

Year 3 - Mathematics - Learn from home timetable

Big Idea Concept: Place value

- I can partition 3-digit numbers into hundreds, tens and ones.
- I can partition 3-digit numbers in non-standard ways.
- I can regroup 3-digit numbers when needed as quantities are added or taken away.
- I can represent 3- and 4-digit numbers in a variety of ways.

Australian Curriculum Connection:

NA3.3 Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems.

Monday	Tuesday	Wednesday	Thursday	Friday
Launch and Tune In	Launch and Tune In	Launch and Tune In	Launch and Tune In	Launch and Tune In
<p>Vocabulary focus:</p> <ul style="list-style-type: none"> • What does place value mean? • What do you need to think about in your brain to understand place value? • Why is zero important in place value? • Can we find any examples of place value in nature? 	<p>Play 'Place Value Cards' – 3-digit numbers</p> <ul style="list-style-type: none"> • Remove the 10s and picture cards from a deck of playing cards. The ace can be used as a 1 in this game. You will also need a place value chart. • Place the deck of cards face down. • Players take turns to pick up a card and turn it over. The player must decide where to place the card – either in the ones, tens, or hundreds place. • They add the card to the column on their place value chart. • Card must be placed before another card is drawn from the deck. • Players keep adding cards until all columns are filled on the place value chart. • The winner is the player who makes the largest 3-digit number. 	<p>Play snap or memory with the 3-digit matching cards. Card template is included in the timetable folder.</p> <p style="font-size: small; text-align: center;">Three-digit matching cards: The following cards can be used to play snap, memory or fish with.</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;">323</div> <div style="text-align: center; font-size: x-small;">Three hundred and twenty-three</div> <div style="text-align: center; font-size: x-small;">$20 + 300 + 3$</div> </div>	<p>Play snap or memory with the 3-digit matching cards. Card template is included in the timetable</p> <p style="font-size: small; text-align: center;">Three-digit matching cards: The following cards can be used to play snap, memory or fish with.</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;">323</div> <div style="text-align: center; font-size: x-small;">Three hundred and twenty-three</div> <div style="text-align: center; font-size: x-small;">$20 + 300 + 3$</div> </div>	<p>Play 'Place Value Cards' – 4-digit numbers</p> <ul style="list-style-type: none"> • Remove the 10s and picture cards from a deck of playing cards. The ace can be used as a 1 in this game. You will also need a place value chart. • Place the deck of cards face down. • Players take turns to pick up a card and turn it over. The player must decide where to place the card – either in the ones, tens, hundreds or thousands place. • They add the card to the column on their place value chart. • Card must be placed before another card is drawn from the deck. • Players keep adding cards until all columns are filled on the place value chart. • The winner is the player who makes the largest 4-digit number.

Vocabulary in Mathematics

Students should be able to communicate using the following language: number before, number after, more than, greater than, less than, largest number, smallest number, ascending order, descending order, digit, zero, ones, groups of ten, tens, groups of one hundred, hundreds, groups of one thousand, thousands, place value, round to.

Conceptual Development

Revise use of the Place Value chart to partition numbers into hundreds, tens and ones starting with 3-digit numbers.

Resources:

- Place Value chart – Thousands
- Calculator
- Whiteboard/notebook

Pre-cut

- Tiny ones, tens and hundreds
- Digits 0-9
- Place Value arrows

Adult:

- writes a three-digit number e.g. 189

Student:

1. **Represents** the number using tiny hundreds, tens and ones frames on the place value chart
2. **Places** digit card to show how many hundreds, tens and ones above the columns
3. **Places** the matching place value arrow beneath the chart



4. Ask: *If we added 1 more to this number, which number would change?*

Student:

5. **Adds** a tiny ones frame with one dot to the nine dots
Swaps the 9 and 1 for a ten frame and moves to the tens column

Conceptual Development

Revise use of the Place Value chart to partition 3-digit numbers into hundreds, tens and ones and zero as a place holder.

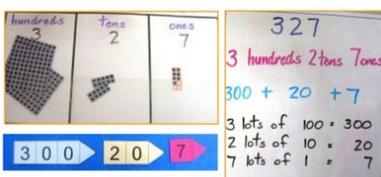
Resources: as for previous lesson

Adult:

writes a three-digit number e.g. 327

Student:

1. **Represents** the number using tiny hundreds, tens and ones.
Writes how many hundreds, tens and ones on whiteboard.
2. Say: *Represent the number in as many ways as you can.*



3. Ask: *What if we take the two tens away?* Represent this number using the tiny hundreds, tens and ones. How would we write this number? Use the place value arrows to check the response.
Ask: *Would the number have the same value if we didn't write the zero?*



4. Reinforce the understanding that zero is used a place value holder. It indicates there is none of a particular quantity and 'holds' the other digits in

Conceptual Development

Revise use of the Place Value chart to partition 3-digit numbers into hundreds, tens and ones using non-standard partitioning.

Resources: as for previous lesson

Adult:

1. Give student a collection of tiny hundreds, tens and ones. Ask them to count by 10s or 100s or trade them in as necessary.
2. [Start with standard partitioning]
Say: *I have made a number using 2 hundreds, 8 tens and 3 ones. What is my number?*

Student:

Makes the number using tiny hundreds, tens and ones and place value arrows to check the answer.
Writes the number using a variety of representations.



3. [Move to non-standard partitioning]
Say: *I have made a number using 15 tens and 3 ones. What is my number?* Support student in trading 10 tens for 1 hundred. Ask student to represent the number in as many ways as they can.

Conceptual Development

Revise standard partitioning and regrouping of 3-digit numbers up to and over 1000.

Resources: as for previous lesson
Rubber bands/paper clip to bundle tiny hundred frames.

Adult:

1. Writes 300 on the whiteboard.

Student:

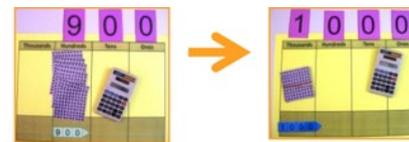
Represents number using tiny hundreds on place value chart.
Enter number on a calculator.



2. Ask student to add 100 more – *what will change?* Ask student to represent this using materials and digits. Use to constant function (+100) on calculator to check answer.



3. Repeat process until you reach 900. Ask: *What will happen if I add 100 more?* Write suggestions on the whiteboard. Model bundling 10 tiny hundreds to make one



Conceptual Development

Revise standard partitioning and regrouping of 4-digit numbers over 1000.

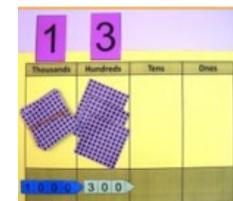
Resources: as for previous lesson
Rubber bands/paper clip to bundle tiny hundred frames.

Adult:

1. Write a four-digit number on the board e.g. 1362.
2. Ask students: *What does the 1 in this number mean?* Represent using a bundle of 10 hundred frames. Place on place value chart. Place the digit to show how many thousands. Find the place value arrow to represent number.



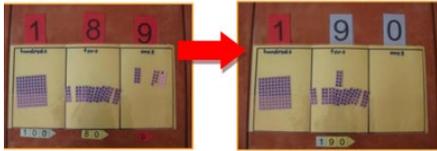
3. Ask: *What does the 3 in this number mean?* Represent using tiny frames. Find the digit and place value arrow.



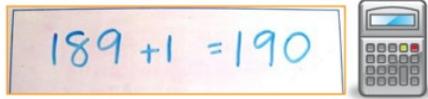
4. Repeat with the final two digits.



Changes the digits and place value arrows to match



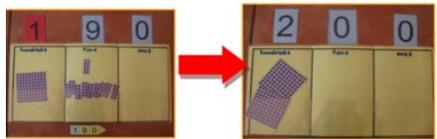
6. Write the number story on a whiteboard/post it. Check the answer with a calculator.



7. Ask: *If we added 10 to the number, which number would change?*

Student:

8. **Adds** a tiny ten frame to the tens column and counts how many.
Swaps ten of the tiny ten frames for a hundred frame and moves to the hundreds column
Changes the digits and place value arrows to match the new number.



9. **Writes** the number story on a whiteboard and checks the answer with a calculator

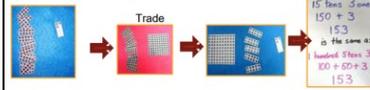


10. Continue with other 3-digit number examples e.g. 389, 689

place e.g. 27 means 2 tens and 7 ones but 207 means 2 hundreds, 0 tens and 7 ones.

5. Continue with other 3-digit number examples e.g. where the number of tens is taken away 438 (take away three tens); 227 (take away two tens); 713 (take away one ten)

Repeat the activity using a range of numbers e.g. 4 tens and 15 ones; 5 hundreds and 12 tens.



thousand. Check on the calculator.

4. Keep adding 100 and record responses on whiteboard, checking using the constant function on calculator.

Source E. DeVries and E. Warren

5. Student selects 4 digit cards and makes the number using tiny frames, digits and place value arrows. Represent number in a variety of ways on whiteboard.

Source: E DeVries, 2008

Learning Journal

Using the deck of playing cards with 10s and picture cards removed student turns over one card at a time to create a 3-digit number (ace is worth 1). Student places one card into each column (ones, tens, hundreds) of the place value chart.

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Learning Journal

Materials needed:

- Tiny ones, tens and hundreds
- place value chart

1. Make the number that has 13 tens and 5 ones. What is it?

Learning Journal

Materials needed:

- Tiny ones, tens and hundreds
- place value chart

1. Make the number that has 18 tens and 9 ones. What is it?

Learning Journal

Using the deck of playing cards with 10s and picture cards removed student turns over one card at a time to create a 4-digit number (ace is worth 1). Student places one card into each column (ones, tens, hundreds, thousands) of the place value chart.

<p>Read the number. Represent the number in a variety of ways – draw tiny hundreds, tens and ones, digits, number sentences.</p>	<p>Read the number. Represent the number in a variety of ways – draw tiny hundreds, tens and ones, digits, number sentences.</p>	<p>Trade 10 tens for 1 hundred. Represent the number in different ways.</p> <p>2. Make the number that has 8 tens and 17 ones. What is it? Trade 10 ones for 1 ten. Represent the number in different ways.</p> <p>3. Make the number that has 2 hundreds and 16 tens. What is it? Trade 10 tens for 1 hundred. Represent the number in different ways.</p>	<p>Trade 10 tens for 1 hundred. Represent the number in different ways.</p> <p>2. Make the number that has 7 tens and 11 ones. What is it? Trade 10 ones for 1 ten. Represent the number in different ways.</p> <p>3. Make the number that has 2 hundreds and 16 tens. What is it? Trade 10 tens for 1 hundred. Represent the number in different ways.</p>	<p>Read the number. Represent the number in a variety of ways –, draw tiny thousands, hundreds, tens and ones, digits, number sentences.</p>
Fluency	Fluency	Fluency	Fluency	Fluency
<p>Materials needed:</p> <ul style="list-style-type: none"> • Tiny ones, tens and hundreds • place value chart • a die <p>Student rolls a die three times to determine the number of ones, tens and hundreds to make a 3-digit number.</p> <p>Student represents number using tiny ones, tens and hundreds on place value chart.</p> <p>Student draws matching picture, words and digits to represent number in a variety of ways.</p> <p>Repeat process to make new numbers.</p> <p>What was the largest number made?</p>	<p>Materials needed:</p> <ul style="list-style-type: none"> • Tiny ones, tens and hundreds • place value chart • a die <p>Student rolls die three times to determine the number of ones, tens and hundreds to make a 3-digit number.</p> <p>Student represents number using tiny ones, tens and hundreds in place value chart.</p> <p>Student draws matching picture, words and digits to represent</p> <p>Repeat process to make new numbers. number in a variety of ways.</p> <p>What was the smallest number made?</p>	<p>Materials needed:</p> <ul style="list-style-type: none"> • Tiny ones, tens and hundreds • place value chart • a die <p>Student rolls die and progressively adds ones as indicated on die to 276 trading 10 ones for tens as needed on the way to 300.</p> <p>Student rolls die and progressively adds tens as indicated on die to 300 trading 10 tens for hundreds as needed on the way to 800.</p>	<p>Materials needed:</p> <ul style="list-style-type: none"> • Tiny ones, tens and hundreds • place value chart • a die <p>Student rolls die and progressively adds ones as indicated on die to 462 trading 10 ones for tens as needed on the way to 500.</p> <p>Student rolls die and progressively adds tens as indicated on die to 520 trading 10 tens for hundreds as needed on the way to 900.</p>	<p>Materials needed:</p> <ul style="list-style-type: none"> • Tiny ones, tens and hundreds • place value chart • a die <p>Student rolls die and progressively adds ones as indicated on die to 617 trading 10 ones for tens as needed on the way to 700.</p> <p>Student rolls die and progressively adds tens as indicated on die to 700 trading 10 tens for hundreds as needed on the way to 1000.</p>