 3: Module A: Unit 1: Tutorial 3 (Screen 1, includes extension work)
168, 169	Looking at Chance: toss a coin, roll a dice	14	Course 3: Module F: Unit 1: Tutorial 2 (Screens 1 and 2, includes extension work)

* Includes some concepts not on the 5th Class curriculum.



Quick Reference Page for Teachers of Sixth Class

Destination Maths Course 3

textbook pages: concept		Pages in this Booklet pages:	location of the interactivity in Course 3
7 - 11	Place value: numbers up to one million	9	Course 3: Module A: Unit 1: Tutorial 1 (Screen 2)
8	Ordering and Rounding: numbers up to one million	9	Course 3: Module A: Unit 1: Tutorial 2 (Screen 2)
17 - 20	Displaying and analysing data: averages	14	Course 3: Module F: Unit 1: Tutorial 1 (Screens 1 and 2, includes extension work) *
25 - 28	Lines, angles and degrees: measuring degrees	13	Course 3: Module E: Unit 1: Tutorial 1 (Screens 1 and 2)
33 - 35	Fractions: ordering and rounding fractions	11	Course 3: Module C: Unit 1: Tutorial 4 (Screens 1 and 2)
36	Fractions: add, subtract with unlike denominators	11	Course 3: Module C: Unit 2: Tutorial 3 (Screens 1, 2 and 3)
37	Fractions: multiplying simple fractions	11	Course 3: Module C: Unit 3: Tutorial 1 (Screens 1 and 2, includes extension work) *
43	Fractions: dividing a whole number by a simple fraction	11	Course 3: Module C: Unit 3: Tutorial 2 (Screen 1) *
50, 51	Introducing co-ordinates	13	Course 3: Module E: Unit 2: Tutorial 1 (Screen 1) *
58	Decimals: rounding decimals	13	Course 3: Module D: Unit 1: Tutorial 2 (Screens 1 and 2)
67 - 70	Factors: finding common factors	9	Course 3: Module A: Unit 2: Tutorial 1 (Screens 1, 2 and 3)
73 - 75	Decimals: multiplying a decimal by a decimal	12	Course 3: Module D: Unit 3: Tutorial 1 (Screens 1 and 2)
87 - 90	Fractions, Decimals and Percentages	12	Course 3: Module D: Unit 1: Tutorial 3 (Screens 1 and 2)
125, 127	Directed numbers: positive and negative numbers	9	Course 3: Module A: Unit 1: Tutorial 3 (Screens 1, 2 and 3)
167 - 169	Looking at Chance: toss a coin, roll a dice	14	Course 3: Module F: Unit 1: Tutorial 2 (Screens 1 and 2, includes extension work) *

* Includes some concepts outside the Irish primary school curriculum.