

TRIAL MATERIAL WORK IN PROGRESS

Differentiated plans for Years 3 & 4

Fractions and decimals

Ian Lowe, MAV Professional Officer, 2008

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PLEASE PROVIDE FEEDBACK TO IAN AT**

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**THIS WILL QUALIFY YOU
FOR AN IMPROVED VERSION
WHEN AVAILABLE**

Materials are recommendations only; suitable substitutions may be made.

MAV materials may be bought from www.mav.vic.edu.au/shop

Download the Curriculum Corporation catalogue from

http://www.curriculum.edu.au/catalogue/downloads/pc2007_pages39-54.pdf

and look at pages 48 and 49.

**For Learning Federation materials (Learning Objects),
check out 'Digital Learning Resources' on your laptop, or download them from the new education
website www.education.vic.gov.au/studentlearning/teachingresources/elearning/digilearn.htm.**

Differentiated plans for Years 3 & 4

Fractions and decimals

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What do we have here?

Fractions and its associated ideas are difficult for children. But they are a major focus for VELS Standard 4. So extra effort is required to create a rich learning environment that can help children to understand and to achieve at their own level. This combined topic is given 4 to 5 weeks, depending on interruptions.

This set of units – one per semester for Years 3 & 4 – could achieve this goal. It matches the specifications for VELS, but recognises that there will be a wide spread of achievement in each class. So children are differentiated into working groups by need, for some of the time only. There may be more than one group at any Standard, or some Standards may need to be combined. Plan a stimulating set of activities for homework review, such as Interactive Learning spreadsheets.

It also balances the *toolbox* requirements – concepts and skills – with the need to learn to apply those tools in *problem solving* situations. Hence there are whole class lessons (from Maths300) punctuating the toolbox development, at regular intervals. These are on the same topic, but do not attempt to mesh with the work done by each ‘standard’ group. They ensure that *Working Mathematically* is always part of the learning process, integrated into each dimension.

The mix of activities will provide a stimulating and rich learning environment, with students learning from and helping one another. Connections between topics will be made and reinforced, and the variety of learning styles will accommodate learners with different needs.

How does it work?

In Years 3 and 4 it is assumed that children will be working from Standard 2 to Standard 4. Probably most will be working on Standard 3. **Because there is little specifically on ‘Fractions’ in Standard 2, the emphasis at that level is on building whole number competence and linking the operations of multiplication with division, and division with fraction ideas.**

At regular intervals whole class lessons are taught to ‘mixed ability’ groups.

Around these are cycles of a fixed pattern of lessons. In Years 3 and 4, the cycle has three parts: teaching, computer use, worksheet or games.

On any day all are taking place in the same classroom, so only a fraction of the resources are needed. But the cycle also works for the students: they follow the pattern – teaching, computer practice, worksheet, (problem solving). As a consequence, teaching is to a different group each day in a regular pattern. Teaching will be for a concentrated 20 minutes or so, and then the teacher will supervise the rest of the class. Instructions on the board will inform the other groups of what they are to do. Encourage students to help each other.

What resources are needed?

Access to 4 or 5 computers daily is expected. Computer pods or laptop trolleys might be the best solution. Membership of Maths300 is a requirement; many schools have membership – here is how to use it.

The pages in the resources are listed for each day’s lesson, but are summarised here. Sources are: MAV (Mathematical Association of Victoria), CC (Curriculum Corporation), LF (Learning Federation).

- *Teaching*: Guidelines in Number (MAV), Maths Continuum (DE&T), People count (MAV)

No textbooks are listed, but use them as required if you wish.

- *Computer*: Interactive Learning (MAV), Learning Objects (LF)

- *Problem solving*: Problem Solving Task Centre (CC), Maths300 (MAV or CC)

How could it be adapted to different situations?

There is no expectation that lessons are sequential. Blocks of time without follow up lead to memory loss. If your class does not have the range predicted, or you cannot manage three groups, you should adapt by ignoring columns. You may substitute other learning tasks at any time. If you run out of time, leave stuff out. In this rich environment you will be surprised how much is learned outside the ‘planned’ activities.

How do I assess the learning?

Your observations, digital photographs and copies of children’s work will be more useful than any external ‘test’. Above all, if children have not all learned the same things, they should not attempt the same ‘test’.

Year 3 Semester 1 Fractions and decimals

Day	Yr 3 sem 1: Towards Std 2	Towards Std 3	Towards Std 4
1	Maths300 #176 Counting machines 1/2		
2	<p style="text-align: center;">Teach</p> <p style="text-align: center;">Counting by 1s up or down starting under 100</p> <p style="text-align: center;">Guidelines in Number p7-8, 15-16,</p> <p style="text-align: center;">Continuum 1.0 Counting groups of up to 20 objects, 1.25 Counting with two digit numbers</p> <p style="text-align: center;">People count #2</p>	<p style="text-align: center;">Worksheet / hands-on</p> <p style="text-align: center;">Active Learning 1 (Number) F2 Fractions of things,</p>	<p style="text-align: center;">Computer</p> <p style="text-align: center;">Interactive Learning Fraction bars and pies, Fractions up to 1, Fractions of an amount, Rod fractions, Mixed numbers, Improper fractions, Skip count fractions, Missing fractions</p> <p style="text-align: center;">Learning objects Design briefs, Fraction fiddle, Dynamic tools</p>
3	<p style="text-align: center;">Computer</p> <p style="text-align: center;">Interactive Learning Adding to 20, Adding single digits, Subtract from 20, Skip count to 140, Grid patterns,</p> <p style="text-align: center;">Learning objects Wishball, The number partner, Dynamic tools, Fraction fiddle, Cassowary fractions</p>	<p style="text-align: center;">Teach</p> <p style="text-align: center;">Basic ideas of denominator and numerator</p> <p style="text-align: center;">Guidelines in Number p37-39, 59</p> <p style="text-align: center;">Continuum 3.25 Fraction wall</p> <p style="text-align: center;">People count #18</p> <p style="text-align: center;">Active Learning 1 (Number) F1 Fraction circles</p>	<p style="text-align: center;">Worksheet / hands-on</p> <p style="text-align: center;">Active Learning 1 (Number) F1 Fraction circles</p> <p style="text-align: center;">Active Learning 2 (Number) N5 Fractions</p>
4	<p style="text-align: center;">Problem Solving Task Centre</p> <p style="text-align: center;"><i>Students work on one in pairs.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Row points, Soft drink crates, Truth tiles, Truth tiles 2, Which floor? Window frames</p>	<p style="text-align: center;">Computer</p> <p style="text-align: center;">Interactive Learning Fraction bars and pies, Fractions up to 1,</p> <p style="text-align: center;">Learning objects Dynamic tools, Fraction fiddle, Cassowary fractions</p> <p style="text-align: center;"><u>standards.nctm.org/document/lexamples/index.htm</u></p> <p style="text-align: center;">Playing Fraction Tracks</p>	<p style="text-align: center;">Teach basic fractions – denominator, numerator, mixed & improper</p> <p style="text-align: center;">Guidelines in Number p</p> <p style="text-align: center;">Continuum 3.25 Fraction wall</p> <p style="text-align: center;">People count #18, 19</p> <p style="text-align: center;">Active Learning 2 (Number) N14 Maths@work: Using fractions</p>
5	Maths300 #176 Counting machines 2/2		
6	<p style="text-align: center;">Teach</p> <p style="text-align: center;">Ordering sets of numbers up to 20</p> <p style="text-align: center;">Guidelines in Number p9, 17-18</p> <p style="text-align: center;">People count #2</p>	<p style="text-align: center;">Mixed/improper Worksheet/games</p> <p style="text-align: center;">Active Learning 2 (Number) N14 Maths@work: Using fractions</p>	<p style="text-align: center;">Computer</p> <p style="text-align: center;">Interactive Learning Fractions of dollars, Fractions of time, Fractions of numbers, Fractions of money</p> <p style="text-align: center;">Learning objects Design briefs, Fraction fiddle, Dynamic tools, Cassowary fractions</p>
7	<p style="text-align: center;">Computer</p> <p style="text-align: center;">Interactive Learning Adding to 20, Adding single digits, Subtract from 20, Skip count to 140, Grid patterns</p> <p style="text-align: center;">Learning objects</p>	<p style="text-align: center;">Teach</p> <p style="text-align: center;">Mixed numbers & improper fractions</p> <p style="text-align: center;">Guidelines in Number p60</p>	<p style="text-align: center;">Worksheet / hands-on</p> <p style="text-align: center;">Active Learning 1 (Number) F3 Fraction rally</p>

Day	Yr 3 sem 1: Towards Std 2	Towards Std 3	Towards Std 4
	Wishball, The number partner, Dynamic tools, Fraction fiddle, Cassowary fractions	People count #19	
8	Problem Solving Task Centre See day 4 above	Computer Interactive Learning Fractions of an amount, Rod fractions Learning objects Design briefs, Fraction fiddle, Cassowary fractions, Dynamic tools	Teach Whole number of fractions, Fractions of whole numbers Guidelines in Number p121 Continuum 3.5 Activities 1, 2 People count #20
9	Maths300 #17 Eric the sheep 1/2		
10	Teach Equal sharing of up to 20 items Guidelines in Number p13 Continuum 2.25 Early division ideas People count #7	Worksheet/games	Computer Interactive Learning Equal circle fractions, Equal square fractions, Equal line fractions, Equal block fractions, Clock fractions, Graph fractions, Missing fractions Learning objects Design briefs, Fraction fiddle, Cassowary fractions, Dynamic tools
11	Computer Interactive Learning Groups of (small), Groups of, Dividing up to 100 Learning objects Wishball	Teach Fractions of whole numbers Guidelines in Number p59, 60 Continuum 3.25 Fraction wall People count #20	Worksheet / hands-on Active Learning 1 (Number) F2 Fractions of things
12	Problem Solving Task Centre See day 4 above	Computer Interactive Learning Mixed numbers, Improper fractions Learning objects Design briefs, Fraction fiddle, Cassowary fractions, Dynamic tools	Teach Equivalent fractions Continuum 3.5 Activity 3 People count #23
13	Maths300 #17 Eric the sheep 2/2		
14	Teach equal sharing of up to 30 items Guidelines in Number p13 Continuum 2.25 Early division ideas People count #7	Worksheet/games Learning objects N14 Maths@work: Using fractions	Computer Interactive Learning Skip count fractions Learning objects Design briefs, Fraction fiddle, Cassowary fractions, Dynamic tools
15	Computer Interactive Learning Groups of (small), Groups of, Dividing up to 100 Learning objects Wishball	Teach Mixed numbers Guidelines in Number p121 People count #19	Worksheet / hands-on Active Learning 1 (Number) F3 Fraction rally

Day	Yr 3 sem 1: Towards Std 2	Towards Std 3	Towards Std 4
16	Problem Solving Task Centre See day 4 above	Computer Interactive Learning Mixed numbers, Improper fractions Learning objects Design briefs, Fraction fiddle, Cassowary fractions, Dynamic tools	Teach Equivalent fractions including tenths & hundredths People count #23

Year 3 Semester 2 Fractions and decimals

Day	Yr 3 sem 2: Towards Std2	Towards Std 3	Towards Std 4
1	Maths300 #37 Spiders & ants 1/2		
2	Teach Skip counting by 2s, 5s and 10s (relate to clock and money) Guidelines in Number p7, 15, 31 Continuum 2.0 Skip counting People count #6	Problem Solving Task Centre <i>Students work on one in pairs.</i> Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Rectangle fractions, Row points, Soft drink crates, Truth tiles, Truth tiles 2, What's it worth? Which floor? Window frames	Computer Interactive Learning Skip count decimals, Spending money, Subtracting money, Estimating decimals, Ordering decimals, Reading a scale Learning objects Design briefs, Fraction fiddle, Dynamic tools
3	Computer Interactive Learning Skip count to 140, Skip count to 9999, Grid patterns, Adding to 100 Learning objects Wishball	Teach Tenths, hundredths, order Guidelines in Number p61, 73, 83, 103 People count #13	Add & subtract fractions Worksheet / games
4	Problem Solving Task Centre <i>Students work on one in pairs.</i> Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Row points, Soft drink crates, Truth tiles, Truth tiles 2, Which floor? Window frames	Computer Interactive Learning Money by 10 or 100, 10 or 100 times what? Learning objects Design briefs, Fraction fiddle, Dynamic tools	Teach Order of decimals, simple fractions to decimal conversions Guidelines in Number p108, 112, 113, 118 Continuum 4.0 Activities 1, 2, 3 People count #24
5	Maths300 #37 Spiders & ants 2/2		
6	Teach Doubling and halving of small quantities Guidelines in Number p13 Continuum 2.25 Early division ideas	Problem Solving Task Centre See day 2 above	Computer Interactive Learning Powers of 10(x), Powers of 10 (+), Estimating decimals, Fractions of a dollar, Guitar fractions Learning objects Decimaster

Day	Yr 3 sem 2: Towards Std2	Towards Std 3	Towards Std 4
	People count #6, 7		
7	<p>Computer</p> <p>Interactive Learning Finding half, Groups of (small), Groups of, Missing numbers</p> <p>Learning objects Wishball</p>	<p>Teach</p> <p>Quantities of fractions</p> <p>Guidelines in Number p121</p> <p>Fractions of quantities</p> <p>People count #20</p>	<p>Problem Solving Task Centre</p> <p><i>Students work on one in pairs.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Rectangle fractions, Row points, Soft drink crates, Truth tiles, Truth tiles 2, What's it worth? Which floor? Window frames</p>
8	<p>Problem Solving Task Centre</p> <p>See day 4 above</p>	<p>Computer</p> <p>Interactive Learning Decimal counting, Fractions of dollars, Fractions of time</p> <p>Learning objects Design briefs, Fraction fiddle, Dynamic tools</p>	<p>Teach</p> <p>Add and subtract decimals</p> <p>Guidelines in Number p176, 177</p> <p>Continuum 4.0 Activity 4</p> <p>People count #13</p>
9	Maths300 #156 Chart strategies 1/2		
10	<p>Teach</p> <p>Half of suitable geometric shapes</p> <p>Guidelines in Number p10, 19</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #18</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning Fractions of dollars, Fractions of time, Fractions of numbers, Fractions of money</p> <p>Learning objects Decimaster</p>
11	<p>Computer</p> <p>Interactive Learning Finding half</p> <p>Learning objects Fraction fiddle</p>	<p>Teach</p> <p>Add decimals</p> <p>Guidelines in Number p108, 109,112-114, 127-128</p> <p>People count #13</p>	<p>Problem Solving Task Centre</p> <p>See day 7 above</p>
12	<p>Problem Solving Task Centre</p> <p>See day 4 above</p>	<p>Computer</p> <p>Interactive Learning Fractions of money, Fractions of a dollar, Guitar fractions</p> <p>Learning objects Fraction fiddle, Dynamic tools</p>	<p>Teach</p> <p>Whole numbers of decimals</p> <p>Guidelines in Number p133-134, 178-180</p> <p>People count #15</p>
13	Maths300 #156 Chart strategies 2/2		
14	<p>Teach</p> <p>Half and quarter of suitable geometric shapes</p> <p>Guidelines in Number p10, 19</p> <p>Continuum 3.25 Fraction wall</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning Comparing fractions, Fraction triangles, Ones times tenths, Remainders, Dividing with remainders</p> <p>Learning objects</p>

Day	Yr 3 sem 2: Towards Std2	Towards Std 3	Towards Std 4
	People count #18		Decimaster
15	<p>Computer</p> <p>Interactive Learning Finding half</p> <p>Learning objects Fraction fiddle, Cassowary fractions</p>	<p>Teach</p> <p>Subtract decimals</p> <p>Guidelines in Number p126 (rounding), 129-131</p> <p>People count #13</p>	<p>Problem Solving Task Centre</p> <p>See day 7 above</p>
16	<p>Problem Solving Task Centre</p> <p>See day 4 above</p>	<p>Computer</p> <p>Interactive Learning Skip count decimals, Spending money, Subtracting money</p> <p>Learning objects Decimaster</p>	<p>Teach</p> <p>Rounding, estimation</p> <p>Guidelines in Number p94, 140, 174</p> <p>People count #13</p>

Year 4 Semester 1 Fractions and decimals

Day	Yr 4 sem 1: Towards Std 2	Towards Std 3	Towards Std 4
1	Maths300 #77 Rectangle fractions (part 1 only) 1/2		
2	<p>Teach</p> <p>Equal sharing of up to 20 objects, and describe using multiplication, division and fraction language</p> <p>Guidelines in Number p13, 25</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #6, 7, 18</p>	<p>Problem Solving Task Centre</p> <p><i>Students work on one in pairs.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Rectangle fractions, Row points, Soft drink crates, Truth tiles, Truth tiles 2, What's it worth? Which floor? Window frames</p>	<p>Computer</p> <p>Interactive Learning Percentage square, Percentage pie, Percentage line, Percentage fraction, Percentage full, Percentage rectangle,</p>
3	<p>Computer</p> <p>Interactive Learning Groups of (small), Groups of, Dividing up to 100</p> <p>Learning objects Fraction fiddle, Cassowary fractions</p>	<p>Teach dividing by whole numbers – dealing with remainders</p> <p>Guidelines in Number p66, 135-137</p> <p>People count #15</p>	<p>Worksheet / hands-on</p> <p>Active Learning 1 (Number) F13 Estimating percentages,</p>
4	<p>Problem Solving Task Centre</p> <p><i>Students work in pairs on one.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Row points, Soft drink crates, Truth tiles, Truth tiles 2, Which floor? Window frames</p>	<p>Computer</p> <p>Interactive Learning Dividing strips, Sharing dampers, Dividing money, Steps</p> <p>Learning objects The divider</p>	<p>Teach</p> <p>Dividing by whole numbers – dealing with remainders</p> <p>Guidelines in Number p134-137</p> <p>People count #15</p>

Day	Yr 4 sem 1: Towards Std 2	Towards Std 3	Towards Std 4
5	Maths300 #77 Rectangle fractions (part 1 only) 1/2		
6	<p>Teach equal sharing of up to 30 objects, and describe using multiplication, division and fraction language</p> <p>Guidelines in Number p13, 25</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #6, 7, 18</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning</p> <p>Dividing strips, Sharing dampers, Dividing money, Steps, Remainders, Dividing with remainders</p>
7	<p>Computer</p> <p>Interactive Learning</p> <p>Groups of (small), Groups of, Dividing, Dividing up to 100</p> <p>Learning objects</p> <p>Dynamic tools. Fraction fiddle, Cassowary fractions</p>	<p>Teach</p> <p>Equivalent fractions</p> <p>Continuum 3.25 Fraction wall</p> <p>People count #23</p>	<p>Problem Solving Task Centre</p> <p><i>Students work on one in pairs.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Rectangle fractions, Row points, Soft drink crates, Truth tiles, Truth tiles 2, What's it worth? Which floor? Window frames</p>
8	<p>Problem Solving Task Centre</p> <p>See day 4 above</p>	<p>Computer</p> <p>Interactive Learning</p> <p>Equal circle fractions, Equal square fractions</p>	<p>Teach</p> <p>Conversions: fractions, decimals and percentages</p> <p>Guidelines in Number p159</p> <p>People count #14, 21, 24</p>
9	Maths300 #162 Four & twenty blackbirds 1/2		
10	<p>Teach equal sharing of up to 40 objects, and describe using multiplication, division and fraction language</p> <p>Guidelines in Number p13, 25</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #6, 7, 18</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning</p> <p>Equal circle fractions, Equal square fractions, Equal line fractions, Equal block fractions, Clock fractions, Percentage square, Percentage pie, Percentage line, Percentage fraction, Percentage full, Percentage rectangle</p> <p>Learning objects</p> <p>Measures, Squirt, Foul Foodmaker</p>
11	<p>Computer</p> <p>Interactive Learning</p> <p>Groups of (small), Groups of, Dividing, Dividing up to 100</p> <p>Learning objects</p> <p>Dynamic tools, Fraction fiddle, Cassowary fractions</p>	<p>Teach</p> <p>Equivalent fractions and simple conversions to decimals and percentages</p> <p>Guidelines in Number p118</p> <p>People count #14, 21, 24</p>	<p>Worksheet / hands-on</p> <p>Active Learning 1 (Number)</p> <p>F11 Converting decimals to fractions</p> <p>Active Learning 2 (Number)</p> <p>N13 Converting forms of fractions</p>
12	<p>Problem Solving Task</p>	<p>Computer</p> <p>Interactive Learning</p>	<p>Teach</p>

Day	Yr 4 sem 1: Towards Std 2	Towards Std 3	Towards Std 4
	<p>Centre See day 4 above</p>	<p>Equal line fractions, Equal block fractions, Clock fractions</p> <p>Learning objects Measures, Squirt, Foul Foodmaker</p>	<p>Adding and subtracting fractions, with different denominators</p> <p>Guidelines in Number p119-120, 160-162</p> <p>People count #26</p>
13	Maths300 #162 Four & twenty blackbirds 1/2		
14	<p>Teach</p> <p>One half of, and one quarter of, suitable sets</p> <p>Guidelines in Number p19</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #18</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning Add circle fractions, Add strip fractions, Add fractions, Subtract fractions</p>
15	<p>Computer</p> <p>Interactive Learning Finding half, Groups of (small), Groups of, Dividing, Dividing up to 100</p> <p>Learning objects Dynamic tools, Fraction fiddle, Cassowary fractions</p>	<p>Teach</p> <p>Order of fractions, decimals, percentages on a number line</p>	<p>Problem Solving Task Centre</p> <p>See day 7 above</p>
16	<p>Problem Solving Task Centre</p> <p>See day 4 above</p>	<p>Computer</p> <p>Interactive Learning Frac-dec-% online, Skip count fractions, Missing fractions, Comparing fractions, Fraction triangles</p>	<p>Teach</p> <p>Chance as a fraction</p> <p>RIME #32 Equally likely - experiments</p>

Year 4 Semester 2 Fractions and decimals

Day	Yr 4 sem 2: Towards Std 2	Towards Std 3	Towards Std 4
1	Maths300 #51 Hunting for stars 1/2		
2	<p>Teach</p> <p>One half -, one quarter -, and one third - of suitable sets</p> <p>Guidelines in Number p19, 37</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #18</p>	<p>Problem Solving Task Centre</p> <p><i>Students work on one in pairs.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Rectangle fractions, Row points, Soft drink crates, Truth tiles, Truth tiles 2, What's it worth? Which floor? Window frames</p>	<p>Computer</p> <p>Interactive Learning Sharing by ratio</p> <p>Learning objects Measures, Squirt, Foul Foodmaker</p>

Day	Yr 4 sem 2: Towards Std 2	Towards Std 3	Towards Std 4
3	<p>Computer</p> <p>Interactive Learning Finding half, Groups of (small), Groups of, Dividing, Dividing up to 100</p> <p>Learning objects Dynamic tools, Fraction fiddle, Cassowary fractions</p>	<p>Teach</p> <p>Equivalent fractions</p> <p>People count #23</p>	<p>Problem Solving Task Centre</p> <p><i>Students work on one in pairs.</i></p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Rectangle fractions, Row points, Soft drink crates, Truth tiles, Truth tiles 2, What's it worth? Which floor? Window frames</p>
4	<p>Problem Solving Task Centre</p> <p>Challenge, Consecutive sums, Criss-cross numbers, Crosses, Domino trails, Eric the sheep, Guessing colours game, Highest number 1, How many beans? Nim, Row points, Soft drink crates, Truth tiles, Truth tiles 2, Which floor? Window frames</p>	<p>Computer</p> <p>Interactive Learning Frac-dec-% online, Equal circle fractions, Equal square fractions, Equal line fractions, Equal block fractions</p>	<p>Teach</p> <p>Decimals divided by whole numbers</p> <p>Guidelines in Number p134-137</p> <p>People count #15</p>
5	Maths300 #51 Hunting for stars 2/2		
6	<p>Teach</p> <p>Unit fractions of money</p> <p>Guidelines in Number p37-39</p> <p>Continuum 2.75 Early fraction ideas with models</p> <p>People count #20</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning Estimate to divide (by whole numbers)</p> <p>Learning objects Decimaster</p>
7	<p>Computer</p> <p>Interactive Learning Dividing, Money by 10 or 100, 10 or 100 times what?</p> <p>Learning objects Dynamic tools, Fraction fiddle, Cassowary fractions</p>	<p>Teach</p> <p>Adding fractions with different denominators</p> <p>Guidelines in Number p119-120</p> <p>People count #26</p>	<p>Worksheet / hands-on</p> <p>Active Learning 1 (Number) N20 Dividing by whole numbers in your head,</p>
8	<p>Problem Solving Task Centre</p> <p>See day 4 above</p>	<p>Computer</p> <p>Interactive Learning Frac-dec-% online, Add circle fractions, Add strip fractions</p> <p>Learning objects Design briefs</p>	<p>Teach</p> <p>Decimals multiplied by decimals</p> <p>People count #16</p>
9	Maths300 #35 Nine & over 1/2		
10	<p>Teach</p> <p>The size of 'one half' depends on what is 1</p> <p>Guidelines in Number p37-39</p> <p>Continuum 2.75 Early fraction</p>	<p>Problem Solving Task Centre</p> <p>See day 2 above</p>	<p>Computer</p> <p>Interactive Learning Tenths times tenths, Multiply by tenths, Estimate to multiply, Estimate to divide (by whole numbers), Missing decimals</p>

Day	Yr 4 sem 2: Towards Std 2	Towards Std 3	Towards Std 4
	ideas with models People count #20		
11	Computer Interactive Learning Dividing, Money by 10 or 100, 10 or 100 times what? Learning objects Dynamic tools, Fraction fiddle, Cassowary fractions	Teach Subtracting fractions with different denominators Guidelines in Number p119-120 People count #26	Worksheet / hands-on Active Learning 1 (Number) F7 Counter abacus,
12	Problem Solving Task Centre See day 4 above	Computer Interactive Learning Frac-dec-% online, Add circle fractions, Add strip fractions, Add fractions, Subtract fractions	Teach Ratio and equivalent ratios Guidelines in Number p163 People count #18, 22, 28
13	Maths300 #35 Nine & over 2/2		
14	Teach Unit fractions of length, mass, capacity, etc. Guidelines in Number p37-39 Continuum 2.75 Early fraction ideas with models People count #20	Problem Solving Task Centre See day 2 above	Computer Interactive Learning Orange cordial, Proportional cordial Learning objects Measures, Squirt, Foul Foodmaker
15	Computer Interactive Learning Dividing, Fractions of an amount, Rod fractions Learning objects Dynamic tools, Fraction fiddle, Cassowary fractions	Teach Fractions of whole numbers, simple fractions of fractions People count #20, 27	Worksheet / hands-on Active Learning 2 (Number) N16 Maths@work: who uses proportion? N17 Understanding proportions Active Learning 1 (Number) N33 Proportion concept test
16	Problem Solving Task Centre See day 4 above	Computer Interactive Learning Frac-dec-% online, Add circle fractions, Add strip fractions, Add fractions, Subtract fractions,	Teach Ratio and equivalent ratios Guidelines in Number p163 People count #18, 22, 28