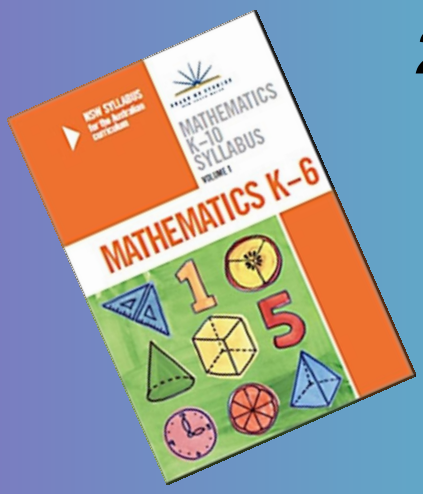
Mathematics at Sylvania Heights Public School

2014

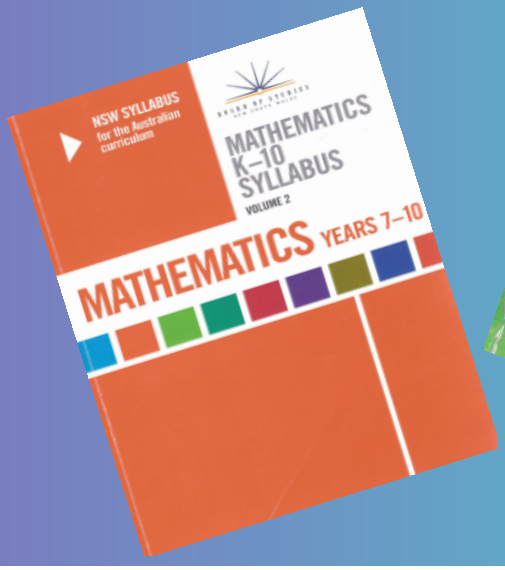


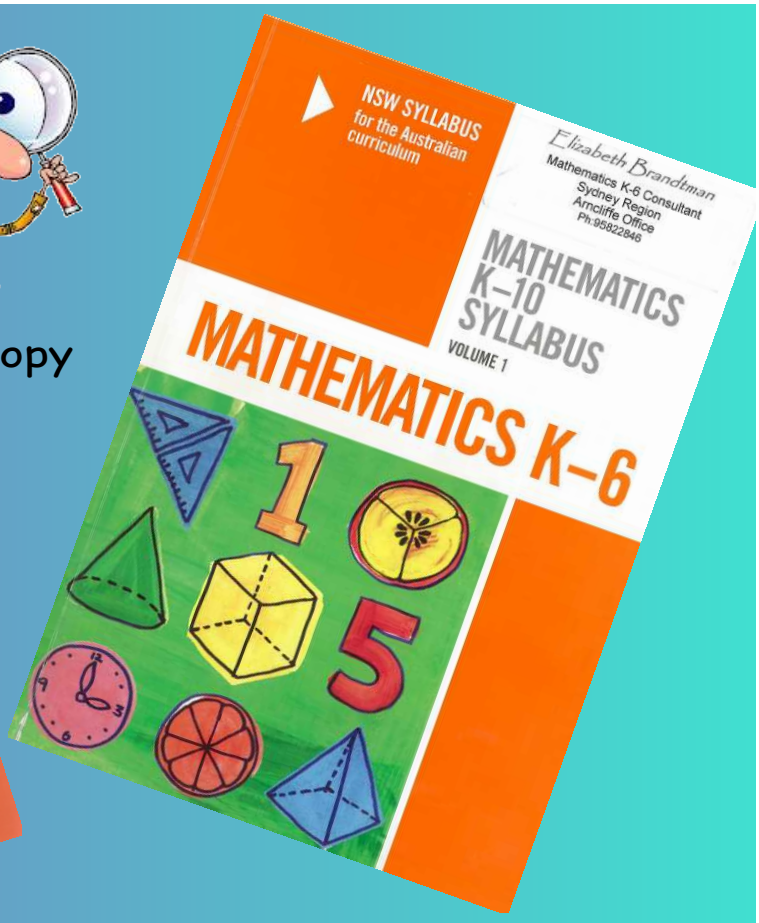
New syllabus implementation timeline

		2012	2013	2014	2015	2016
K-6	English	Use existing syllabuses	Use existing syllabuses	Implement		
	Mathematics			Optional	Implement	
	Science and Technology	Support materials become available		Optional	Implement	
	History				Optional	Implement
7-10	English	Plan whole school approach	Become familiar, plan and program	Implement in Years 7 and 9	Implement in Years 7, 8, 9, 10	
	Mathematics					
	Science					
	History					

Source: Board of Studies NSW

Electronic and Hard copy



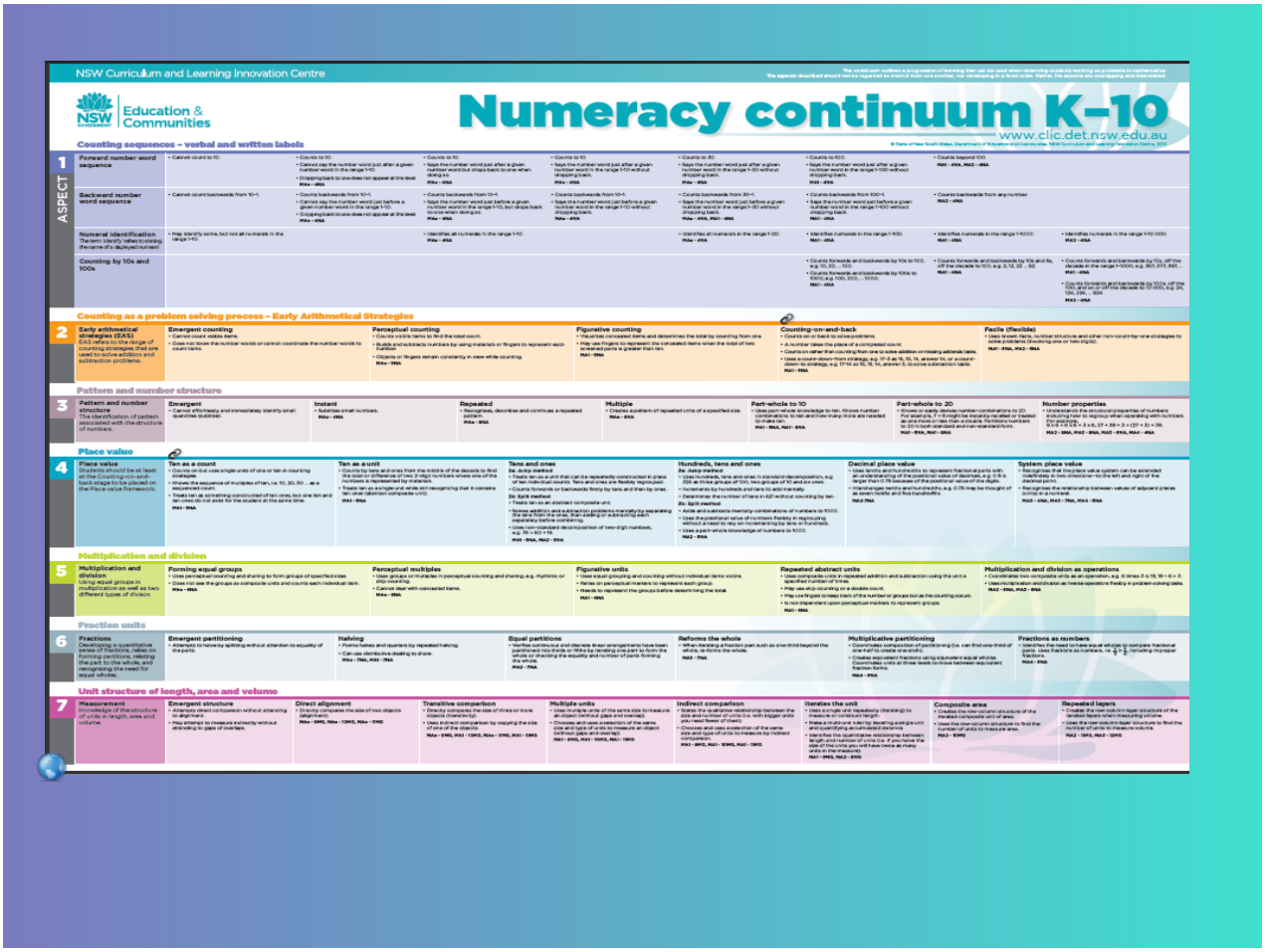


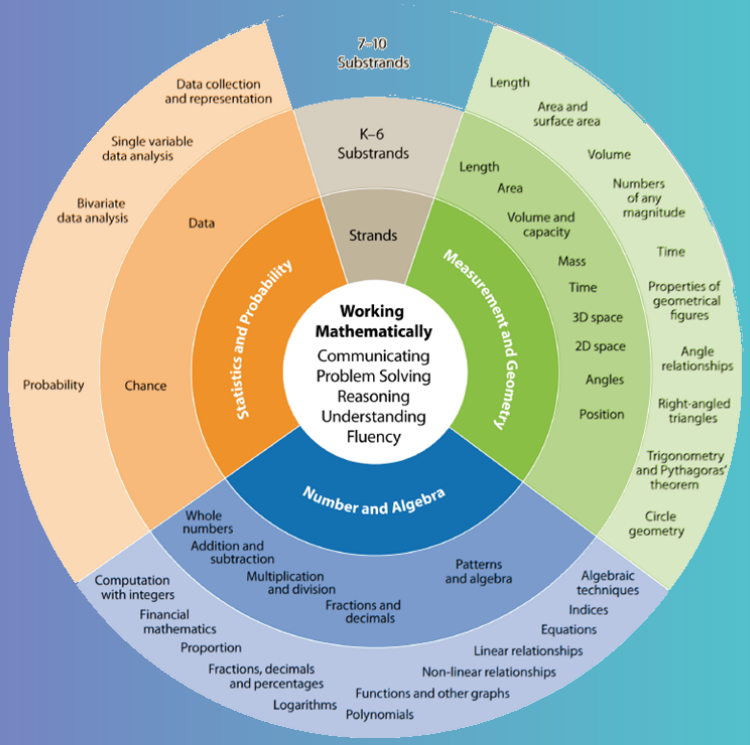
Overview of the syllabus: aims

- develop an increasingly sophisticated **understanding** of mathematical concepts and **fluency** with mathematical processes… to pose problems and reason…'
- Increasingly sophisticated- needs a continuum to see the progress of development (WM outcomes)
- Understanding of concepts- links to quality teaching question *Why does this learning matter?*
- Fluency with processes- use flexible and efficient strategies links with the Numeracy continuum

Linked to Quality Teaching

nked to fluency
d
derstanding


NSW Curriculum and Learning Innovation Centre
Education & Communities
Numeracy continuum K–10
www.clic.det.nsw.edu.au
ASPECT
Counting sequences – verbal and written labels
Counting as a problem solving process – Early Arithmetical Strategies
Pattern and number structure
Place value
Multiplication and division
Fraction units
Unit structure of length, area and volume


7–10 Substrands
K–6 Substrands
Strands
Statistics and Probability
Measurement and Geometry
Number and Algebra
Working Mathematically
Communicating
Problem Solving
Reasoning
Understanding
Fluency
Data collection and representation
Single variable data analysis
Bivariate data analysis
Data
Probability
Chance
Length
Area and surface area
Volume
Numbers of any magnitude
Time
Properties of geometrical figures
Angle relationships
Right-angled triangles
Trigonometry and Pythagoras' theorem
Circle geometry
Position
Angles
2D space
3D space
Time
Mass
Volume and capacity
Area
Length
Whole numbers
Addition and subtraction
Multiplication and division
Fractions and decimals
Patterns and algebra
Computation with integers
Financial mathematics
Proportion
Fractions, decimals and percentages
Logarithms
Polynomials
Algebraic techniques
Indices
Equations
Linear relationships
Non-linear relationships
Functions and other graphs

Key Features K-10

Increased focus on recording

Increased focus on solving word problems

increased focus on modelling, ordering, identifying and "using the term"(correct and appropriate mathematical language)

Similarities and Differences K-6

Please note: Year 7 start the new syllabus in 2014, K-6 is not mandatory until 2015. This means some students may be required to have certain understandings of concepts in year 7 that they have not learned in year 6. There may be gaps in their understanding.

With this in mind, Stage 3 teachers are exploring some of the new topics this year as an extension of current content to assist in this area.

- Whole Number- HCF, LCM, integers
- Multiplication and Division- order of operations
- Fractions and Decimals- x and ÷ decimals
- Patterns and Algebra- number (Cartesian) plane
- Data- categorical and numerical data, dot plots

We are also receiving support from Michael Lucas, head mathematics teacher at Sylvania High, for support and training.

Similarities and Differences K-6

Current: ES1
. word rows used
for multiplication

New: ES1
word"groups only is used not rows
equal arm balance and sorting on the basis of mass moved to S1

Similarities and Differences K-6

Current: S1
- standard partitioning
- 1/2, 1/4
- Equal - arm balance
- 1/2 hour clock reading
- corner
- Tessalations
- angles

New: S1
- partitioning of numbers into non standard forms
- movement of some content from PAS to Number
- 1/8
- Pan balance
- 1/4 hour clock reading
- Flat and curved surfaces
- vertex
- half and quarter turns

Similarities and Differences K-6

Current: S2

- Standard partitioning
- Up to four-digit
- adding and subtracting with money
- 1/2, 1/4, 1/8
- Percentages
- Cross sections
- Constructing 2D shapes

New: S2

- partitioning of numbers into non standard forms
- Up to five - digits
- calculating equivalent amounts of money and solving problems
- 1/3, 1/5, mixed numeracls
- temperature
- constructing irregular 2D shapes
- combining 2D shapes
- comparing chance events

Similarities and Differences K-6

Current: S3

- factors
- Roman numerals
- Square Numbers
- Positive and Negative numbers
- Solve problems involving money
- speed (in measurement)

New:S3

HCF, LCM (from stage 4)

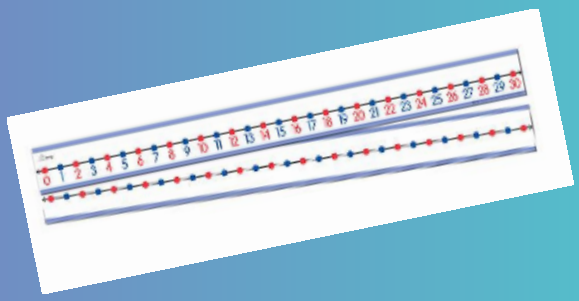
- solving problems with factors
- square and triangular numbers
- uses word integer
- create a financial plan
- using area model for multiplication
- speed (in multiplication)
- order of operations
- percentages only in Stage 3 part 2

Similarities and Differences K-6

New: S3

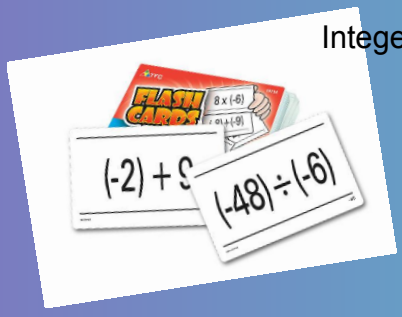
- adding mixed numerals
- content moved both up and down and across(WM) into Fractions and decimals 2
- Cartesian plane(from stage 4)
- investigating areas of triangles
- cross-sections (up from Stage 2)
- translation and rotations with shapes
- Adjacent angles
- categorical and numerical data, dot plots
- frequencies and equally likely events

K - 2

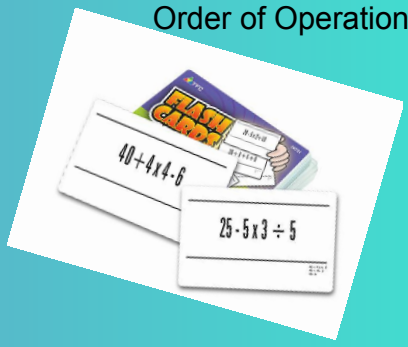


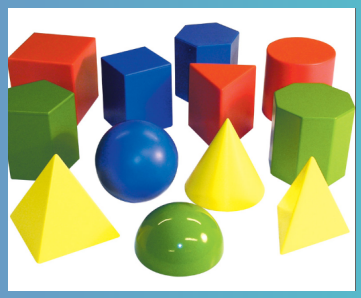
3 - 6

Integers

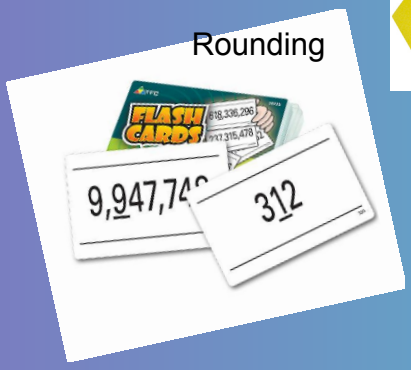


Order of Operations





Rounding



Ipads - $100 per year.

Student Resources

$5066.75

Teacher Resources

Targeting Maths - $497.79
Upgrade licence - $539.55
Targeting Maths - $1364.03
Maths Syllabus - $356.08
Challenge books - $47.27
Envision Maths - $450
Oxford Assessment - $454.36

Total - $3709.08

Any Questions?

Attachments

Working Mathematicallydraft version 2.docx

maths_es1s1_sampleu1.doc

maths_s1_sampleu1.doc

maths_s2_sampleu1.doc

maths_s3_sampleu1.doc