2017 SEM 1 ELSP MATHEMATICS YR 2

<table>
<tr>
<td colspan="6">What is it that we want our students to know, understand, do and communicate KUDCO?</td>
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<tr>
<td>Year Level: Two</td>
<td>Semester: One</td>
<td>Subject: Maths</td>
<td colspan="3">Team Members: Nathan Welsh, Kim Cleghorn, Christine Kane, Vanessa Brown, Georgina Dunne</td>
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<tr>
<td>Essential Learning
What is the essential learning? Describe in student friendly vocabulary.</td>
<td>Example-Rigor
What does proficient student work look like? Provide an example and/or description.</td>
<td>Prior Skills Needed
What prior knowledge, skills and/or vocabulary are needed for a student to master this essential learning?</td>
<td>Common Assessments
What assessment/s will be used to measure student mastery?</td>
<td>When taught?
When will this essential learning be taught?</td>
<td>Application
What will we do when students have already learned this essential learning?</td>
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<tr>
<td>I know how to model, partition and order numbers to 1000 to count efficiently.</td>
<td>I can solve problems showing solution as pictures, numbers and words.

I can rename 3 digit numbers, e.g. 981 can be represented as 9 hundreds, 8 tens, 1 one, or 98 tens and 1 one, etc

I can explain that 10 ones makes a ten, 10 tens make 100, 10 hundreds makes 1000.

I can read and write 3 digit numbers.</td>
<td>I know that numbers are made up of place value parts.

I can read and write 2 digits numbers

I can explain a 2 digit number using materials, eg. bundles, unifix towers, tens frames, drawings / picture models, a Place Value template (mat/columns)

I know what numbers come before and after in 2 and 3 digits</td>
<td>Students are given an assortment of numbers from 0 to 1000 - students have to order them

Students can represent numbers in a variety of ways using MAB

CFA's

Anecdotal notes</td>
<td>Term 1 Weeks 4-9</td>
<td>I can solve problems involving renaming, e.g. joining or subtracting collections of MAB with each other, place value problems, e.g. my sister wanted to buy 267 lollies, lollies come in bags of 100, rolls of 10 and as singles, show how my sister would have bought the lollies.

I can hypothesise how the number system works and extends beyond 1000</td>
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*Working in Collaborative teams, examine all relevant documents, school scope and sequence, regional documents and AusVELS, and then apply the criteria of endurance, leverage and readiness to determine which standards are essential for all students to master. Remember, less is more. For each standard selected, complete the remaining columns. Complete the chart by the second or third week of each term/semester.

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	I can expand 3 digit numbers I can represent and explain a 3 digit number using materials, eg. unifix towers, MAB, spike abacus, diagrams, a Place Value template (mat/columns) I know what numbers come before and after in numbers up to 1000. I know zero has a place value Vocabulary: Place value, hundreds, tens, ones	numbers. (e.g. 126 comes before 127) I can expand 2 digit numbers			
I can skip count by 2's, 5's and 10's and describe, create, and continue patterns with numbers and identify missing elements **LEARNING TARGET:** ● I can skip count in both directions. ● I can skip count from any given starting point beyond 100	I can solve story problems using skip counting patterns of 2's, 5's and 10's. I can connect related number patterns (e.g. 5's and 10's) I can explain the final digit pattern for each number pattern.	I can understand that when I skip count, I miss a regular amount of numbers out. I can use a 1-100 number chart to explain skip counting by 2's, 5's and 10's. I can skip count forwards in 10's from any starting number	Students will complete 'rocket writing' skip counting forwards and backs in 2's, 5's and 10's from zero and non-zero starting points I can skip count in 2's, 5's or 10's from 73 to beyond 100.	Term 2, Weeks 1- 3	I can investigate and hypothesise about related number patterns beyond the 2's, 5's and 10's. I can understand the relationship between 2's, 4's and 8's number patterns. I can use skip counting in real world situations (e.g. repeated groups,

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● identify the rule in a pattern ● find the missing number in a pattern ● create number patterns with 2's, 5's, 10's (orally), and (using tools)	I can explain the rule for specific number patterns I can use a number chart and numberline to show my skip counting in 2's,, 5's, and 10's from zero to 1,000 from any starting point. Vocabulary: Skip count, numbers, pattern, 2's, 5's, 10's, rows, columns	beyond 100 and count backwards. I can skip count forwards (orally) from zero in 2's, 5's and 10's and count backwards in these number patterns. I can name in correct sequence the numbers from 0-100.			array problems, odd/even postman problem)
Addition I can solve addition problems using a range of strategies. **Learning Targets:** Understand and use a variety of strategies including: - Counting on - Commutative property (Turn around) for addition - Building to 10 - Doubles and Near Doubles -10s facts	I can automatically (without applying addition strategies) add numbers 0 to 10 together Example: 9 + 7 = 16 I can explain the process for splitting numbers when adding. I can use tools such as: concrete materials, empty number lines, hundreds charts to solve addition problems I can record a worded problem for a number sentence and vise versa	I know that the equals symbol means 'the same as' I can count all items in a collection up to 100 (Counting all) When given a said amount (eg 5) I can count on or back to find a total (trust the count) I know that adding two numbers together makes the answer bigger.	Addition and subtraction assessments completed and analysed by the team. Students are given a number of simple addition and subtraction problems. They explain in words, pictures and with concrete materials how they solved these. Anecdotal notes taken from a range of class games targeting addition and subtraction fluency Students are given 2 'think boards'. On one	Term 2, Weeks 3-7 (Addition)	I can transfer these strategies to add and subtract complex three digit numbers and beyond. I can apply and justify the strategy that best suits the problem.

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	I can use strategies to solve worded problems. Vocabulary: Place value, columns, hundreds, tens, ones, split, addition, subtraction, (and associated terms), equals, Addition, Subtraction (and associated language developed in class), count on and back commutativity, building to 10, doubles, near doubles, 10's facts, adding 10, equals, strategy.	I know that subtracting one number from another number makes the answer smaller. I recognise and understand some words or phrases that link to addition or subtraction.	there is a worded problem, on the other a number sentence. They complete both by filling in the missing information.		
Subtraction I can solve subtraction problems using a range of strategies and understand how addition and subtraction are connected. **Learning Targets:** Understand and use a variety of strategies including: -Counting back -Adding and subtracting 10 - Finding the difference - Splitting Numbers - Using fact families	I can explain addition and subtraction as parts and whole (part/part/whole model) I can explain the process for splitting numbers when subtracting I can use tools such as: concrete materials, empty number lines, hundreds charts to solve subtraction problems I can record a worded problem for a number sentence and vise versa	I know that the equals symbol means 'the same as' I can count all items in a collection up to 100 (Counting all) When given a said amount (eg 5) I can count on or back to find a total (trust the count) I know that adding two numbers together makes the answer bigger.	Addition and subtraction assessments completed and analysed by the team. Students are given a number of simple addition and subtraction problems. They explain in words, pictures and with concrete materials how they solved these. Anecdotal notes taken from a range of class games targeting addition and subtraction fluency	Term 2 Weeks 7-11 (Subtraction)	I can transfer these strategies to add and subtract complex three digit numbers and beyond. I can apply and justify the strategy that best suits the problem.

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	I know that subtraction can be used to find the difference or the amount leftover. I can use strategies to solve worded problems. <u>Vocabulary:</u> Place value, columns, hundreds, tens, ones, split, addition, subtraction, (and associated terms), equals, Addition, Subtraction (and associated language developed in class), count on and back commutativity, building to 10, doubles, near doubles, 10's facts, adding 10, equals, strategy.	I know that subtracting one number from another number makes the answer smaller. I recognise and understand some words or phrases that link to addition or subtraction.	Students are given 2 'think boards'. On one there is a worded problem, on the other a number sentence. They complete both by filling in the missing information.		
I can find the total value of simple collections of Australian notes and coins. **Learning Targets:** I can: - use place value as increments of 10c. - add collections of notes or coins - make equivalent values.	I can identify equivalent values of a total dollar and cent amount. I can count up in 10 cents to make dollars. I can make a dollar in a variety ways I can add together notes and coins to show a total amount.	I know the features of Australian notes and coins. I can order Australian coins and notes. I know the names and value of Australian coins. "This is the: 5 cent….	Pre and post CFA	Term 3, Weeks 1-2	I can calculate the change due from a purchase. I can use addition to find the cost of two items.

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	Vocab: Dollars, cents, total amount, cash,	10 cent… 20cent… 50 cent…. 1 dollar … 2 dollar….Coin $1 is worth 100 cents $2 is worth 200 cents			
I can read simple maps and identify the position of key features.	I can find and mark places I know on a map I can describe coordinates of a given point on a map I can use directional language to describe the easiest way to get from one point to another. Vocabulary: Map, bird's eye view, place, directional language, describe, features, and directional language developed with the class (eg: left, right, around, forwards, etc).	I can use some simple words to describe how to get somewhere (eg: forward, straight, next to).	Students receive a map of the school and they mark places that are familiar to them. Students write a short paragraph that describes how to get from one place to another on the map.		Students add to their gridlines and describe the location of features using coordinates.
I know the months of the year and can order them and the seasons.	I can name the 12 months of the year in sequence. I can sequence the seasons of the year and match	I know that the year has different seasons. I know the year is divided into four seasons.	Students are asked to list the months of the year in order. Students are asked to list the seasons and match		I can use my understanding of months and seasons to solve to worded problems

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	them with the right months. <u>Vocabulary:</u> months (the names of all months using capital letters), year, sequence, summer, autumn, winter, spring.	I know that the year has different months in it.	them to the months of the year.		
I know how to use calendars	I can find a specific date on a calendar and say what day of the week it is. EG: "This year my birthday will be on a Saturday" I know that calendars can have different formats. I can explain the duration of time for familiar family events (e.g. I went on holidays for a fortnight) I can use a calendar to determine how many days are in each month.	I can say the names of the seven days of the week. I know that a calendar measures time over a whole year.	Students are given a calendar and answer simple questions; EG "What day of the week will Christmas be this year?" Students are given a blank calendar, and are asked to fill missing dates and days of a month.		I can use a calendar to find a date that is a week before/after and a month before/after.
I can use informal measurement to compare and order shapes and objects: -Length,	I know that I need to estimate first so I can assess my measurements.	I know that length measures how long or short something is.	Students complete a CFA related to measurement.		I can estimate, measure and compare formal measurements in length and volume.

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-Area	I can compare and order the length and area of shapes and objects. I can select the most appropriate informal measurements and explain my choice. EG: "I used my hand and not unifix because the table is very long". I can explain the need to use the same informal measurement to compare shapes or objects. EG: "I need to use unifix for both so then I know how much longer the book is than the ruler" <u>Vocabulary:</u> measure, informal, objects, length, area, volume, capacity, estimate, compare, appropriate,	I know that area is the size a surface takes up.			
I can create a survey question and collect, check and group my data.	I can create a survey question and collect response data I can show my data in groups of five and show as tally marks and explain why this makes counting easier	Students ask a question to collect data using multiple categories (tallied).	Students select a survey question (e.g favourite animal) and organise responses in a tally table with categories. Anecdotal notes		I can create more complex survey questions with a greater range of variables.

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	EG: "This shows 16" Tally Marks I know that my total of tally marks needs to equal the number of people surveyed. EG: "I have checked my tally marks and the total of 22 equals the amount of people we have in our class' <u>Vocabulary:</u> Survey, tally marks, groups of five, table, equal.				
I can make, interpret and compare displays of simple data using: -Lists -Tables -Picture graphs	I can make a list, table and picture graph. I can interpret the data shown in lists, tables and picture graphs. I can compare similarities and differences between lists, tables and picture graph. <u>Vocabulary:</u> Rows, columns, count, collect, groups, gather, question, response, answer, information, survey,	Data can be shown in different ways. Students describe and interpret the data they have collected. I can see what is more, what is less, and what is the same (equal).	Students complete an assessment on the application and interpretation of lists, tables, and graphs.		Interpret and create more complex data displays (e.g. with multiple variables) Open ended activity: Students are given a column graph with no title, or title axis. They are asked to explain what the graph might be about and to interpret the data.

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	research, graph, table, list, conclusion, data, category, result, record, tally, total, axis, table, title,				

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