

TRIAL MATERIAL WORK IN PROGRESS

Differentiated plans for Years 7 & 8 for Chance & Data

Ian Lowe, MAV Professional Officer, 2007

IF YOU USE ANY OF THIS
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 7 & 8 Chance & Data

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Chance and Data is linked to Measurement only for reporting; it is a separate strand of content. A rich learning environment is needed that can help children to understand and to achieve at their own level. This topic can only be given 3 weeks per semester in Years 7 and 8: Data in semester 1 and Chance in semester 2.

This set of units – one per semester for Years 7 & 8 – 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 (often from Maths300 or RIME) 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 7 and 8 the spread will be from Standard 3 up to 6, with the majority working towards Standard 4 or 5.

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

Between these are cycles of a fixed pattern of lessons. In Years 7 and 8, the cycle has four parts: teaching, worksheet or games, problem solving (choice from a set of tasks) and computer use (a variety).

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, worksheet, (problem solving) and computer. 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*: Maths Continuum (DE&T), People count (MAV), Dice don’t have brains (MAV), Working mathematically–Investigations (CC), Chance & Data Investigations 1 and 2 (CC)
- *Worksheets & games*: Active Learning 1 (M,C&D), Active Learning 2 (M,C&D) (all from MAV),
- *Computer*: Interactive Learning (MAV), Learning Objects (LF)
- *Problem solving*: Problem Solving Task Centre (CC), Maths300 (CC), RIME (MAV), RIME 5&6 (MAV)

How could it be adapted to different situations?

If your class does not have the range predicted, or you cannot manage three or four 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?

At the end of the tables are sets of questions based on *understanding* at each VELs standard that will allow you to place children into groups and monitor progress at selected times. However your observations, digital photographs and copies of children’s work will be more useful than any external ‘test’.

Year 7 Semester 1 Data

Day	Yr 7 sem 1: Towards Std 3	Towards Std 4 group	Towards Std 5 group	Towards Std 6 group
1	Maths300 #78 Temperature graphs or RIME: Measurement, Space, C&D: 28 Estimating averages			
2	<p>Teach gathering of frequency data for different data types</p> <p>People count #71 Collecting data</p> <p>Active Learning 2 (M,C&D) D6 DIY database</p>	<p>Computer</p> <p>Interactive Learning Families – Victoria,</p> <p>Learning objects Healthy life survey, Home internet survey, Leisure survey</p> <p>standards.nctm.org/document/teexamples/index.htm</p> <p>5.4 Accessing and Investigating Data Using the World Wide Web</p>	<p>Problem Solving Task Centre</p> <p>6 Counter Escape, 13 The Frog Pond, 20 Pack The Box, 46 Duelling Dice, 76 Tube Toss, 99 How Many Beans? 117 Twelve Counters, 133 Win At The Fair, 87 Triangle Area, 191 Choosing Beads, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces, 226 Playing With Objects</p>	<p>Worksheet</p> <p>Active Learning 1: Measurement, C&D CD30 Choosing samples from a population</p>
3	<p>Worksheet</p> <p>C&D Investigations Vol 2 Performance data (1 of 2)</p>	<p>Teach using questionnaires to obtain discrete and continuous data</p> <p>People count #70 Statistics – using data for a purpose, #71 Collecting data</p> <p>Active Learning 2 (M,C&D) D8 Your own statistical investigation</p>	<p>Computer</p> <p>Interactive Learning National areas, AFL ladders, Australian weather, Olympic track & field, AFL 1992, Education, Melb/Vic/Aust, English Proficiency, Age pyramid, AFL heights, Netball heights, Birthplaces & languages, Income – Victoria, Marital status, Heights of teenagers, DIY database</p> <p>Learning objects Foul Foodmaker, Rice crisp machine, Matchbox machine, Healthy life survey, Home internet survey, Leisure survey</p>	<p>Problem Solving Task Centre</p> <p>1 Final Eight, 18 Same Or Different, 34 Dice Differences, 49 Take A Chance, 53 Have A Hexagon, 162 Game Show, 198 What's In the Bag? 219 The Hole In The Triangle, 232 Dice Footy 90 The Grubby Pages Effect,</p>
4	<p>Problem Solving Task Centre</p> <p>6 Counter Escape, 13 The Frog Pond, 18 Same Or Different, 20 Pack The Box, 34 Dice Differences, 46 Duelling Dice, 53 Have A Hexagon, 58 See-Saw, 76 Tube Toss, 117 Twelve Counters, 131 Walk The Plank, 133 Win At The Fair, 191 Choosing Beads, 198 What's In the Bag? 200 Greedy Pig</p>	<p>Worksheet</p> <p>Active Learning 1 : Measurement, C&D</p> <p>CD7 Some survey questions using numerical responses</p> <p>Active Learning 2 (M,C&D) D9 Opinion survey</p>	<p>Teach using technology to organise data tables and displays (dot plots, stem and leaf plots, column graphs, bar charts and histograms)</p> <p>People count #75 Comparing data sets – tables #77 Comparing data sets – graphs</p>	<p>Computer</p> <p>Interactive Learning Opinion survey, Normal samples AFL heights, Aust netball scores, Netball goal-shooting, Birthplaces & languages, Family types – Victoria, Incomes, Marital status, Netball heights, Heights of teenagers, Age pyramids</p> <p>Learning objects Healthy life survey, Home internet survey, Leisure survey</p>
5	<p>Computer</p> <p>Learning objects Rice crisp machine, Matchbox machine</p>	<p>Problem Solving Task Centre</p> <p>1 Final Eight, 47 Red/Black Card Game, 49 Take A Chance,</p>	<p>Worksheet</p> <p>Active Learning 1: Measurement, C&D CD19 Some statistical</p>	<p>Teach sampling and use it in a survey</p> <p>People count #71 Collecting data</p>

	http://nlvm.usu.edu/en/nav/vlibrary.html Spinners, Histogram, Boxplot, Bar chart, Histogram, Pie chart	128 Highest Number 2, 162 Game Show, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces	experiments Active Learning 2 (M,C&D) Quickmaths C&D A-H	Active Learning 2 (M,C&D) D16 Choosing a sample randomly
6	Working mathematically–Investigations: Chance & Data Investigations 2: Database debut (1 of 3)			
7	Teach display of frequency data for different data types People count #74 Describing data – graphs Continuum 3 Choosing Appropriate Graphical Displays	Computer Interactive Learning Median, Stemplot unordered, Lineplot, Families – Victoria, Olympic track & field Learning objects Rice crisp machine, Matchbox machine http://illuminations.nctm.org/Activities.aspx Circle grapher, Bar grapher http://nlvm.usu.edu/en/nav/vlibrary.html Bar chart, Pie chart,	Problem Solving Task Centre See Std 5 day 2	Worksheet Active Learning 1: Measurement, C&D CD24 Doing things with data, CD25 Doing more things with data,
8	Worksheet C&D Investigations Vol 2 Performance data (2 of 2)	Teach presenting data in appropriate summary statistics and displays People count #73 Describing data – summary statistics #74 Describing data – graphs Continuum 4 A critical approach to summary statistics and graphs Active Learning 2 (M,C&D) D8 Your own statistical investigation	Computer Interactive Learning Boxplot, Histogram, Stemplot unordered, Estimating means, Mean vs median, Mean and quartiles, IQR & SD, Learning objects Foul Foodmaker, Rice crisp machine, Matchbox machine, Healthy life survey, Home internet survey, Leisure survey http://nlvm.usu.edu/en/nav/vlibrary.html Histogram http://illuminations.nctm.org/Activities.aspx Histogram tool, Bar grapher, Box plotter	Problem Solving Task Centre See Std 6 day 3
9	Problem Solving Task Centre See Std 3 day 4	Worksheet Active Learning 1 (M,C&D) CD10 The toy car	Teach calculating and interpreting summary statistics (mean, median, mode, range, difference) People count #73 Describing data – summary statistics Continuum 4 A critical approach to summary statistics and graphs	Computer Interactive Learning Median, Stemplot unordered, Lineplot, Boxplot Learning objects Spinners, Mystery spinner, Vile vendor http://nlvm.usu.edu/en/nav/vlibrary.html Boxplot
10	Computer Interactive Learning Median, Stemplot unordered, Lineplot,	Problem Solving Task Centre See Std 4 day 5	Worksheet Active Learning 1: Measurement, C&D CD5 Estimating lengths	Teach calculating and interpreting summary statistics from univariate data

10	<p style="text-align: center;">Computer</p> <p>Interactive Learning Median, Stemplot unordered, Lineplot, Boxplot</p> <p>Learning objects Spinners, Mystery spinner, Vile vendor</p> <p>http://nlvm.usu.edu/en/nav/vlibrary.html Boxplot</p>	<p style="text-align: center;">Problem Solving Task Centre</p> <p>See Std 4 day 5</p>	<p style="text-align: center;">Worksheet</p> <p>Active Learning 1: Measurement, C&D CD5 Estimating lengths using means, CD6 Estimating fractions of lengths,</p>	<p style="text-align: center;">Teach calculating and interpreting summary statistics from univariate data (mode, median and mean, box plot, inter- quartile range, outliers)</p> <p>People count #73 Describing data – summary statistics</p> <p>Active Learning 2 (M,C&D) D15 Investigating language</p>
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Year 7 Semester 2 Chance

Day	Yr 7 sem 2: Towards Std 3	Towards Std 4 group(s)	Towards Std 5 group(s)	Towards Std 6 group(s)
1	Maths300 #11 This Goes With This, or #26 Highest Number, or #58 Chocolate Chip Cookies, or #88 Counter Escape, or #148 Birth Month Paradox, or #155 Cat & Mouse			
2	<p style="text-align: center;">Teach intuitive chance language to compare events</p> <p>People count #64 Chance by intuition</p> <p>Continuum 3 Fairness relates to having an equal chance of winning</p>	<p style="text-align: center;">Computer</p> <p>Interactive Learning Lotto, Coin tossing, Coin tosses, Dice rolling, Marbles, Raffle, Spinner, Dice football, Dice totals</p> <p>Learning objects Spinners, Mystery spinner</p> <p>http://illuminations.nctm.org/Activities.aspx Adjustable spinner</p> <p>http://nlvm.usu.edu/en/nav/vlibrary.html Spinners</p>	<p style="text-align: center;">Problem Solving Task Centre</p> <p>6 Counter Escape, 13 The Frog Pond, 20 Pack The Box, 46 Duelling Dice, 76 Tube Toss, 99 How Many Beans? 117 Twelve Counters, 133 Win At The Fair, 87 Triangle Area, 191 Choosing Beads, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces, 226 Playing With Objects</p>	<p style="text-align: center;">Worksheet</p> <p>Active Learning 1: Measurement, C&D CD21 Natural data, CD15 An Australian age pyramid, CD22 AFL and netballer heights; traffic lights</p> <p>Active Learning 2 (M,C&D) C6 Beetle</p>
3	<p style="text-align: center;">Worksheet</p> <p>Dice don't have brains 1 What's in my bag? OR 2 Ladybird, OR 3 Raffle</p>	<p style="text-align: center;">Teach representing estimations of chance as fractions, decimals or percentages</p> <p>People count #64 Chance by intuition</p>	<p style="text-align: center;">Computer</p> <p>Interactive Learning Probability Long term coin tosses</p>	<p style="text-align: center;">Problem Solving Task Centre</p> <p>1 Final Eight, 18 Same Or Different, 34 Dice Differences, 49 Take A Chance, 53 Have A Hexagon, 162 Game Show, 198 What's In the Bag? 219 The Hole In The Triangle, 232 Dice Footy 90 The Grubby Pages Effect</p>
4	<p style="text-align: center;">Problem Solving Task Centre</p> <p>6 Counter Escape, 13 The Frog Pond, 18 Same Or Different, 20 Pack The Box, 34 Dice Differences, 46 Duelling Dice, 53 Have A Hexagon, 58 See-Saw, 76 Tube Toss, 87 First Down The Mountain, 117 Twelve Counters, 131 Walk The Plank, 133 Win</p>	<p style="text-align: center;">Worksheet</p> <p>Active Learning 1: Measurement, C&D CD1 Coin tossing</p> <p>Active Learning 2 (M,C&D) C6 Beetle</p>	<p style="text-align: center;">Teach probability as long-run relative frequency</p> <p>People count #65 Simulation – chance by experiment</p> <p>Continuum 5 Short run variation and long-run stability</p>	<p style="text-align: center;">Computer</p> <p>Interactive Learning Rolling a 6, TAB, How many rolls, Cards, Chuck-a-luck, Birthday, Final 8, Card collecting, Birthday, Exponential decay, Yowee, Several coins, Betting on equal odds, Betting on unequal odds,</p>

Day	Yr 7 sem 2: Towards Std 3	Towards Std 4 group(s)	Towards Std 5 group(s)	Towards Std 6 group(s)
	At The Fair, 191 Choosing Beads, 198 What's In the Bag? 200 Greedy Pig			Craps, Roulette, Ruin,
5	Computer Interactive Learning Die racing, Coin tossing, Coin tosses, Dice rolling Learning objects	Problem Solving Task Centre 1 Final Eight, 47 Red/Black Card Game, 49 Take A Chance, 128 Highest Number 2, 162 Game Show, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces	Worksheet Active Learning 1: Measurement, C&D CD3 Spinner	Teach estimating probability based on data tables People count #66 Probability – chance by prediction Active Learning 2 (M,C&D) D11 Investigating wealth
6	Maths300 #11 This Goes With This, or #26 Highest Number, or #58 Chocolate Chip Cookies, or #88 Counter Escape, or #148 Birth Month Paradox, or #155 Cat & Mouse			
7	Teach planning of chance experiments, inc. collecting and displaying data People count #65 Simulation – chance by experiment Continuum 3 Choosing Appropriate Graphical Displays	Computer See Std 4 day 4	Problem Solving Task Centre See Std 5 day 2	Worksheet Active Learning 1: Measurement, C&D CD19 Some statistical experiments
8	Worksheet Dice don't have brains 1 What's in my bag? OR 2 Ladybird, OR 3 Raffle	Teach simulation of chance events using random devices People count #65 Simulation – chance by experiment	Computer Interactive Learning Coin tossing, Several coins, Die rolling, Getting, Marbles, Raffle, Spinner, Peg bag Learning objects Random or not, Mystery spinner, Dice duels http://illuminations.nctm.org/Activities.aspx Adjustable spinner	Problem Solving Task Centre See Std 6 day 3
9	Problem Solving Task Centre See Std 3 day 4	Worksheet Active Learning 1: Measurement, C&D CD4 Rolling marbles Active Learning 2 (M,C&D) C11 sports simulations	Teach calculating simple probabilities of equally likely events People count #66 Probability – chance by prediction	Computer See Std 6 day 4
10	Computer Interactive Learning Die racing, Coin tossing, Coin tosses, Dice rolling http://illuminations.nctm.org/Activities.aspx Adjustable spinner	Problem Solving Task Centre See Std 4 day 5	Worksheet Active Learning 1: Measurement, C&D CD16 Coin in the square Active Learning 2 (M,C&D) C1 Short chance activities	Teach calculate and estimate probability based on real experiments People count #66 Probability – chance by prediction
11	Maths300 #11 This Goes With This, or #26 Highest Number, or #58 Chocolate Chip Cookies,			

Day	Yr 7 sem 2: Towards Std 3	Towards Std 4 group(s)	Towards Std 5 group(s)	Towards Std 6 group(s)
	or #88 Counter Escape, or #148 Birth Month Paradox, or #155 Cat & Mouse			
12	as above			

Year 8 Semester 1 Data

Day	Yr 8 sem 1: Towards Std 3	Towards Std 4 group	Towards Std 5 group	Towards Std 6 group
1	Working mathematically–Investigations: 11 The easier keyboard or Chance & Data Investigations 2: Video data or Duelling dice (1 of 2)			
2	Teach designing questions for data collecting People count #71 Collecting data Active Learning 2 (M,C&D) D8 Your own statistical investigation	Computer Interactive Learning AFL heights, Netball heights, Birthplaces & languages, Income – Victoria, Marital status, Heights of teenagers Learning objects Healthy life survey, Home internet survey, Leisure survey http://nlvm.usu.edu/en/nav/vlibrary.html Histogram	Problem Solving Task Centre 6 Counter Escape, 13 The Frog Pond, 20 Pack The Box, 46 Duelling Dice, 76 Tube Toss, 99 How Many Beans? 117 Twelve Counters, 133 Win At The Fair, 87 Triangle Area, 191 Choosing Beads, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces, 226 Playing With Objects	Worksheet Active Learning 1: Measurement, C&D CD26 Frequency, relative frequency and cumulative frequency, CD27 Percentiles and cumulative relative frequency, CD28 More percentiles and cumulative relative frequency, CD29 Problem solving with data
3	Worksheet Working mathematically: Investigations Unit 8: Games in the playground (1 of 2) Active Learning 2 (M,C&D) D8 Your own statistical investigation	Teach using grouping of data and histograms People count #73 Describing data – summary statistics, #74 Describing data – graphs	Computer Interactive Learning Boxplot, Histogram, Stemplot unordered, Estimating means, Mean vs median, Mean and quartiles Learning objects Healthy life survey, Home internet survey, Leisure survey http://illuminations.nctm.org/Activities.aspx Circle grapher, Bar grapher http://nlvm.usu.edu/en/nav/vlibrary.html Bar chart, Histogram, Pie chart standards.nctm.org/document/examples/index.htm 5.4 Accessing and Investigating Data Using the World Wide Web	Problem Solving Task Centre 1 Final Eight, 18 Same Or Different, 34 Dice Differences, 49 Take A Chance, 53 Have A Hexagon, 162 Game Show, 198 What's In the Bag? 219 The Hole In The Triangle, 232 Dice Footy 90 The Grubby Pages Effect
4	Problem Solving Task Centre 6 Counter Escape, 13 The Frog Pond, 18 Same Or Different, 20 Pack The Box, 34 Dice Differences, 46 Duelling Dice, 53 Have	Worksheet Active Learning 1: Measurement, C&D M22 Estimating irregular areas, AND CD13 Hands – spans and	Teach using technology to organise data tables and displays (dot plots, stem and leaf plots, column graphs,	Computer Interactive Learning Age pyramids, Stemplot, B2B stemplot, Boxplot, Parallel boxplots, Normal samples,

Day	Yr 8 sem 1: Towards Std 3	Towards Std 4 group	Towards Std 5 group	Towards Std 6 group
	A Hexagon, 58 See-Saw, 76 Tube Toss, 87 First Down The Mountain, 117 Twelve Counters, 131 Walk The Plank, 133 Win At The Fair, 191 Choosing Beads, 198 What's In the Bag? 200 Greedy Pig	area	bar charts and histograms) People count #72 Describing data – tables #74 Describing data – graphs #75 Comparing data sets – tables	standards.nctm.org/doc ument/eexamples/index. htm 5.4 Accessing and Investigating Data Using the World Wide Web 5.5 Collecting, Representing, and Interpreting Data Using Spreadsheets and Graphing Software
5	Computer Interactive Learning Families – Victoria Learning objects Vile vendor standards.nctm.org/doc ument/eexamples/index. htm 5.4 Accessing and Investigating Data Using the World Wide Web	Problem Solving Task Centre 1 Final Eight, 47 Red/Black Card Game, 49 Take A Chance, 128 Highest Number 2, 162 Game Show, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces	Worksheet Active Learning 1: Measurement, C&D CD14 Graph review Active Learning 2 (M,C&D) D8 Your own statistical investigation, D9 Opinion survey	Teach interpreting summary statistics (mode, median and mean, box plot, inter- quartile range, outliers) and displays People count #76 Comparing data sets – summary statistics, #77 Comparing data sets – graphs
6	Working mathematically–Investigations: 11 The easier keyboard or Chance & Data Investigations 2: Video data or Duelling dice (2 of 2)			
7	Teach collecting, displaying and interpreting data People count #70 Statistics – using data for a purpose Continuum 3 Choosing Appropriate Graphical Displays	Computer Interactive Learning Families – Victoria, Olympic track & field Learning objects Healthy life survey, Home internet survey, Leisure survey standards.nctm.org/doc ument/eexamples/index. htm 5.4 Accessing and Investigating Data Using the World Wide Web	Problem Solving Task Centre See Std 5 day 2	Worksheet Active Learning 1: Measurement, C&D CD32 Scatterplots, employment and qualifications, CD33 Lines of fit and predictions, Maths at Work 27 Statistical change
8	Worksheet Working mathematically: Investigations Unit 8: Games in the playground (2 of 2)	Teach interpreting summary statistics and displays to answer questions People count #73 Describing data – summary statistics, #74 Describing data – graphs	Computer Interactive Learning National areas, AFL ladders, Australian weather, Olympic track & field, AFL 1992, Education, Melb/Vic/Aust, English Proficiency, Age pyramid, AFL heights, Netball heights, Birthplaces & languages, Income – Victoria, Marital status, Heights of teenagers standards.nctm.org/doc ument/ eexamples/index.htm 5.4 Accessing and Investigating Data Using the World Wide Web	Problem Solving Task Centre See Std 6 day 3

Day	Yr 8 sem 1: Towards Std 3	Towards Std 4 group	Towards Std 5 group	Towards Std 6 group
9	Problem Solving Task Centre See Std 3 day 4	Worksheet Active Learning 1: Measurement, C&D CD8 Some survey questions using categorical responses	Teach calculating and interpreting summary statistics (mean, median, mode, range, difference) People count #73 Describing data – summary statistics	Computer Interactive Learning Young adults, Two-way relating, Rank-order correlation, Scatterplot & correlation, Breast-feeding and death, Line of fit, Sampling lines of fit
10	Computer See Std 3 day 5	Problem Solving Task Centre See Std 4 day 5	Worksheet Active Learning 1: Measurement, C&D CD9 Reaction times,	Teach interpreting and predicting from association (using scatterplots and best-fit lines) People count #80 Relating data sets – graphs
11	Working mathematically–Investigations: 15 How expensive am I? or Chance & Data Investigations 2: Pocket money (1 of 2)			
12	as above (2 of 2)			

Year 8 Semester 2 Chance

Day	Yr 8 sem 1: Towards Std 3	Towards Std 4 group(s)	Towards Std 5 group(s)	Towards Std 6 group(s)
1	RIME: Measurement, Space, C&D: 30 Coin in the square or Chance & Data Investigations 1: Swapping schools or Chocolate chip cookies (1 of 2)			
2	Teach comparing likelihoods People count #64 Chance by intuition, #65 Simulation – chance by experiment Continuum 3 Fairness relates to having an equal chance of winning Active Learning 2 (M,C&D) Quickmaths C&D A-D	Computer Interactive Learning Probability, Drawing pin Learning objects	Problem Solving Task Centre 6 Counter Escape, 13 The Frog Pond, 20 Pack The Box, 46 Duelling Dice, 76 Tube Toss, 99 How Many Beans? 117 Twelve Counters, 133 Win At The Fair, 87 Triangle Area, 191 Choosing Beads, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces, 226 Playing With Objects	Worksheet Maths at Work 16 Combining chances
3	Worksheet Dice don't have brains 5 Degrees of certainty, OR 7 How many rolls? OR 8 Roll a double, OR 15 Spin out	Teach that variable chance experiments must get closer to true probabilities 'in the long run' People count #66 Probability – chance by prediction Continuum 5 Short run variation and	Computer Interactive Learning Dice football, One-day cricket, Tennis, Tennis set, Table tennis, Beetle, Pinball, Poker machine, Odds, Lotto, TAB, Winning streaks, Coin in the square, Learning objects Random or not, Mystery	Problem Solving Task Centre 1 Final Eight, 18 Same Or Different, 34 Dice Differences, 49 Take A Chance, 53 Have A Hexagon, 162 Game Show, 198 What's In the Bag? 219 The Hole In The Triangle, 232 Dice Footy

Day	Yr 8 sem 1: Towards Std 3	Towards Std 4 group(s)	Towards Std 5 group(s)	Towards Std 6 group(s)
		long-run stability	spinner, Dice duels http://illuminations.nctm.org/Activities.aspx Fire	90 The Grubby Pages Effect
4	Problem Solving Task Centre 6 Counter Escape, 13 The Frog Pond, 18 Same Or Different, 20 Pack The Box, 34 Dice Differences, 46 Duelling Dice, 53 Have A Hexagon, 58 See-Saw, 76 Tube Toss, 87 First Down The Mountain, 117 Twelve Counters, 131 Walk The Plank, 133 Win At The Fair, 191 Choosing Beads, 198 What's In the Bag? 200 Greedy Pig	Worksheet Active Learning 1: Measurement, C&D CD2 Die-rolling	Teach generating random numbers for simulations using technology People count #66 Probability – chance by prediction	Computer Interactive Learning Addition law, (no overlap), Addition law (with overlap), Multiplication law, Cards, Coincidences, Lotto, Learning objects Foul Foodmaker, Rice crisp machine, Matchbox machine
5	Computer Interactive Learning Guess the chance, Marbles, Raffle, Spinner, Learning objects Spinners, Mystery spinner	Problem Solving Task Centre 1 Final Eight, 47 Red/Black Card Game, 49 Take A Chance, 128 Highest Number 2, 162 Game Show, 197 Chocolate Chip Cookies, 223 Cat and Mouse, 224 Matching Faces	Worksheet Active Learning 1: Measurement, C&D CD18 TAB Active Learning 2 (M,C&D) C11 Sports simulations	Teach listing event spaces (for up to 3 events) to calculate probabilities People count #68 Multiplication law and tree diagrams
6	RIME: Measurement, Space, C&D: 31 Equally likely – games or Chance & Data Investigations 1: Swapping schools or Chocolate chip cookies (2 of 2)			
7	Teach recognition of equally likely events People count #64 Chance by intuition Continuum 3 Fairness relates to having an equal chance of winning Active Learning 2 (M,C&D) Quickmaths C&D A-H	Computer Interactive Learning Coin tossing, Coin tosses, Dice rolling, Marbles, Raffle, Spinner, Dice football, Dice totals Learning objects Random or not, Mystery spinner, Dice duels	Problem Solving Task Centre See Std 5 day 2	Worksheet Maths at Work 16 Combining chances Active Learning 2 (M,C&D) C7 Repeated coin tossing, C8 Repeated die rolling
8	Worksheet Dice don't have brains 5 Degrees of certainty, OR 7 How many rolls? OR 8 Roll a double, OR 15 Spin out	Teach calculating equally likely probabilities by listing all the possible outcomes of an event People count #66 Probability – chance by prediction	Computer See Std 5 day 3	Problem Solving Task Centre See Std 6 day 3
9	Problem Solving Task Centre See Std 3 day 4	Worksheet Active Learning 1: Measurement, C&D	Teach using tree diagrams to predict probabilities for two-event	Computer Interactive Learning AIDS testing, Smith family, Four marbles, Two cards,

Day	Yr 8 sem 1: Towards Std 3	Towards Std 4 group(s)	Towards Std 5 group(s)	Towards Std 6 group(s)
		CD17 Fair and unfair odds	experiments People count #68 Multiplication law and tree diagrams	Quiz show, http://nlvm.usu.edu/en/nav/vlibrary.html Stick or switch
10	Computer Interactive Learning Die racing, Coin tossing, Coin tosses, Dice rolling Learning objects The Slushy Sludger, Spinners http://nlvm.usu.edu/en/nav/vlibrary.html Spinners http://illuminations.nctm.org/Activities.aspx Adjustable spinner	Problem Solving Task Centre See Std 4 day 5	Worksheet Active Learning 1: Measurement, C&D CD23 Loaded dice Active Learning 2 (M,C&D) C7 Repeated coin tossing, C8 Repeated die rolling	Teach calculating probabilities (for complementary, mutually exclusive, and compound events) People count #69 Further probability ideas Active Learning 2 (M,C&D) C5 Simulating AIDS
11	RIME: Measurement, Space, C&D: 32 Equally likely – experiments (1 of 2) or MCTP: p111 Maths and Lotto, or p555 Only a matter of time! or p561 Dice cricket (1 of 2)			
12	as above (2 of 2)			