MATHEMATICS UNIT PLANNER

AusVELS L: 3&4  Term:1  Year:2015

Dimension: Number

Focus: Place Value & Skip Counting

Length of Unit: 17 lessons (apx)

AusVELS Standard/s:

2.00
Students count to and from, and order numbers up to 1000. They recognise increasing and decreasing number sequences involving 2s, 3s, 5s and 10s, identify the missing element in a number sequence, and use digital technology to produce sequences by constant addition.

3.00
Students count and order numbers to and from 10 000. They classify numbers as either odd or even, continue number patterns involving addition or subtraction, and explore simple number sequences based on multiples.

4.00
They locate familiar fractions on a number line, recognise common equivalent fractions in familiar contexts and make connections between fractions and decimal notations up to two decimal places. They use the properties of odd and even numbers and describe number patterns resulting from multiplication. Students continue number sequences involving multiples of single-digit numbers and unit fractions, and locate them on a number line.

5.00
Use estimation and rounding to check the reasonableness of answers to calculations. Identify and describe factors and multiples of whole numbers and use them to solve problems. Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction. Use equivalent number sentences involving multiplication and division to find unknown quantities.

Vocabulary Development:

Ones, tens, hundreds, thousands, ten thousands, hundred thousands, millions, value, count, thousandths, hundredths.

Common Assessment Tasks

<table>
<thead>
<tr>
<th>Assessment FOR Learning</th>
<th>Assessment OF Learning</th>
<th>Assessment AS Learning</th>
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Other Resources:
<table>
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<tr>
<th>Warm up</th>
<th>Student Learning Activity (including introduction)</th>
<th>Share / Reflection / Assessment</th>
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<tr>
<td><strong>Team Buzz:</strong></td>
<td>First Steps Diagnostic Task: Read, write and say numbers</td>
<td>Turn &amp; Talk</td>
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<tr>
<td><strong>Chorus Counting:</strong></td>
<td>See pack.</td>
<td>20 Words:</td>
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<td><strong>Place Value Millionaire:</strong></td>
<td>Modifications:</td>
<td>(Class Maths Journal Entry)</td>
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<td><strong>Round Me Off:</strong></td>
<td>Part A listen to the numbers and record them (Six numbers- 716, 805, 1 020, 26 015, 505 014, 23 and 2 tenths)</td>
<td>Strategic questions:</td>
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<td><strong>Mindreader:</strong></td>
<td>Part B: Write numbers in words (as on the sheet)</td>
<td>Based on observations</td>
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<td><strong>Wipe Out:</strong></td>
<td>Part C: Choose a number from the first 4 of Part A. On the back of the sheet, count forwards, starting at that number. (give them about 5 mins to do this)</td>
<td>‘See Saw’ reflection:</td>
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<td></td>
<td>Then, get them to do the same, only this time counting backwards.</td>
<td>In pairs, one person goes first (see) to state something that they learned/recall from today’s lesson/activity. The other person (Saw) then states something they gained from the session. Back to See’s turn. This continues until either See or Saw is unable to recall another fact or aspect of the lesson. Ensure you move among the pairs and encourage use of appropriate terminology. This share activity works very with about 5 minutes to go before recess time. Person with the last given fact goes out first!</td>
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<tr>
<td><strong>Build a Flat</strong></td>
<td>(See Resource Folder)</td>
<td>3-2-1:</td>
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<tr>
<td><strong>Think board</strong></td>
<td>Students to play in pairs. Students take turns rolling dice and ‘make’ that number with MAB blocks. When they get to 10 ones, they can trade it in for a ten. Aim is to be the first to trade in 10 tens for a 100.</td>
<td>(3 things I learnt, 2 things I enjoyed, 1 thing I would like to find out more about)</td>
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<td><strong>Order, Order.</strong> (See Place Value Resource folder on t-drive)</td>
<td>Teacher to choose five numbers appropriate for their students to write at the top of the think board, based on the initial assessment.</td>
<td>Rocket Writing:</td>
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<tr>
<td><strong>Wipe Out</strong></td>
<td>Maths on the Go pg 23</td>
<td>Today I found out...</td>
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<td></td>
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<td>I really liked...</td>
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<td></td>
<td></td>
<td>I’m still not too sure about...</td>
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**Number Line Activity**

Give students a blank number line and a bunch of numbers. They must cut and stick the numbers where they think they should go and label key points along the number line.

**Part 2:** Choose one number from your number line, make it with MAB, and then record with MAB BLM sheets in your book.

**Part 3:** Choose another number (or the same one, up to them) and skip count from it by 2s, 10s, 5s, and student’s choice (eg. 3s or 4s or 9s or whatever)

**Reading Numbers and importance of the zero:**

Get students to write all of the numbers they can find between 100 & 200 that include zeros, then order from biggest to smallest. Vary the difficulty by varying the range and value of numbers. Discuss why the zero is important?

Whilst kids are working, call them up individually and show them cards with the following numbers on them: 17, 364, 702, 3 418, 50 070. Show kids cards and ask them to read the numbers (record on checklist or something).

**The Next/ Previous Number**

**Number Scrolls**

Students work in differentiated groups of 3 or 4- starting number based on ability. Give students appropriate starting number to count on by. Using the constant function, students record the next number. Prompt students to discuss and record: What patterns do you see? What happens after 99? Can you see this happening anywhere else?
to students and ask them to write a number on it that comes between the two numbers. Students are then asked to stand in their correct place between 12 and 32.

Extension: After all the whole numbers are gone keep going. Ask a student to stand between 12 and 13 and ask what number could go here?

### Let's Count:
Have children practise counting silently as you clap a given number of times. Eg Now I want you to count on silently from 254. Clap 5 times. Which number did you end up at? Count back. Students practise in pairs.

### Other:

#### Today's Target:
Number Sense (3-4) pg 20
Make it up so it has place value/counting questions.

#### Order, Order:
See 'Maths on the Go: Book 1' pg 23.  
**What's my Number?**
Choose a child to write down a secret number. Class asks questions to reveal answer.

**Roll the Place:**
See 'Games on the Go Ages:8-10' pg 14.

**Place Value Memory:**
See 'Games on the Go Ages:8-10' pg 36.

**Target 15,287:**

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<th><strong>Pick it Out</strong></th>
<th><strong>Roll the Place – ordering</strong></th>
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| Students pick out or roll a given number of dice to create a number. Students then write these numbers in words. Pull out 4 or 5 depending on the size of the number you want them to make. You pull out a number and students record it in a place value column. Do this until all numbers are out. Highest number = 3 points, 2nd highest = 2 points etc.  

Get the group to order their numbers- highest to lowest, odd & even amounts etc. (Maths on the Go Bk 2 pg52) | **See Pack**  
(Modified version to include whole grade: modify sheet to leave number of digits open for students to decide based on ability level) Prompt questions: What digit do you look to, to decide how to order? Is it always that digit? What about larger numbers? What happens then? |

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<th><strong>Win a Flat</strong></th>
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| Ones and Tens- Place Value Mat  
Using icy pole sticks students in pairs compete to be the first to make 100. Students roll dice and record that as ‘ones’, repeat, record as ‘tens’. They then make this number using icy pole sticks and bundles. Students record these numbers in their Maths Journals. |  

**The Value of 8**
Students go through catalogues and magazines and find as many different numbers with the digit ‘8’ in it. Students cut and paste these numbers down and next to each one, describe what value and use MAB |
| **Number Cards - Ordering** | **99 or Bust**  
(See Pack) |
|---------------------------|----------------|
| **Dice Tower - *Problem Solving**  
(See Problem Solving Folder) | |
| **Salaries - ‘How Much Do You Earn?’**  
See Pack. |
| **Hundredths & Thousandths:**  
As an introduction to hundredths, look at results from a race. Get kids to put times in order. Justify why. Students could then go off and time how long it takes them to do something eg 100m sprint. Get them to collect the data and then order the times from the fastest to the slowest. Prompt questions during reflection: ‘Why do use hundredths when we use stopwatches?’ ‘When else do we use hundredths/thousandths?’ |
<p>| <strong>Final Assessment: Skip Counting</strong> |</p>
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<th><strong>Final Assessment: ‘What I've Learnt About Place Value’</strong></th>
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<td>Students choose a number. They have to record this number in 4 different ways eg. Using MAB, renaming, breaking in PV parts and equations (any way you could make that number), any facts about their number (e.g. even/odd, three digits, tens digit is even, etc.)</td>
<td>Open-ended. After a brainstorm on the ideas explored throughout the unit, students record what they have learnt (e.g. rounding, how high they can count, multiples, hundredths/thousandths, etc.).</td>
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