
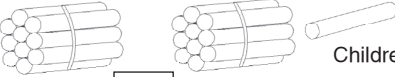
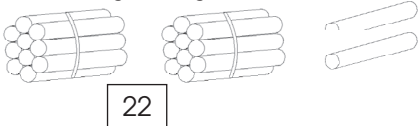



Learning Outcomes

4.5.1	Get to know the numbers between 20-30
4.5.2	Able to count and complete numbers in sequence of 30-40
5.1.1	Use daily conversation to do addition
5.1.2	Combine 2 groups of item and count them one by one to get the total
5.1.3	Combine 2 objects and count forward with one adding number to get the total
5.1.4	Explain mathematical sentences
5.1.5	Use symbol “+” and symbol “=” to do addition
5.2.1	Use daily conversation to talk about condition of subtractions
5.2.2	Separate one group of items from the other and count the difference
5.2.3	Use mathematical sentence to talk about subtraction
5.2.4	Use symbol “-” and symbol “=” in mathematical sentence
6.1.1	Measuring objects according to: a. length b. height c. weight d. quantity
6.1.2	Record measurements
6.1.3	Comparison

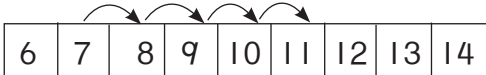
Mathematics 4

Page	Learning Outcomes	Objectives	Teaching steps and activities	Teaching aids
Numbers from 21 - 30 6 7	4.5.1	Children are able to speak out and make sure of digit value within 30.	<p>Pre-learning preparation</p> <p>Teachers can do some revision for the learning outcomes as shown below:</p> <ol style="list-style-type: none"> Plain sequence and backward sequence for the numbers within 20 Able to proceed any numbers within 20 Arrange several numbers from large to small or from small to large. Speak out numbers within 20 and any 2 numbers that are close to. Speak out each number of 11 - 20 which are consisting of several tens and several ones' group or every number can be broken up into several tens and several ones. <p>Should base on age characteristics when teaching numbers within 30 by using direct showing. Ask children to use self-prepared counting stick e.g. small stick to count one by one. Bundle up when counting reach the 10th stick. Count from number 1 until number 30. Teachers need to pay attention to the inspiration and demonstration when counting close to round 10.</p> <p>Let children see numbers and then ask them to speak out the formation on that basis e.g. 25 is formed by 2 tens and 5 ones.</p> <ol style="list-style-type: none"> Children use objects to count from 1-20, then increase gradually until 30. Teachers use mathematical cards to indicate every amount's characteristic and children speak out that number. <div style="text-align: center;">  <p>Children say: "twenty".</p> <div style="border: 1px solid black; padding: 2px 10px; display: inline-block; margin: 0 auto;">20</div> </div> <div style="text-align: center; margin-top: 20px;">  <p>Children say: "twenty- one".</p> <div style="border: 1px solid black; padding: 2px 10px; display: inline-block; margin: 0 auto;">21</div> </div>	Mathematical card Counting sticks



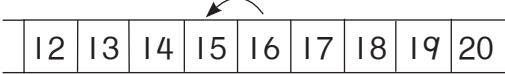
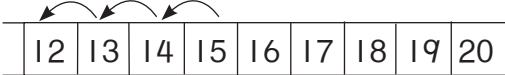
Page	Learning Outcomes	Objectives	Teaching steps and activities	Teaching aids
			<p>Children say: "twenty- two".</p>  <ol style="list-style-type: none"> 2. Teachers display at will any mathematical card ranging from 21 - 30 and ask children to speak out the displayed number. 3. Children speak out the number displaying on the mathematical card and then use objects to indicate those numbers. 4. After showing, can use page 6 and 7 in the textbook as teaching materials to discuss the formation of numbers 21-30. 	
8 9	4.5.1	Children are able to speak out and make sure of digit value within 30.	<ol style="list-style-type: none"> 1. Guide them to use the correct way of writing when teaching numbers from 21 - 30. At first, ask them to write in the air, imitate in the column and finally let them practise individually for number writing in the exercise book. 2. Emphasize that place value of ten should be written equally in the column e.g. when writing number "26", the space between "2" and "6" cannot be too far or too up and down. 3. Then can do the following activity to fulfil the requirements demanded by the learning outcomes. <ol style="list-style-type: none"> a. Teachers speak out any number and children point out that number by using mathematical card. b. Teachers speak out that number and children point it out. c. Teachers speak out any number and children write it out. 4. After activity, guiding children to discuss and complete the exercises in the textbook and the workbook. 	
10	4.5.1	Write number 1-30 in plain sequence.	<ol style="list-style-type: none"> 1. Teachers use flashcards with numbers from 1 - 30 to do the following activity: <ol style="list-style-type: none"> a. Arrange numbers in plain sequence. b. Arrange numbers in backward sequence. c. Teachers display a certain mathematical card with number started from 1 - 30 and ask children to complete from that point in plain sequence. 2. Teachers ask children to write on the blackboard or a piece of paper: 	Mathematical card

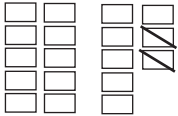

Page	Learning Outcomes	Objectives	Teaching steps and activities	Teaching aids
			a. numbers from 21 - 30 b. write numbers 1 - 30 in plain sequence and backward sequence. 3. After activity, guiding children to discuss and complete exercises in the textbook and the workbook.	
11	5.1.1 5.1.2 5.1.3 5.1.4 5.1.5	Pupils will be able to find one more than a number. Find the total of two numbers Write number sentences for addition.	Note: Teachers must first expose pupils to simple concepts of addition that is numbers having more or less in value when compared to one another. It is important for pupils to grasp this concept of 'more than', 'less than', 'equal to', before real addition is introduced. Step 1 1 Count concrete objects in the classroom. eg: cubes. 2 Ask pupils to count along. Say the numbers. There are 2 cubes. 3 Show that you are adding one more cube and ask question. Let us add one more cube. How many are there now? <div style="text-align: center;">  </div> 4 Teacher shows the concept of addition. Teacher explains that joining in this situation means putting together. Explain: two cubes and one cube make three cubes. 2 and 1 make 3. 2 plus 1 is 3. The sum of 2 and 1 is 3. 5 Write the number sentence: $2 + 1 = 3$ 6 Read the number sentence. <i>Two plus one equals three.</i> 7 Repeat with other pairs of numbers. (addition within 5) Step 2 1 Ask one of the pupil pick up one of the number Cards e.g. 5, shows to the class. <div style="display: inline-block; border: 1px solid black; padding: 2px 5px; margin-right: 5px;">5</div> Pupil: My card is number 5. Teacher : Which card shows a sum of 5?	

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			<p>2 Pupils pick up the cards showing a sum of 5.</p> <p>$4 + 1 = 5$ $3 + 2 = 5$ etc.</p> <p>3 Pupils read the number sentence when they answer.</p> <p>$4 + 1 = 5$ (four plus one equals five) $3 + 2 = 5$ (three plus two equals five) $2 + 3 = 5$ (two plus three equals five) $1 + 4 = 5$ (one plus four equals five) $0 + 5 = 5$ (zero plus five equals five) $5 + 0 = 5$ (five plus zero equals five)</p> <p>4 Continue with other cards and other combinations. All possible combinations must be explored. Note : Pupils must know by heart all possible combinations of two number cards 1 to 10 on the board.</p> <p>Step 3</p> <p>1 Teacher pastes number cards 1 to 10 on the board. 2 Pupils have to pick all possible combinations and paste it near the correct number cards.</p> <p>Eg:</p> <table border="1" data-bbox="1060 711 1375 855"> <tr> <td style="text-align: center;">9</td> <td style="text-align: center;">8</td> </tr> <tr> <td>$3 + 6$</td> <td>$3 + 5$</td> </tr> <tr> <td>$4 + 5$</td> <td>$2 + 6$</td> </tr> <tr> <td>$7 + 2$</td> <td>$7 + 1$</td> </tr> <tr> <td>$5 + 4$</td> <td></td> </tr> </table> <p>3 Carry out the activity in groups. Each group have to find all possible combinations to match the correct number given.</p> <p>Step 4</p> <p>1 Paste several number sentences on the board and ask pupils to read the number sentence loudly. Eg: $5 + 2 = \underline{\quad}$ Five plus two equals seven (Demonstrate by counting on the objects.)</p> <p>Step 3</p> <p>1 Prepare a number track on the floor. 2 Ask a pupil to stand on track no 5.</p> <table border="1" data-bbox="938 1187 1468 1250"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> </tr> </table>	9	8	$3 + 6$	$3 + 5$	$4 + 5$	$2 + 6$	$7 + 2$	$7 + 1$	$5 + 4$		1	2	3	4	5	6	7	8	9	10	
9	8																							
$3 + 6$	$3 + 5$																							
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$7 + 2$	$7 + 1$																							
$5 + 4$																								
1	2	3	4	5	6	7	8	9	10															

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			<p>Pupil : Start at 5. Count on 2 steps. 5 ,6,7, The answer is 7 . Five plus two is seven.</p> <p>3 Repeat with other pairs of number sentence. (Addition within 10) 4 Assess pupils on activity in Workbook 4 page 3.</p> <p>Step 4</p> <p>1 Paste a number strip on the board. (1 - 20) 2 Show the number sentence. $7 + 4 =$ <i>Pupils : seven plus four</i></p> <p>3 Teacher points to the no 7 on the number strip. Start at 7. 4 Draw 4 arrows to show the movement (4 steps). Count on 4 steps. 7 , 8 , 9, 10, 11.</p>  <p>Pupils : Seven plus four equals eleven.</p> <p>5 Repeat with other number sentence. 6 Ask pupils to memorize the basic facts by heart.</p> <p>Step 5</p> <p>1 Provide pupils a number strip individually. (No 1 - 20) 2 Assess pupils on activity in Textbook 11 /12/ 13 and Workbook pg 11,12,13.</p> <p>Step 6</p> <p>1 Teacher asks pupils to count the sticks . (12 sticks) 2 Let us count in ones. 1, 2, 3 ,..... 12. The last number is 12. 3 Teacher puts 10 sticks together. (count in ones) <i>I put 10 sticks together to make a ten.</i> <i>Let us count the sticks.</i> <i>There are 1 tens and 2 ones.</i> <i>1 tens and 2 ones is 12.</i> <i>There are 12 sticks.</i></p> <p>4 Repeat the activity with different number of sticks. (number of sticks: 11 to 30)</p>	Ice cream sticks.

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<p>16 17 18</p>	<p>5.2.1 5.2.2 5.2.3</p>	<p>Subtract two numbers without regrouping: a 1-digit number from a 1-digit number</p> <p>Pupils will be able to subtract two numbers without regrouping:</p> <ul style="list-style-type: none"> • a 1- digit number from a 2-digit number • a 2- digit number from a 2-digit number. 	<p>Note :</p> <ul style="list-style-type: none"> * Emphasize that subtracting one from a number involves counting back in ones <p>Concepts : one less than a number means the number gets smaller by one. : ones less than a number involves subtracting one from the number.</p> <p>Step 1</p> <ol style="list-style-type: none"> 1 Ask 2 pupils to come forward. Ali holds 4 pencils and Bakar holds 3 pencils. 2 Guide pupils to form sentences using the phrase 'one less than ' Ali has 4 pencils. Bakar has 3 pencils Bakar has 1 pencil less than Ali. One less than 4 is 3. 3 Teacher writes the number sentence on the board $4 - 1 = 3$ 4 Repeat the activity with a different number of objects and different pupils. <p>Step 2</p> <p>Note : Introduce the vocabulary for subtraction one at a time to avoid confusion. Eg: take away, difference, remove, less than etc.</p> <p>Concepts : Subtraction is taking away objects from a group of objects Subtraction is finding the difference between two numbers.</p> <ol style="list-style-type: none"> 1 Put 13 cards on the board. Take away 6 cards. There are 13 cards. I take away 6 cards. (Teacher counts one by one the remaining cards, 1, 2, 3,7) There are 7 cards left. 2 Teacher writes the number sentence on the board. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $13 - 6 = 7$ </div> <p>Teacher : Thirteen minus six equals seven</p> <ol style="list-style-type: none"> 3 Repeat the activity with other objects and different numbers. Eg $18 - 14 = 4$ 	<p>Pencils</p> <p>Cards</p>

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			<p>Step 3</p> <ol style="list-style-type: none"> 1 Refer to textbook pg 16, 17, 18. 2 Guide the pupils. Eg: $3 - 2 =$ There are three ice cream.  Take away two ice cream.  (Teacher cross 2 ice creams) There is one ice-cream left. 3 Pupils write the answer . $3 - 2 = 1$ 4 Continue with activities in workbook pg 16, 17, 18. 	
19 20	5.2.4		<p>Step 1 :</p> <ol style="list-style-type: none"> 1 Paste the number strip on the board. Ask pupils : <i>What is 1 less than 16?</i> 2 Draw an arrow on the number strip to show 1 less than 16.  <i>15 is 1 less than 16, or 1 less than 16 is 15.</i> 3 Write the number sentence on the board and ask pupils to read. $16 - 1 = 15$ <i>Sixteen minus one equals fifteen.</i> 4 By using the same number strip, ask pupils: <i>What is 3 less than 15 ?</i>  <i>12 is 3 less than 15 , or 3 less than 15 is 12.</i> 5 Write the number sentence on the board and ask pupils to read. $15 - 3 = 12$ <i>Fifteen minus three is twelve.</i> 6 Repeat the activity with different numbers. 	

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			<p>Step 2</p> <p>1 Teacher writes the number sentence on the board. $18 - 12 =$</p> <p>2 Teacher shows the cubes.</p>  <p>Take away 2 ones</p>  <p>Take away 1 tens</p> <p>3 Teacher : How many tens and ones are left? Pipils : 0 tens and 6 ones. Teacher : So, 18 minus 12 equals 6.</p> <p>4 Teacher shows how to use the standard written method.</p> <table border="1" data-bbox="923 789 1105 901"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8</td> </tr> <tr> <td>- 1</td> <td>2</td> </tr> <tr> <td></td> <td>6</td> </tr> </tbody> </table> <table border="1" data-bbox="1158 789 1340 901"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8</td> </tr> <tr> <td>- 1</td> <td>2</td> </tr> <tr> <td></td> <td>6</td> </tr> </tbody> </table> <p>First, subtract the ones. Then, subtract the tens 8 ones - 2 ones = 6 ones 1 tens - 1 tens = 0 Tens So, $18 - 12 = 6$</p> <p>5 Discuss the activities in textbook pg 19 , 20 . 6 Workbook activities in workbook pg 19, 20.</p>	Tens	Ones	1	8	- 1	2		6	Tens	Ones	1	8	- 1	2		6	cubes
Tens	Ones																			
1	8																			
- 1	2																			
	6																			
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- 1	2																			
	6																			

Page	Learning Outcomes	Objectives	Teaching steps and activities	Teaching aids
Numbers 31 - 40 21	4.5.2	Children are able to speak out and make sure digit value within 40.	<p>Pre-learning preparation</p> <p>Teachers let children do some revision for the following learning outcomes:</p> <ol style="list-style-type: none"> a. Plain sequence and backward sequence for numbers within 30. b. Able to continue counting any number within 30. c. Arrange a few numbers from big to small and from small to big. d. Speak out 2 numbers within 30 that are close to a certain number. <ol style="list-style-type: none"> 1. Teachers use objects showing to count from 1 - 30. Children see and count at the same time by arranging 10 in one group side by side and then increase the number gradually: " 31, 32, 33...40. This is to let children see that 40 has 4 tens. 2. Teachers show at will any mathematical cards from 31 - 40 and ask children to speak out the displayed number. 3. Teachers speak out one number/display mathematical card and children use object to indicate digit value. 4. Let children use mathematical card started with 1 - 40 to do the following exercise: <ol style="list-style-type: none"> a. Arrange in plain sequence b. Arrange in backward sequence c. Teachers display any number of mathematical card within 40, then ask children to continue from that point in plain sequence. 5. After activity, using materials in the textbook to do discussion and Q&A session. 	Mathematical card
22 23 24	4.5.2	Able to count and complete number within 40 in sequence.	<ol style="list-style-type: none"> 1. Teachers use counting sticks or other objects to guide children to say every number of 31 - 40 is consisting of several tens and several ones or every number from 31 - 40 can be divided into several tens and several ones. 	

Page	Learning Outcomes	Objectives	Teaching steps and activities	Teaching aids
			Later, guide children to use different objects to measure ribbon which is in the textbook to get a conclusion: use different objects to measure will get different answers.	
26	6.1.1 6.1.2 6.1.3	1. Learn to use different objects to do measurement. 2. Compare the result of measurement.	1. At first, teachers use screw, pin and shuttlecock to do object measurement activity. 2. Let children try to use the 4 items above to do measurement. 3. Compare the length of different objects and try to figure out which one is longer and which one is shorter? 4. After the activity, combining material in the textbook and workbook to do discussion and Q&A session with children.	Screws Pins Buttons Shuttlecocks
27	6.1.1 6.1.2	Learn to measure the height of objects.	1. Teachers use square-building blocks to do measurement of certain items in the classroom. Teachers explain and at the same time demonstrate to children how to count building blocks. 2. Guide children to use block buildings to measure height of objects in pair: one measure and the other one record. 3. After the activity, guiding children to do discussion and Q&A session according to the textbook.	Building blocks
28	6.1.1 6.1.3	Children can compare different heights of object.	1. Teachers can write / draw / paste 10 items on the blackboard. (Some are taller than children and some are tiny than children.) 2. Let children answer: circle things higher than children and cross out items lower than children. 3. Teachers ask questions to guide children to say the other items which are higher or shorter than children . 4. After the activity, combining exercises in the textbook and workbook to do discussion and Q&A session with children. 1. Prepare two different types of basket, let children carry for a while, then say which one is heavier. 2. Prepare 2 baskets to let children put different quantities of fruit. And then let them say which one is lighter. 3. Draw / paste pictures of elephant and mouse, then ask children which one is light and which one is heavy? 4. Teachers ask questions to guide children to say items that are heavy and light in their daily life and the surrounding	Objects or pictures

Thematic Approach - Mathematics 4

