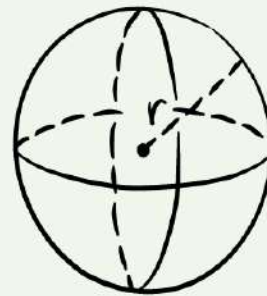
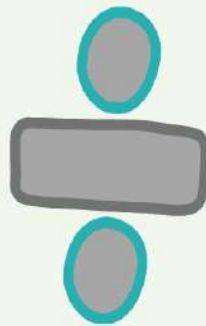
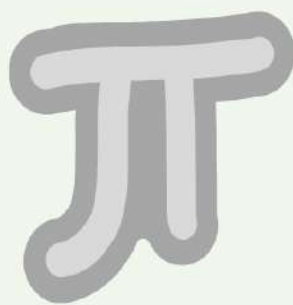


MathStep 4

(Revised/ SNC Version)



$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$V = \frac{4}{3} \pi r^3$$

Lesson Planner

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LearningWell

Unit 1: Numbers to 100 000

Suggested Number of Lessons: 3 to 4

Lesson 1

Objective(s): Read and write numbers up to 100 000 in numerals and words
Identify the place value of numbers up to 100 000

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks

Introduction (5 min)

Recall counting numbers from 1 to 9999 with the children. Refer to pages 8-9 for a mild reinforcement.

Teaching procedure (20 min)

Discuss the opening page with the class. Ask children if they have ever been to a stadium to watch a match. Have they ever wondered how many people were at the stadium or a cinema hall or an auditorium? Allow them to share their experience.

Recap place value up to 4-digits with the children. Tell them that when we add one more to 9999, we get 10 000 (ten thousand). Reiterate the fact that 10 ones make 1 ten, 10 tens make 1 hundred, 10 hundreds make 1 thousand and 10 thousands make 1 ten thousand.

Show the place values on the board and write the number 2148 under them:

Ten Thousands (TTh)	Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
1	3	5	3	8

Tell them that 1 is in the ten thousands place and its value is 10 000. 3 is in the thousands place and its value is 3000. 5 is in the hundreds place and its value is 500. 3 is in the tens place and its value is 30. Lastly, 8 is in the ones place and its value is 8. Write the number 25 076 on the board and ask children to tell you place and value of each digit in the number. Discuss a few more examples. Refer to the textbook pages 12 to 14 for reinforcement.

Task (12 min)

Exercise 1, Question 1	Children should read the numbers in figures and match them to their correct word form. The first one is done for them.
Exercise 1, Question 2	Children should count and write the correct number in figures and words.
Exercise 1, Question 3	Children should fill in the blanks by noticing the place value of each digit in the given numbers.

Homework

Ask children to complete Exercise 1, Question 3, 4 and 5.

Lesson 2

Objective(s): Compare two numbers up to 5 - digits using symbols “<”, “>”, or “=”.
Write the given set of numbers in ascending and descending order
(numbers up to 5-digit).

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap comparing up to 3-digit and 4-digit numbers in terms of thousands, hundreds, tens and ones. Write a few 3-digit numbers on the board and ask the children to compare the numbers using the symbols > and <. Write a few 4-digit numbers on the board and ask the children to arrange them in ascending/descending order. Ask the children to attempt the simple tasks on pages 9 and 10 for reinforcement.

Teaching procedure (20 min)

Write the following numbers on the board. Also draw empty boxes below each number:

13220	12413	15057

Ask the children to compare the numbers and tell you which is the largest and which is the smallest number. Now ask them to arrange the numbers in ascending order with you. Since these are 5-digit numbers, emphasise that we always start comparing from the ten thousands, then the thousands, then the hundreds, then the tens and lastly the ones. Repeat the activity with more numbers. Ask them to arrange numbers in descending order. Once again start comparing from the ten thousands. Observe that pupils are able to arrange numbers according to the orders asked for. Refer to the textbook pages 19 to 21 for reinforcement.

Task (10 min)

Exercise 3, Question 3	Children should arrange each set of numbers in ascending order and write in the boxes. The first one is done for them.
Exercise 3, Question 4	Children should arrange each set of numbers in descending order and write in the boxes. The first one is done for them.

Homework

Ask children to complete Exercise 3, Questions 1 and 2.

Lesson 3

Objective(s): Round off a whole number to the nearest 10, 100 and 1000

Teaching Resources: Wall chart of a number line

Introduction (10 min)

Recall rounding off numbers to the nearest 10 and 100 with the children which they had covered in Grade 3. Refer to page 24 and 25 for a quick recap. Ask them how do we round off a number at midpoint. Confirm that we always round it off to the upper ten or hundred. Also ask children to do the small recap task on page 11.

Teaching procedure (15 min)

Write the number 3100 on the board and draw a number line labelled 3000 to 4000. Mark the number 3100 on the number line. Highlight that the upper thousand is 4000 and a lower thousand is 3000. Tell the children when rounding off to the nearest 1000, we always look at the digit in the hundreds place.

- If the digit is 0, 1, 2, 3 or 4, we round off the number to the lower thousand.
- If the digit is 5, 6, 7, 8 or 9, we round off the number to the upper thousand.

Ask the children what will be the value of 3100 when rounded off to the nearest 1000. The children should say 3000.

Repeat the activity with the number 3700 and then 3500. Tell the children that if a number is at the midpoint between the upper and lower thousands, it is rounded off to the upper thousand.

Refer to page 26-28 for reinforcement.

Task (10 min)

Ask children to complete Exercise 4, Questions 1 and 2.

Homework

Ask children to complete Exercise 4, Question 3.

Unit 2: Addition and Subtraction

Suggested Number of Lessons: 8 to 9

Lesson 1

Objective(s): Recall addition within 10 000

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks.

Introduction (5 min)

Recall addition within 10 000 with the children.

Teaching procedure (20 min)

Write the sentence $245 + 129$ on the board and ask the children to add vertically and tell you the total.

Write another sentence $2636 + 3155$ on the board. Ask the children to add them vertically. Ask the children if the sum involves carrying or not. Give a few more examples on the board. Ensure that the children are able to add easily.

Task (10 min)

Recap Questions 1 to 3	Children should be able to attempt the questions easily.
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Homework

Ask children to complete Question 4 of the Recap section.

Lesson 2

Objective(s): Adding numbers up to 5-digit without carrying


Teaching Resources: Base-10 blocks or counters

Introduction (8 min)

Recap place values (ones, tens, hundreds, thousands and ten thousands) and addition of 4-digit numbers without carry over with the children.

Teaching procedure (20 min)

Introduce addition of 5-digit numbers to the children. Recall the place values up to ten thousands with the children then write the following sum on the board:

TTh	Th	H	T	O		TTh	Th	H	T	O		
	4	4	1	6	3		4	4	1	6	3	
+		3	4	0	4		+		3	4	0	4
							4	7	5	6	7	

Begin adding from the ones, the tens, the hundreds, the thousands and then the ten thousands. Repeat the activity by adding 16 056 and 10 212. Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1, Question 1 parts a to c	Children should observe each set of numbers and add them. Remind them to start adding from the ones. The first one is done for them.
---	--

Homework

Exercise 1, Question 1 parts d to f	Children should observe each set of numbers and add them. Remind them to start adding from the ones.
---	--

Lesson 3

Objective(s): Adding numbers up to 5-digit with carry

Teaching Resources: Base-10 blocks

Introduction (5 min)

Recap addition of 4-digit numbers with carry with the children.

Teaching procedure (20 min)

Introduce the children to addition of 5-digit numbers with carry. Write the following sum on the board:

	TTh	Th	H	T	O
	3	1	5	3	1
+		4	7	7	6
					7

	TTh	Th	H	T	O
			1		
	3	1	5	3	1
+		4	7	7	6
				0	7

	TTh	Th	H	T	O
		1	1		
	3	1	5	3	1
+		4	7	7	6
			3	0	7



	TTh	Th	H	T	O
		1	1		
	3	1	5	3	1
+		4	7	7	6
		6	3	0	7



	TTh	Th	H	T	O
		1	1		
	3	1	5	3	1
+		4	7	7	6
	3	6	3	0	7

Solve the above sum step wise.

Add the ones: 1 one + 6 ones = 7 ones.

Add the tens: 3 tens + 7 tens = 10 tens. Remind the children that 10 tens make 1 hundred. Regroup as 1 hundred and 0 tens. Carry over 1 hundred to the hundreds column.

Add the hundreds: 1 hundred + 5 hundreds + 7 hundreds = 13 hundreds. Remind children that 10 hundreds make 1 thousand. Regroup as 1 thousand and 3 hundreds. Carry over 1 thousand to the thousands column.

Add the thousands: 1 thousand + 1 thousand + 4 thousands = 6 thousands.

Add the ten thousands: 3 ten thousand + 0 ten thousand = 3 thousands.

So, $31\,531 + 4\,776 = 36\,307$

Repeat the activity with another example. Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1, Question 1 parts g to i	Children should observe each set of numbers and add them. Remind them to start adding from the ones and remember to add the carry.
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Homework

Exercise 1, Question 1 parts j to l	Children should observe each set of numbers and add them. Remind them to start adding from the ones and remember to add the carry.
---	--

Lesson 4

Objective(s): Solve real life number stories involving addition of numbers up to 5 - digit

Teaching Resources: Base-10 blocks

Introduction (5 min)

Recap addition of 5-digit numbers (with and without carry) with the children.

Teaching procedure (30 min)

Write the following story on the board: A supermarket sells 12 345 bottle of juice on Monday. It sells 13 285 bottles of juice on Tuesday. How many bottles does it sell altogether?

Ask the children to solve the word problem with you on the board. Make sure they understand the question and then tell you what is required to be found. Observe whether children have grasped the idea of carrying constructively.

Write another example, $26\,305 + 33\,775$ on the board and solve it with the children.

Refer to the examples in the textbook and solve them with the children in class.

Homework

Exercise 2, Questions 1 to 3	Children should read and understand each word problem. Remind them to start adding from the ones and remember to add the carry.
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Lesson 5

Objective(s): Revise subtracting within 10 000

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks.

Introduction (5 min)

Recall subtraction within 10 000 with the children.

Teaching procedure (22 min)

Write the sentence $3659 - 336$ on the board and ask the children to subtract and tell you the difference. Write another sentence $5063 - 1646$ on the board. Ask the children to subtract them vertically. Give a few more examples on the board. Ensure that the children are able to subtract easily.

Task (10 min)

Recap Questions 1 to 3	Children should be able to attempt the questions easily.
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Homework

Ask children to complete Question 4 of the Recap section.

Lesson 6

Objective(s): Subtracting 5-digit numbers without borrowing

Teaching Resources: Base-10 blocks or counters

Introduction (7 min)

Recap place values (ones, tens, hundreds, thousands and ten thousands) and subtraction of 4-digit numbers without borrowing with the children.

Teaching procedure (20 min)

Introduce subtraction of 5-digit numbers to the children. Recall the place values up to ten thousands with the children then write the following sum on the board:

TTh	Th	H	T	O		TTh	Th	H	T	O		
	5	4	8	6	6		5	4	8	6	6	
	-		3	7	2	4	-		3	7	2	4
<hr/>						<hr/>						
						5 1 1 4 2						

Begin subtracting from the ones, the tens, the hundreds, the thousands and then the ten thousands. Repeat the activity by subtracting 23 124 from 65 785. Refer to the textbook for reinforcement.

Task (10 min)

Exercise 3, Question 1 parts a to c	Children should observe each set of numbers and subtract them. Remind them to start subtracting from the ones. The first one is done for them.
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Homework

Exercise 3, Question 1 parts d to f	Children should observe each set of numbers and subtract them. Remind them to start subtracting from the ones.
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Lesson 7

Objective(s): Subtracting 5-digit numbers with borrowing

Teaching Resources: Base-10 blocks

Introduction (5 min)

Recap subtraction of 5-digit numbers with borrowing with the children.

Teaching procedure (20 min)

Introduce subtraction of 5-digit numbers with borrowing to the children. Write the following sum on the board:

TTh	Th	H	T	O
5	3	6	3	7
-	6	2	4	3
				4

TTh	Th	H	T	O
5	3	6	13	7
-	6	2	4	3
			9	4

TTh	Th	H	T	O
5	3	5	13	7
-	6	2	4	3
		3	9	4



TTh	Th	H	T	O
4 5	13	5 6	13	7
-	6	2	4	3
	7	3	9	4

TTh	Th	H	T	O
4 5	13	5 6	13	7
-	6	2	4	3
4	7	3	9	4

Solve the above sum step wise.

Subtract the ones: 7 ones – 3 ones = 4 ones.

Subtract the tens. 3 tens are smaller than 4 tens, so regroup 1 hundred as 10 tens. We have 10 tens and 3 tens which is 13 tens. 13 tens – 4 tens = 9 tens.

After regrouping we have 5 hundreds left. Subtract the hundreds. 5 hundreds – 2 hundreds = 3 hundreds.

Subtract the thousands: 3 thousands are smaller than 6 thousands, so regroup 1 ten thousand as 10 thousands. We have 10 thousands and 3 thousands which is 13 thousands. 13 thousands – 6 thousands = 7 thousands.

After regrouping we have 4 ten thousands left. Subtract the ten thousands: 4 ten thousands – 0 ten thousands = 4 ten thousands. So, $53\,637 - 6243 = 47\,394$.

Repeat the activity with $60\,251 - 26\,473$. Refer to the textbook for reinforcement.

Task (10 min)

Exercise 3, Question 1 parts g to i	Children should observe each set of numbers and subtract them. Remind them to start subtracting from the ones. The first one is done for them.
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Homework

Exercise 3, Question 1 parts j to l	Children should observe each set of numbers and subtract them. Remind them to start subtracting from the ones. The first one is done for them.
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Lesson 8

Objective(s): Solve real life situations involving subtraction of numbers up to 5- digit

Teaching Resources: Base-10 blocks

Introduction (10 min)

Recap addition of 5-digit numbers (with and without borrowing) with the children.

Teaching procedure (25 min)

Write the following story on the board: Mr Shah has 35 260 apples. He sells 12 456 apples. How many apples are left?

Ask the children to solve the word problem with you on the board. Make sure that the children understand the word problem and tell you what is required. Observe whether children have grasped the idea of borrowing constructively.

Write another example, $50\,342 - 26\,215$ on the board and solve it with the children. Ask children to be careful when they are borrowing and to make changes accordingly.

Refer to the examples in the textbook and solve them with the children in class.

Homework

Exercise 4, Questions 1 to 3	Children should read and understand each word problem. They should then solve them. Remind children to start subtracting from the ones and be careful when they are borrowing.
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Unit 3: Multiplication and Division

Suggested Number of Lessons: 15 to 16

Lesson 1

Objective(s): Revise multiplication tables of 2 till 10

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks.

Introduction (5 min)

Recap tables of 2 to 10 with the children.

Teaching procedure (20 min)

Write a few multiplication statements on the board and ask children to complete them with you. For example, $4 \times \underline{\quad} = 12$, $3 \times 7 = \underline{\quad}$, $2 \times 9 = \underline{\quad}$, $5 \times \underline{\quad} = 40$, $6 \times 6 = \underline{\quad}$, $7 \times \underline{\quad} = 56$, etc.

Encourage children to solve the statements with you on the board. You can also ask them to demonstrate the multiplication sentences on the board using stars, circles, etc.

Repeat the activity with 2-digit multiplication such as 45×2 , 16×5 and 33×6 .

Write the following word problem on the board: Sara has 8 bags. Each bag has 13 blocks. How many blocks are there altogether? Solve the word problem with the children.

Ensure that the children have grasped the concept of multiplication well.

Task (10 min)

Recap Question 1	Children should be able attempt the questions easily.
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Homework

Ask children to complete Recap, Questions 2 and 3.

Lesson 2

Objective(s): Multiply 3-digit numbers by 1 - digit number

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap the tables of 2 to 10 with the children.

Teaching procedure (20 min)

Before proceeding, recap multiplying a 2-digit number with a 1-digit number.

Write the following on the board:

$$\begin{array}{r} \text{T O} \\ 23 \\ \times 4 \\ \hline \\ \hline \end{array}$$

Solve the above sum with the children stepwise. First multiply the ones and then the tens. Repeat with another example: 16×7 .

Introduce multiplying a 3-digit number by a 1-digit number. Write the following on the board:

$$\begin{array}{r} \text{H T O} \\ 152 \\ \times 4 \\ \hline \\ \hline \end{array}$$

Solve the sum stepwise with the children. First multiply the ones, then the tens and finally the hundreds. Remind children that whenever there is a carry over, they have to add it otherwise their calculation will be incorrect. Repeat with another example: 241×3

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1 Question 1 parts (d), (e) and (i)	Children should be able attempt the questions easily.
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Lesson 3

Objective(s): Multiply 4-digit numbers by 1 - digit number

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap multiplying 3-digit numbers by a 1-digit number.

Teaching procedure (20 min)

Recap multiplying a 3-digit number with a 1-digit number. Write the following sum on board and solve it with the children: 237×5

Introduce multiplying a 4-digit number by a 1-digit number. Write the following on the board:

$\begin{array}{r} \text{Th H T O} \\ 1352 \\ \times \quad 3 \\ \hline \\ \hline \end{array}$
--

Solve the sum stepwise with the children. First multiply the ones, then the tens, then the hundreds and finally the thousands. Remind children that whenever there is a carry over, they have to add it otherwise their calculation will be incorrect. Repeat with another example: 2281×5

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1, Question 1 parts (j), (k), and (l)	Children should be able to attempt the questions easily.
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Lesson 4 and 5

Objective(s): Multiply up to 5-digit numbers by 2 - digit numbers

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap multiplying 2- digit, 3-digit and 4-digit numbers by a 1-digit number.

Teaching procedure (20 min)

Recap multiplying a 2- digit, 3-digit and 4-digit number with a 1-digit number.

Introduce multiplying a 2-digit number by a 2-digit number. Write the following on the board:

$\begin{array}{r} \text{T O} \\ 22 \\ \times 13 \\ \hline \\ \hline \end{array}$
--

Solve the sum stepwise with the children. Explain to the children multiplying by a 2-digit number means that we first multiply the whole number by ones and then by tens of the multiplier. Remind children that whenever there is a carry over, they have to add it otherwise their calculation will be incorrect. Repeat with another example: 33×12 .

Repeat the activity with a 3-digit number: 231×13

Then repeat the activity with a 4-digit number: 2153×15

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1, Question 1 parts (a), (b), (f), (m), (n)	Children should be able to attempt the questions easily.
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Homework

Ask children to complete Exercise 1, Question 1 parts (c), (g), (h), (o) and (p).

Lesson 6

Objective(s): Multiply up to 5-digit numbers by 3 - digit numbers

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap multiplying 2- digit, 3-digit and 4-digit numbers by a 2-digit number.

Teaching procedure (20 min)

Recap multiplying a 2- digit, 3-digit and 4-digit number with a 2-digit number.

Introduce multiplying a 3-digit number by a 3-digit number. Write the following on the board:

			H	T	O	
			3	2	2	
			<u>x</u>	<u>1</u>	<u>1</u>	<u>3</u>

Solve the sum stepwise with the children. Explain to the children multiplying by a 3-digit number means that we first multiply the whole number by ones, then by tens and then by hundreds of the multiplier. Remind children that whenever there is a carry over, they have to add it otherwise their calculation will be incorrect. Repeat with another example: 303×214 .

Repeat the activity with a 4-digit number: 3053×215

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1, Question 1 parts (q), (r) and (s)	Children should be able to attempt the questions easily.
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Homework

Ask children to complete Exercise 1, Question 1 parts (t), (u), (v) and (w).

Lesson 7

Objective(s): Solve real life situations involving multiplication of numbers up to 5-digit by a number up to 2-digit.

Teaching Resources: Base-10 blocks

Introduction (5 min)

Recap the tables of 2 to 10 with the children. Also recap multiplication of 2-digit, 3-digit and 4-digit numbers by a 1-digit and a 2-digit number.

Teaching procedure (20 min)

Write the following story on the board: Mr Ali has a box that has 25 balls. How many balls are there in 20 such boxes?

Ask the children to solve the word problem with you on the board. Observe whether children have grasped the idea of multiplication constructively.

Write another example on the board: There are 1258 plants in an orchard. How many plants are there 62 orchards? Solve it with the children.

Refer to the examples in the textbook and solve them with the children in class.

Task (10 min)

Exercise 2, Questions 1, 3 and 4	Children should read and understand each word problem and then attempt to solve them.
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Homework

Ask children to complete Exercise 2, Questions 2, 5, 6 and 7.

Lesson 8

Objective(s): Revise division by 1-digit numbers

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks.

Introduction (5 min)

Recap tables of 2 to 10 with the children.

Teaching procedure (20 min)

Write the following statements on the board and solve them with the children: $27 \div 3 = \underline{\quad}$, $48 \div 6 = \underline{\quad}$, $15 \div 5 = \underline{\quad}$, $40 \div 8 = \underline{\quad}$, $81 \div 9 = \underline{\quad}$.

Encourage children to solve the statements with you on the board. You can also ask them to demonstrate the division sentences on the board using stars, circles, etc.

Write the following word problem on the board: There are 56 sweets. Atif divides them equally among 7 children. How many sweets does each child get? Solve the word problem with the children.

Ensure that the children have grasped the concept of division well.

Task (10 min)

Recap Question 1	Children should be able attempt the questions easily.
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Homework

Ask children to complete Recap, Questions 2 and 3.

Lesson 9 and 10

Objective(s): Divide up to 4-digit number by 1 - digit number

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap the tables of 2 to 10 with the children.

Teaching procedure (30 min)

Write on board: $48 \div 4$

Ask the children to tell you the answer. Discuss a few more examples.

Now write the following on the board:

$$\begin{array}{r} 21 \\ 2 \overline{) 43} \\ \underline{4} \\ 03 \\ \underline{2} \\ 1 \end{array}$$

Tell them that in the above case the answer is 21 R 1. Give a few more examples with a non-zero remainder and solve them on the board with them.

Similarly write the following sum on the board and solve it with the children: $257 \div 5$. Give another example where the remainder is zero.

Once 3-digit number division is clear give an example of dividing a 4-digit number: $4531 \div 3$. Give another example where the remainder is zero.

Refer to the textbook for reinforcement.

Homework

Ask children to complete the following questions:

- (a) $124 \div 3$ (b) $260 \div 4$ (c) $368 \div 5$ (d) $1687 \div 3$ (e) $2580 \div 6$ (f) $3301 \div 7$

Lesson 11 and 12

Objective(s): Divide up to 4-digit numbers by 2-digit numbers

Teaching Resources: Base-10 blocks or counters

Introduction (5 min)

Recap division of number up to 4-digits with 1-digit numbers.

Teaching procedure (20 min)

Now that children are familiar with division by a 1-digit number, introduce division by 2-digit numbers to the children.

Write the following on the board:

$$\begin{array}{r} 4 \\ 13 \overline{) 56} \\ \underline{52} \\ 4 \end{array}$$

Solve the sum with the children on the board. Repeat with another example with zero remainder.

Now write the following on the board and solve it: $240 \div 12$. Use the vertical method and solve the above sum with the children stepwise. Repeat with another example: $350 \div 11$.

Introduce dividing 4-digit number by a 2-digit number to the children by using this example: $2522 \div 13$. Repeat with the following example: $2185 \div 14$.

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 3, Question 1 parts (a) to (c)	Children should be able to solve the division sums using the vertical method.
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Homework

Ask children to complete Exercise 3, Question 1 parts (d) to (f).

Lesson 13

Objective(s): Solve real life situations involving division of numbers up to 4 -digit by a number up to 2-digit.

Teaching Resources: Base-10 blocks

Introduction (5 min)

Recap division by 1-digit number and 2-digit number with the children.

Teaching procedure (30 min)

Write the following story on the board: Sara has 1331 flowers. She places them equally in 11 vases. How many flowers are there in each vase?

Ask the children to solve the word problem with you on the board. Observe whether children have grasped the idea of division constructively.

Write another example on the board: There are 368 oranges. Ahmed packs 15 oranges in one bag. How many bags does he pack? How many oranges are left? Solve it with the children.

Refer to the examples in the textbook and solve them with the children in class.

Homework

Exercise 4, Questions 1 to 3	Children should read and understand each word problem. They should then be able to solve the questions easily.
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Lesson 14

Objective(s):

- Recognize a given increasing and decreasing pattern by stating a pattern rule.
- Complete the given increasing & decreasing number sequence

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks.

Introduction (5 min)

Recap tables of 2 to 10 with the children.

Teaching procedure (20 min)

Write the numbers 1 to 15 on the board in multiples of 3: 3, 6, 9, ... Ask the children what pattern can they see in the numbers. Each number is 3 more than the previous number.

Similarly write a sequence of numbers in multiples of 5 and 6. Ask the children to tell you the rule in each sequence. Lead them on to the concept of patterns and sequencing.

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 5, Question 1 parts (a) to (c)	Children should be able attempt the questions easily.
---	---

Homework

Ask children to complete Exercise 5, Question 1 parts (d) to (h).

Lesson 15

Objective(s):

- Describe the pattern found in a given table or chart.
- Complete the given increasing & decreasing number sequence

Teaching Resources: Countable items such as balls, blocks, etc. Base-10 blocks. 100 numbers chart.

Introduction (5 min)

Recap tables of 2 to 10 with the children.

Teaching procedure (20 min)

Present the chart to the children and highlight all the multiples of 5 on the chart. Ask the children if they are able to recognise the rule. Similarly highlight another pattern and ask the children.

Write the following on the board: Amna makes 5 bracelets in one day. How many bracelets will she make in 12 days?

Solve the above question by making a chart on the board.

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 5, Question 2	Children should be able attempt the question easily.
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Homework

Ask children to complete Exercise 5, Question 3.

Unit 4: Factors and Multiples

Unit 5: Fractions

Lesson 1: Comparing unlike fraction

Objectives: Recognize like and unlike fractions, Compare two unlike fractions by converting them to equivalent fractions with the same denominators

Teaching Resources: - Book pg. 93,94,95,96,97,98,99, teacher's board , A4 size computer papers

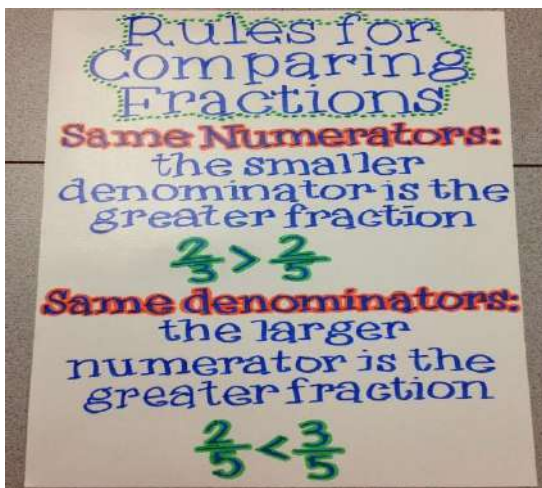
Introduction (5min)

Show full A4 size two color computer paper. Tell them these both are 1 whole and 1 whole then one paper cut in half and one cut in quarter part and ask them which one is greater ,half or quarter ($\frac{1}{2}$ or $\frac{1}{4}$),Observe their prior knowledge and make them ready for new topic

Teaching Procedure (15min)

Ask children to observe the picture pg.93 and tell the fraction, they will observe the fractions and write proper or improper in recap questions, they will write the equivalent fraction with the help of basic fraction then circle the bigger fraction by observing the numerator only in like fractions.

Tell them the rule of comparing like or unlike fraction (if numerator same the smaller the denominator is the greater fraction. Or if denominator same (like fraction) the larger the numerator is the greater fraction, but if both are not same (unlike fraction) then first find the equivalent fractions or make like fraction and identify.



Compare $\frac{3}{4}$ to $\frac{5}{9}$.

$\frac{3}{4}$ is to $\frac{5}{9}$ as 3×9 is to 4×5

$\frac{27}{4} > \frac{20}{9}$

In this comparison, $\frac{3}{4}$ is the larger fraction since $27 > 20$.

Explain the examples of book page 96, 97, 98

Tell them about equivalent fractions

Definition

Equivalent Fraction A fraction with the same numerical value as another fraction but whose numerator and denominator are multiplied by a common factor.

Examples of equivalent fractions:

$$\frac{1}{2} = \frac{2}{4} \rightarrow \frac{1 \cdot 2}{2 \cdot 2}$$
$$\frac{2}{3} = \frac{6}{9} \rightarrow \frac{2 \cdot 3}{3 \cdot 3}$$

Discuss the real life issues how fraction help us to make further parts of whole and how can compare find the difference of larger part or smaller part.

Task 18 min

Exercise 1(Q1): Children should compare the unlike fractions (The first one is done for them) (a till e part)

Exercise 1(Q2): Children should find the missing equivalent fraction (The first one is done for them) (a till e part)

H.W: Explanation (2min)

Children should complete the remaining parts of Ex 1 Q1 AND Q2 and pg. 95 Q4, Q5 in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 2: Simplifying fractions

Objectives: Simplify fractions to the lowest form

Teaching Resources: - Book pg. 100,101,102, teacher's board, and A4 size computer papers

Introduction (5min)

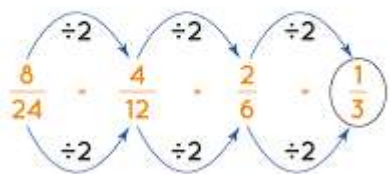
Ask from children which fraction is greater $\frac{3}{5}$ or $\frac{2}{4}$

Discuss the rules of comparison and observe their prior knowledge and make them ready for new topic

Teaching Procedure (15min)

Tell children that we can find the lowest form of fraction by simplification. Explain the real life examples pg.100, 101 and discuss the method to find the simplest form of fraction. Tell them when we simplifying the numerator and denominator should be factorized by the same number.

Simplest Form of Fraction $\frac{8}{24}$



Discuss the real life issues how fraction help us to find the portion which we distribute and receive about the division of whole

Task 18 min

Exercise 2(Q1): Children should simplify the given fractions (The first one is done for them) (a till e part)

Exercise 2(Q2): Children should simplify the given fractions (The first one is done for them)

H.W: Explanation (2min)

Children should complete the remaining parts of Ex 2 Q1 pg.102 in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 3: Mixed Number

Objectives: Identify (unit, proper, improper) fractions and mixed numbers, convert improper fraction to mixed numbers and vice versa

Teaching Resources: - Book pg. 102,103,104,105,108 teacher's board, fraction figures chart

Introduction (5min)

Show them the fraction figures and ask about the total parts, shaded parts fraction unshaded parts of fractions. Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20min)

Show children fraction figures and discuss about the types of fractions .Explain them if numerator is less than denominator is known as proper fraction, numerator is greater than denominator then is known as improper fraction, but sometime we get whole and fraction part that known as mixed number .in mixed number we always find proper fraction with whole number.

$\frac{3}{5}$	$2\frac{3}{5}$	$\frac{5}{3}$
Proper fraction	Mixed fraction	Improper fraction

Tell children that we can convert the improper fraction into mixed number and mixed number into improper fraction

$5\frac{2}{3} = \frac{17}{3}$

Converting Improper Fractions to Mixed Numbers

$$\frac{7}{3} = 2\frac{1}{3}$$

Step 1: Set-up a division problem and divide 7 by 3

$$\begin{array}{r} 2 \\ 3 \overline{) 7} \\ \underline{-6} \\ 1 \end{array}$$

Step 2: the result is 2 with a remainder of 1 which we write as $2\frac{1}{3}$

. Explain the real life examples pg.102, 103,104,105 and discuss the method to convert the mixed fraction into improper and improper fraction into mixed fraction by using division method.

Discuss the real life issues how fraction help us to find the portion which we distribute and receive about the division of whole

Task 18 min

Exercise 3(Q1): Children should convert the mixed number into improper fraction (The first one is done for them) (a till d part)

Exercise 3(Q2): Children should convert the improper fraction into mixed number (The first one is done for them) (a till d part)

H.W: Explanation (2min)

Children should complete the remaining parts of Ex 3 Q1 and Q2 pg.108 in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 4: Ordering fractions

Objective: Arrange fractions in ascending and descending order

Teaching Resources: - Book pg. 106,107,108 teacher's board. Paper plate, fraction figures chart

Introduction (5min)

Show them the paper plate and ask them do you find any fraction in this plate, this plate is one whole plate but if I cut plate it will change into fractions show them the fraction by cutting plates in 8 parts. Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20min)

Write three fractions on board $\frac{2}{4}$, $\frac{1}{4}$, $\frac{3}{4}$.and ask them which fraction is smaller and which are bigger Can you arrange in increasing (ascending) order. Explain them from smaller to bigger fraction is Ascending and bigger to smaller (decreasing) is descending order. If denominator are same it's quite easy to observe the numerator and arrange but if denominator are not same then we make like fractions, find equivalent fraction then order. Discuss the steps of ordering fractions pg.106 and 107.

Write these fractions in order, smallest first.

$$\frac{3}{4} \quad \frac{3}{6} \quad \frac{3}{8}$$



First we convert all the fraction into like fraction by making their equivalents, $\frac{3}{4} \times 6$ and $\frac{3}{6} \times 4$ then $\frac{3}{8} \times 3$ we get $\frac{18}{24}$, $\frac{12}{24}$, $\frac{9}{24}$ then arrange in ascending order = $\frac{9}{24}$, $\frac{12}{24}$, $\frac{18}{24}$

Tell children that we can take L.C.M to find the lowest common multiples of denominator.

Discuss the real life issues how fraction help us to find the difference of fractional items

Task 18 min

Exercise 3(Q3): Children should arrange the fractions into ascending and descending order. (The first one is done for them)

H.W: Explanation (2min)

Children should order the given fractions in ascending and descending order in Homework

- 1) $\frac{2}{2}$, $\frac{4}{5}$, $\frac{3}{10}$
- 2) $\frac{6}{8}$, $\frac{3}{12}$, $\frac{3}{4}$

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 5: Addition and Subtraction of fractions

Objective: Add and Subtract fractions with like denominators.

Teaching Resources: - Book pg. 109,110,111 teacher's board, fraction figures chart

Introduction (5min)

Do you know?

Show them the fraction cut outs and Tell children if we add half and half we get one whole again.
 $\frac{1}{2} + \frac{1}{2} = \frac{2}{2} = 1$ means one whole and if we add $\frac{1}{2}$ and $\frac{1}{4}$ we get three fourth, $\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$

Teaching Procedure (20min)

Tell children we can easily add and subtract the fraction with like denominators, we only add the numerators and get the answer. Explain the real life examples pg.109, 110

Discuss the real life issues how fraction help us to find the total parts of anything or how many wholes we get from fraction parts and how much fraction part left at the end

Task 18 min

Exercise 4(Q1): Children should add the like fractions (The first one is done for them)
Exercise 4(Q2): Children should subtract the like fractions (The first one is done for them)

H.W: Explanation (2min)

Children should do Q3 and Q4 pg. 111 in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 6: Multiplication of fractions

Objectives: Multiply a fraction (proper, improper) and mixed number by a whole number, multiply two fractions (proper, improper) and mixed number

Teaching Resources: - Book pg. 112,113,115, teacher's board. Fraction diagram chart

Introduction (5min)

Tell me?

How many halves make one whole?

How many quarters make one whole?

How many wholes we get from three fourth =2 whole and one fourth=2 ¼

Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (15min)

Ask children to observe the book page 112 ,113 explain them the method of multiplication of fraction by 1 digit number and fraction with fraction and also mixed number with whole number

$$\frac{2}{5} \times \frac{6}{7} = \frac{2 \times 6}{5 \times 7} = \frac{12}{35}$$

$$\frac{1}{4} \times \frac{2}{3} = \frac{1 \times 2}{4 \times 3} = \frac{2}{12} = \text{reduces to } \frac{1}{6}$$

$$\begin{aligned} & \frac{7}{5} \times \frac{2}{3} \times \frac{10}{7} \\ &= \frac{\cancel{7}^1}{5} \times \frac{2}{3} \times \frac{10}{\cancel{7}_1} \\ &= \frac{1 \times 2 \times 2}{1 \times 3 \times 1} \\ &= \frac{4}{3} \end{aligned}$$

Discuss the real life examples of fractions like dividing pizza slices equally amongst everyone requires fractions. The shutter speed of a camera is calculated using fractions. Scores of tests and exams are generally expressed as fractions, like 18/20. The doctor prescribes different dosages, for people of different sizes based on fractions.

Task 18 min

Exercise 5(Q1): Children should multiply fraction by 1 digit and fraction by fraction (The first one is done for them) (a till d part)

H.W: Explanation (2min)

Children should complete the remaining parts of Ex 5 Q1 (e, f part) in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 7: Division of fractions

Objectives: Divide a fraction (proper, improper) and mixed number by a whole number,

Teaching Resources: - Book pg. 114,115, teacher's board. Fraction diagram chart

Introduction (5min)

Show the children fraction diagram and explain them how we can divide whole into fraction and fraction by fraction.

1 whole divided by 2 = each part = $\frac{1}{2}$

1 whole divide by 4 = each part = $\frac{1}{4}$

1 whole divided by 8 = each part = $\frac{1}{8}$

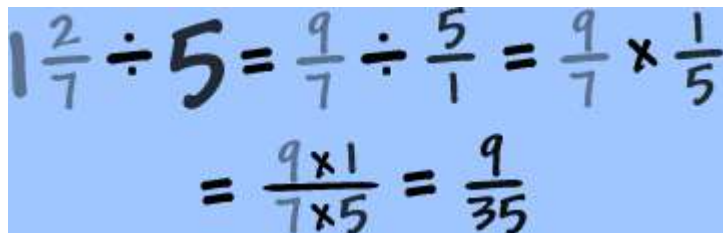
Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (15min)

Tell children that $\frac{6}{2}$ means how many "2" in 6

$6=2+2+2$ so $\frac{6}{2}$ is 3

Discuss the real life example pg.114 and tell them the method to divide mixed number by whole number



The image shows a handwritten mathematical derivation on a blue background. It starts with the equation $1\frac{2}{7} \div 5 = \frac{9}{7} \div \frac{5}{1} = \frac{9}{7} \times \frac{1}{5}$. The next line shows the result of multiplying the fractions: $= \frac{9 \times 1}{7 \times 5} = \frac{9}{35}$.

Explain children for mixed number convert it into improper then use reciprocal method to divide fraction by fraction or mixed number with whole number if denominator not simplify with whole number.

Task 20 min

Exercise 5(Q2): Children should divide fractions with whole number and fraction by fraction (The first one is done for them) (a till e part)

H.W: Explanation (2min)

Children should complete the remaining parts of Ex 5 Q2 in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 8: Real life Problems involving four operation of fraction

Objectives: analyses real life situation involving fractions by identifying appropriate number operation

Teaching Resources: - Book pg. 116, teacher's board. Word problem keywords chart

Introduction (5min)

Ask children to read the sample word problem question from teacher's board, then ask children what we will do?

Teaching Procedure (15min)

Ask children to read the real life problem from book page 47 then discuss the keywords to identify the solution

Tell them the steps to solve the real life problem.

1. Read the problems carefully
2. Understand the facts (numbers, data)
3. Draw a picture if u need
4. Write a number sentence (which operation)
5. Solve the problem show your calculations
- 6 .check your answer and write answer statement.

Ask from children then discuss to solve the real life problem.

Task 18 min

Exercise 5(Q3, Q4): Children should solve the real life problem of fractions after identify the keywords

H.W: Explanation (2min)

Children should search more real life problems involving four operation of fraction in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Unit 6: Decimals

Lesson 1: Tenths, Hundredths, Thousandths

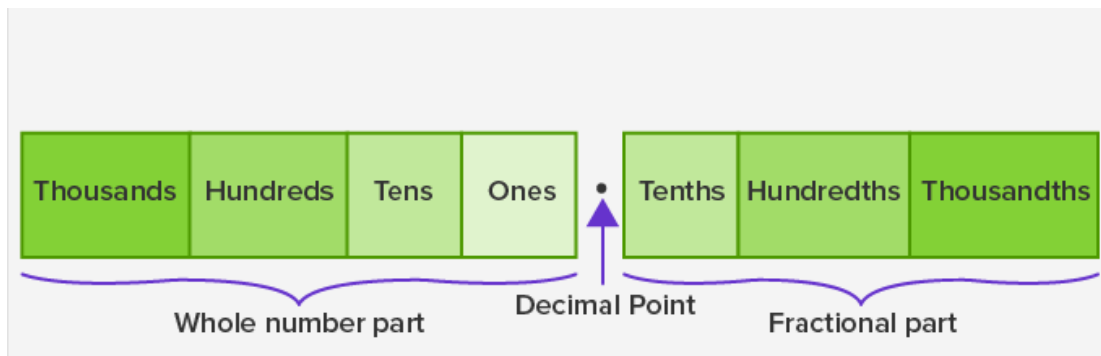
Objectives: Recognize a decimal number as an alternative way of writing a fraction, express a decimal number as a fraction whose denominator is 10,100 or 1000.

Teaching Resources: - Book pg. 117,118,119,120,124, teacher's board, decimals place value chart, paper strip, base ten blocks

Introduction (5min)

Fold the paper strip in 10 parts and color 1 part, show children out of 10 parts we choose 1 part means $\frac{1}{10}$ we can write this fraction 0.1 also it means we can write fraction in decimal form. Observe their prior knowledge and make them ready for new topic.

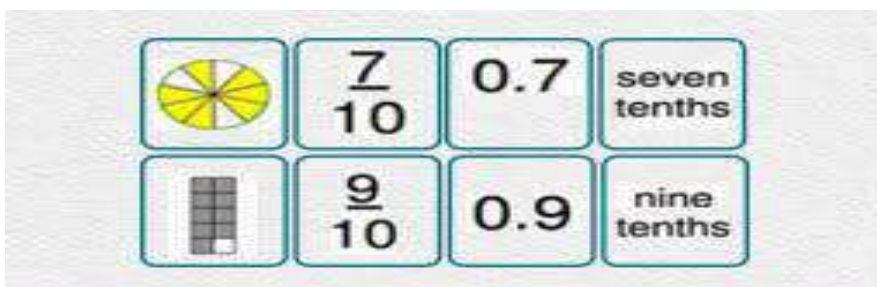
Teaching Procedure (20 min)



Show the children decimal place value chart and write decimal number on teacher's board and explain each digit's place value. Tell them about first decimal place is tenth 0.1 means 1 divided by 10, second decimal place is hundredth 0.02 means 2 divided by 100, and third decimal place is thousandth 0.004 means 4 divided by 1000.

Use base ten blocks cards or draw 10 blocks on board and 100 blocks chart to explain the concept of tenths, hundredths and thousands. Call few children on teacher's board to write decimal number on place value chart.

Show them shaded figure and explain how can we find fraction and then write decimal number of shaded and unshaded parts explain examples given on pg.118,119,120



Discuss the real life examples like decimal number help us represent the minute values easily

Task 15min

Exercise 1(Q1): Children should write decimal numbers on place value chart (The first one is done for them)

Exercise 1(Q2): Children should write decimal number for shaded and unshaded parts (The first one is done for them) (a part only)

H.W: Explanation (2min)

Children should do Exercise 1 Q2 b part only in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 2: Place value

Objectives: Identify and recognize the place value of a digit in decimals (up to 3-decimal places)

Teaching Resources: - Book pg. 120,121,122,125 teacher's board, decimals place value chart, base ten blocks chart

Introduction (5min)

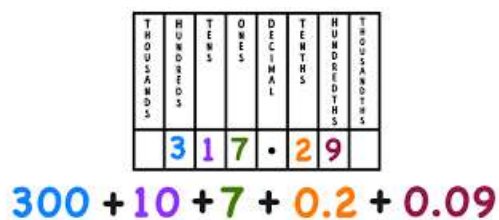
Write decimal number on board and ask children each digit place and value (23.478)

What is the place value of digit 4=tenth its value is $\frac{4}{10}$ means 0.4. Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20 min)

Show them base ten blocks chart and explain the denominator 10,100 or 1000 decimals numbers

Tell the children each digit place and its value one by one and explain the expanded form of decimal number like $34.579 = 30 + 4 + 0.5 + 0.07 + 0.009$. Explain examples given on pg.120, 121,122



Discuss the real life examples like decimal number help us represent the minute values easily

Task 15min

Exercise 1(Q3): Children should write decimal numbers place in words (The first one is done for them)

Exercise 1(Q4): Children should write expanded form for decimal numbers (The first one is done for them)

H.W: Explanation (2min)

Children should do exercise in Homework.

Write expanded form of following decimal numbers

- 1) 56.879 2) 6.321 3) 8.457 4) 92.364

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 3: Conversion of Fractions and Decimals

Objectives: Convert a given fraction to a decimal if denominator of the fraction is 10,100 or 1000, denominator of the fraction is not 10,100 or 1000 but can be converted to 10,100 or 1000, convert a decimal (up to 3-decimal places) to fraction.

Teaching Resources: - Book pg., 122,123,126 teacher's board, decimals place value chart

Introduction (5min)

Write fraction number on teacher's board and ask children to read the number $\frac{1}{2}$ means half, $\frac{1}{4}$ means quarter. $\frac{3}{4}$ means three fourth. $\frac{4}{4}$ means 1 whole. Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20 min)

Tell children if we have denominator 10,100 or 1000 then we convert the fraction number into decimal easily like $\frac{3}{10}$ means 0.3, $\frac{45}{100}$ means 0.45 and $\frac{724}{1000}$ means 0.724 but if denominator is not 10,100 or 1000 then we change the denominator and then convert the fraction into decimals

$$\begin{array}{l} \text{(a)} \quad \frac{2}{5} \quad \frac{2}{5} = \frac{4}{10} = 0.4 \\ \text{(b)} \quad \frac{3}{50} \quad \frac{3}{50} = \frac{6}{100} = 0.06 \\ \text{(c)} \quad \frac{6}{25} \quad \frac{6}{25} = \frac{24}{100} = 0.24 \\ \text{(d)} \quad \frac{5}{4} \quad \frac{5}{4} = \frac{125}{100} = 1.25 \\ \text{(e)} \quad \frac{7}{250} \quad \frac{7}{250} = \frac{28}{1000} = 0.028 \end{array}$$

We can convert the decimal number into fraction by checking their decimal place value like 0.8 in this 8 comes at tenth place so we write 10 as denominator and 8 as numerator $\frac{8}{10}$ and 0.47 the last digit 7 comes at hundredth place so we write 100 as denominator and 47 as numerator $\frac{47}{100}$. We can show the simplest form of fraction as if required. Explain them the examples given on pg.122, 123.

Decimal → Fraction

$$.15 = \frac{15}{100} = \frac{3}{20}$$

The last digit is in the hundredths place.

Use the place value of the last digit to write as fraction with denominator of 10, 100, 1000 etc. Then simplify the fraction if possible.

Discuss the real life examples like decimal number help us represent the minute values easily

Task 15min

Exercise 1(Q5): Children should convert the fraction into decimals (The first one is done for them) (a till d part)

Exercise 1(Q6): Children should convert the decimal numbers into fractions (The first one is done for them) (a till d part)

H.W: Explanation (2min)

Children should do Q5 (e, f parts) and Q6 (e, f parts) in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 4: Addition and Subtraction of Decimal Numbers

Objectives: Add and Subtract 3 digit numbers up to 2 decimal places

Teaching Resources: - Book pg. 127,128,129, teacher's board, word problems keywords chart

Introduction (5min)

What will be the answer if we add 25 with 25?

And we can add 200 with 300?

If we take away 35 from 100?

What is the difference of 150 and 300?

Discuss the addition and subtraction rule of whole numbers then tell the children about the decimal numbers .Write few decimal number and ask children to add and subtract decimal numbers same like whole numbers but start from left to right. Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20 min)

Write few decimal number on teacher's board and explain them to add and subtract the decimal numbers .Explain them the real life examples and questions pg. 127,128,129. Before solving the sums make sure that the numbers are aligned according to the decimal point. Discuss the key words which we use for addition and subtraction .Write more decimal numbers for practice work on board and ask children to practice the concept.

Adding & Subtracting Decimals

- Steps:**
1. Stack your decimals.
 2. Put placeholders (zeroes) in empty spaces, if needed.
 3. Drop your decimal point.
 4. Add or Subtract

$$\begin{array}{r} 34.567 \\ + 65.371 \\ \hline 99.938 \end{array}$$

Task 15min

Exercise 2(Q1, Q3): Children should add numbers up to 2 decimal places. (The first one is done for them)

Exercise 2(Q2, Q4): Children should subtract numbers up to 2 decimal places (The first one is done for them)

H.W: Explanation (2min)

Children should do Ex 2 Q5 page 129 in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 5: Multiplying Decimal by 1 digit Numbers

Objectives: Multiply a 2 digit number up to 1 decimal places by 10,100 and 1000, Multiply a 2 digit number up to 1 decimal places by a 1 digit number

Teaching Resources: - Book pg. 130,131, teacher's board and mental math questions.

Introduction (5min)

Ask children what is 15×2 is 30

4 times 26 is 104

If we multiply 35 with 4 = 140

What is the product (answer) of 67by 8? =536

Double of 6 means (6×2) is 12

Observe the prior knowledge of children and make them ready for new topic

Teaching Procedure (15min)

Ask children to observe book page 130 then Write decimal number on teacher's board and multiply decimal number with 1 digit step by step. Inform children to multiply the tenth then ones.

$$\begin{array}{r} 3. \textcircled{4} \\ \times 7 \\ \hline \end{array} \rightarrow \text{1 Decimal Place}$$

Children observe the examples on page 130 and follow the same steps they will follow when children will multiply decimal number with one digit number they will get one decimal place in answer at product place.

Tell them the method of moving decimal forward while multiplying decimal number with 10, 100, or 1000. If we multiply by 10 decimal point will move one step forward, if we multiply by 100 decimal point will move two steps forward and if we multiply by 1000 decimal point move three steps forward.

**Multiplication of a Decimal
by 10, 100, 1000**

When the multiplier is 10, 100 or 1000, we move the decimal point to the right by as many places as number of zeroes after 1 in the multiplier.

For Example: $8.597 \times 10 = 85.97$
 $8.597 \times 100 = 859.7$
 $8.597 \times 1000 = 8597.0$

Discuss the real life example that how decimal number help to count the minute values

Task (18 min)

Exercise 3(Q1): Children should multiply the decimal numbers by 1 digit by using standard method of multiplication then solve the given sums. (The first one is done for them) (a-g parts)

H.W: Explanation (2min)

Children should complete the remaining sums of Q1 Ex 3 pg. 134 in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lesson

Lesson 6: Dividing Decimal by 1 digit Numbers

Objectives: Divide a 2 digit number up to 1 decimal places by 10,100 and 1000, divide a 2 digit number up to 1 decimal places by a 1 digit number, and solve real life situation involving 2 digit number with 1 decimal place

Teaching Resources: - Book pg. 132,133,134, teacher's board and mental math questions.

Introduction (5min)

Ask children what is $735 \div 15$ is **49**

56 divided by 7 is **8**

If we divide 81 with 9 = **9**

What is the quotient (answer) of 72 by 2? =**36**

Half of 36 means ($36 \div 2$) is **18**

Observe the prior knowledge of children and make them ready for new topic

Teaching Procedure (15min)

Ask children to observe book page 132 then write decimal number on teacher's board and divide decimal number with one digit, tell children divide in the same standard method of long division but make sure that the numbers are aligned according to the decimal point.

Divide a Decimal by a 1-digit Number

Dividing a decimal by a whole number is similar to dividing whole numbers.

$$\begin{array}{r} 3.4 \\ 2 \overline{)6.8} \\ \underline{-6} \\ 08 \\ \underline{-8} \\ 0 \end{array}$$

Place the decimal point directly above the decimal point in the quotient.

Divide as with whole numbers.

2

Tell them the method of moving decimal backward while dividing decimal number with 10, 100, or 1000. If we divide by 10 decimal point will move one step backward, if we divide by 100 decimal point will move two steps backward and if we divide by 1000 decimal point move three steps backward. Discuss the example questions given on pg.132, 133,135

Division of a Decimal Number by 10, 100 or 1000

Division of a decimal number by 10, 100 or 1000 can be performed by moving the decimal point to the left by as many places as the number of zeroes in the divisor.

For Example:

$752.3 \div 10$	=	75.23
$752.3 \div 100$	=	7.523
$752.3 \div 1000$	=	0.7523

Discuss the real life example that how long division helps them to convert the fractions into decimals.

Task (22 min)

Exercise 3(Q2): Children should divide the decimal number by 1 digit number (the first one is done for them) (a-d) parts

Exercise 3(Q3-Q5): Children should read the word problems and solve the word problems.

H.W: Explanation (2min)

Children should complete the remaining sums of Q2 (e-h parts) in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lesson

Lesson 7: Rounding off Decimals

Objectives: Round off decimal to the nearest whole number, nearest tenth and nearest hundredths

Teaching Resources: - Book pg. 135,136,137, teacher's board, rounding off rule chart

Introduction (5min)

Draw a number line between 2 and 3 and ask children to find which decimal number is closer to 2 or 3 like 2.2 round off 2 and 2.7 round off 3. tell the children round off rules



Observe the prior knowledge of children and make them ready to divide decimal 3 digit number with 2 decimal place

Teaching Procedure (15min)

Ask children to observe book page 135 and 136 then write decimal number on teacher's board and circle the value which are going to round off. Then check the next place value if next place value is less than 5 it will remain same but if 5 or more than 5 it will increase in the circle value. Children will round off the decimal numbers to the nearest tenth and hundredth.



Solve example pg.136, 137 on teacher's board. Discuss the real life example that how rounding off values use for finding nearest close value for calculations.

Task 18 min

Exercise 4(Q1): Children should round off decimal numbers to the nearest whole number then solve the given sums. (The first one is done for them) (a- d parts)

Exercise 4(Q2): Children should round off decimal numbers to the nearest tenth then solve the given sums. (The first one is done for them) (a- d parts)

Exercise 4(Q3): Children should round off decimal numbers to the nearest hundredth then solve the given sums. (The first one is done for them) (a- d parts)

H.W: Explanation (2min)

Children should complete the remaining sums of Q1, Q2 and Q3 in Homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lesson

Unit 7: Length, Mass and Capacity

Lesson 1: Measuring Length

Objectives: Use standard metric units of length of different objects

Teaching Resources: - Text book pg. 139, 140, 141,142, teacher's board, big scale, metre scale, measuring tape.

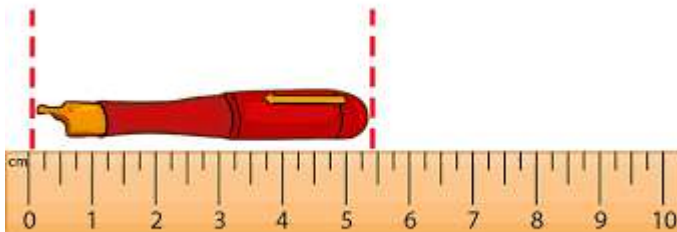
Introduction (5min)

Ask children to observe the pictures on pg.139 and ask them how do you measure the distance between the house and the market place? .Observe children's prior knowledge and make them ready for new topic.

Teaching Procedure (15 min)

Ask children to measure the length of pencil and pin and then add and subtract the given lengths in recap activity, children will discuss all the recap question and complete the recap work given on pg. 140

Show them large scale and tell them for small measurement of length we use centimetre and metres and if we want to measure the large table size then we use metre scale. We can measure the large distance between city to city and towns in kilometres. Ask them to measure the length of teacher's board and door, desk and book discuss the examples given on pg.141 and 142



Discuss the real life example, we can use millimeters or centimeters to measure how tall we are, or how wide a table is, but to measure the length of a football field it is better to use meters. **A meter is equal to 100 centimeters.** Meters can be used to measure the length of a house, or the size of a playground. A kilometer is equal to 1000 meters.

Task (20 min)

Exercise recap pg.140 Q1and Q2 .Children should add the different units of lengths .mass and capacity in recaps

H.W: Explanation (2min)

Children should do Q3 recap pg.140, 141 in homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 2: Conversion of units of length

Objectives: Convert larger to smaller metric units (2 digit numbers with one decimal place) kilometres into metres and centimetres into millimetres.

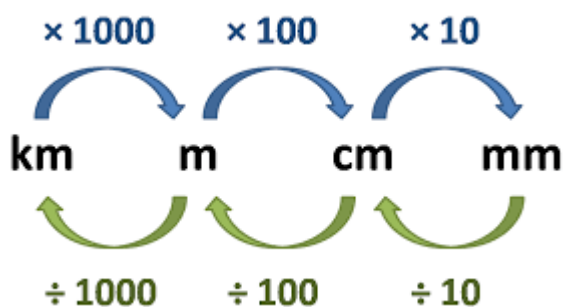
Teaching Resources: - Book pg. 143,144, teacher's board, Standard Metric unit of length chart, measuring scale

Introduction (5min)

Quantity	SI unit	Symbol
Length	Meter	m
Mass	Kilogram	Kg
Time	Second	s
Area	Square meter	m ²
Volume	Cubic meter	m ³

Show the children SI unit chart and ask children to read the discuss the symbols which we use for metres ,kilometres and milimetres .show them the measuring scale and explain them about the difference of mm, cm ,m and km

Teaching Procedure (20 min)



Tell the children short form SBD=SMALLER TO BIGGER DIVIDE and BSM=BIGGER TO SMALLER MULTIPLY

Explain them when we convert the smaller unit to bigger we divide like how many cm in 40mm are 4cm($40 \div 10$)and when we convert the bigger unit to smaller we will multiply like how many m in 4km are 4000m ($4 \times 1000=4000$)

Ask them to observe all the units then convert, explain examples of pg.143, 144

Discuss the real life examples Converting is important because it **will help you measure the size of an object easily it will help you measure an amount easily**. Conversion factor is used to convert a measured quantity to a different unit of measure without changing the relative amount.

Task 15min

Exercise: Convert the following units

1) 1cm 9mm into mm(2) 45mm into cm and mm(3)4m 62cm into cm(4) 3m 67cm into cm(5)708cm into m

H.W: Explanation (2min)

Children should do question in Homework.

Q: Convert the followings units

(1)2km 405cm into m (2) 7cm 2mm into mm(3) 89mm into cm and mm(4)8m 92cm into cm(5) 7m 47cm into cm(6) 308cm into m

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 3: Addition and Subtraction of length

Objectives: Add and subtract measures of length in same units

Teaching Resources: - Book pg. 145,146,147,148, teacher's board, Standard Metric unit of length chart,

Introduction (5min)

Write 2m on teacher's board and ask children how many cm in 2m? 200 cm

How many mm in 12cm =120mm

How many m in 25km=2500m

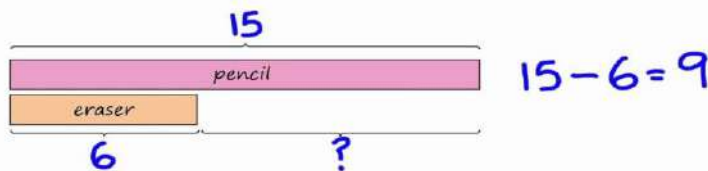
Discuss with children that for short measurement we can use mm, cm and m and for long distance measurement we can use m and km.

Teaching Procedure (20 min)

Tell the children that we can make a sum by writing the same unit value under the same unit and then add and subtract like ordinary numbers.

Tell them the key words which we identify in word problems for addition and subtraction

A pencil has a length of 15 cm.
An eraser has a length of 6 cm.
How much longer is the pencil than the eraser?



The pencil is 9 cm longer than the eraser.

Discuss the real life examples Length is one of the most common measurements that is used every day. This can tell **you how far away the nearest town is, the width of a fridge or your height**. In science it can be used on very different scales to measure the size of the universe,

Task 15min

Exercise 1 (Q1): Children should Add and subtract the given questions (the first one is done for them)

Exercise 1 (Q2): Children should Add and subtract the given questions (the first one is done for them)

H.W: Explanation (2min)

Children should do Q3 Pg.148 in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 4: Measuring Mass

Objectives: Use standard metric units to measure the mass of different objects

Teaching Resources: - Text book pg.149 , teacher's board, two objects (one heavier and other lighter) weigh machine if possible ,weigh machine chart to show the measuring scale clearly to children

Introduction (5min)

Show two objects bag and bottle and ask which one have more weight? Then show pencil and eraser and ask which one have more weight. Observe children's prior knowledge and make them ready for new topic.

Teaching Procedure (15 min)

Ask children to observe book pg. 149 and discuss the real life examples about objects that which object is heavier and lighter. Tell them the SI Units for kilogram is kg and grams is g .1 kg =1000g show them the measuring scale of weigh machine and ask them to observe pg.156 find the masses of different fruits and objects by observing scale.



Discuss the real life example, Mass can be best understood as the amount of matter present in any object or body. Everything we see around us has mass. For example, **a table, a chair, your bed, a football, a glass, and even air has** mass. That being said, all objects are light or heavy because of their mass.

Task (20 min)

Children should identify the different masses by observing different pictures.

H.W: Explanation (2min)

Children should find which object weight in grams or kilograms?

1: (Water melon/apple)

4: (table / lion)

2 :(Scissor/pen)

5: (syrup bottle / tablet)

3: (book/tissue)

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 5: Conversion of units of Mass

Objectives: Convert larger to smaller metric units (2 digit numbers with one decimal place) kilograms into grams and grams into kilograms

Teaching Resources: - Book pg. 150, teacher's board, Standard Metric unit of Mass chart, measuring pan

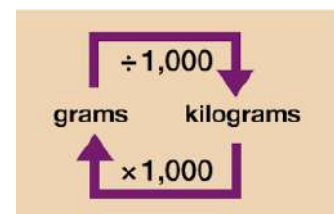
Introduction (5min)

Show the children SI unit chart and ask children to read the discuss the symbols which we use for grams and kilograms .show them the objects and explain them about the difference of grams,miligrams and kilograms .observe their prior knowledge and make them ready for new topic

Teaching Procedure (20 min)

Tell the children short form SBD=SMALLER TO BIGGER DIVIDE and BSM=BIGGER TO SMALLER MULTIPLY

Explain them when we convert the smaller unit to bigger we divide like how many kg in 4000g are 4kg (4000 divided by 1000=4kg and when we convert the bigger unit to smaller we will multiply like how many g in 9kg are 9000m (9 x1000=9000)



Ask them to observe all the units then convert, explain examples of pg.150

Discuss the real life examples Converting is important because it **will help you measure the weight of an object easily it will help you while making mixtures and measure quantity of spices during cooking** . Conversion factor is used to convert a measured quantity to a different unit of measure without changing the relative amount.

Task 15min

Exercise: Convert the following units

1) 4kg 231g into g (2) 4576g into kg and g (3) 6g 56mg into mg (4) 5667 mg into g and mg (5)9 kg 300g into g

H.W: Explanation (2min)

Children should do question in Homework.

Q: Convert the followings units

(1) 9kg 875g into g (2) 600g 20mg into mg (3) 6089mg into kg and mg (4) 12 g 72mg into mg

(5) 17kg 547g into g (6) 7608mg into kg and mg

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 6: Addition and Subtraction of Mass

Objectives: Add and subtract measures of Mass in same units

Teaching Resources: - Book pg. 151,152,153 154, teacher's board, Standard Metric unit of Mass chart,

Introduction (5min)

Write 5kg on teacher's board and ask children how many g in 5kg? 5000g

How many mg in 12g =12000mg

How many kg in 25000g =25kg

Kilogram	Conversion of Kilogram
1 kg	1 kg = 1000 g
1 kg	1 kg = 1,000,000 mg

Discuss with children that for lighter weight we can use mg, g and for heavier we measure weight in kg ton.

Teaching Procedure (20 min)

Tell the children that we can make a sum by writing the same unit value under the same unit and then add and subtract like ordinary numbers.

Tell them the key words which we identify in word problems for addition and subtraction

Tell them if we get 1000 grams or more than 1000 g in grams addition we carry in kg .explain the real life examples pg.151

Addition of Mass

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Add 6 kg 135 g and 11 kg 954 g.

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Arrange the numbers vertically.
First, add the grams.
 $135 + 954 = 1089 \text{ g} = 1000 \text{ g} + 89 \text{ g}$
Write 89 under grams column and carry over 1 kg to kilograms column. Add the kilograms.
 $6 + 11 + 1 \text{ (carry over)} = 18 \text{ kg}$
Write 18 kg under the kilograms column.
Hence, $6 \text{ kg } 135 \text{ g} + 11 \text{ kg } 954 \text{ g} = 18 \text{ kg } 89 \text{ g}$.

	1	
	kg	g
	6	135
+	11	954
	18	089

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Discuss the real life examples Mass is one of the most common measurements that is used every day. This can tell **you how heavy the object is it, and how lighter is it** . In science it can be used on very different scales to measure the masses of the objects

Task 15min

Exercise 2 (Q1): Children should Add and subtract the given questions (the first one is done for them)

Exercise 2 (Q2): Children should Add and subtract the given questions (the first one is done for them)

H.W: Explanation (2min)

Children should do Q3 and Q4 Pg.154 in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 7: Measuring Capacity or Volume

Objectives. : Use standard metric units to measure the mass of different container

Teaching Resources: - Text book pg.155 teacher's board, two objects (one big water bottle and other cane or small water bottle or juice bottle) water ,measuring beaker or chart with clear scale

Introduction (5min)

Show two containers of different size and ask in which container holds more water or less water? Then show spoon and tea cup which one holds more water. Observe children's prior knowledge and make them ready for new topic.

Teaching Procedure (15 min)

Ask children to observe book pg. 154 and discuss the real life examples about two different container jug of 2litre and bowl of 1 litres to find the difference of capacity to hold water. Tell them the SI Units for litre is l and mililitres ml .1 l=1000ml show them the pictures given on pg.155 .tell them how can we observe the volume of water in measuring container by observing the measuring scale. Tell them if the size of container increase its capacity or volume also increase



Discuss the real life example, the basic units of measurement of capacity are **liter (l)** and **milliliter (ml)**. To measure smaller quantities of liquid, we use milliliter (ml) and to measure larger quantities we use liter (l).

Task (20 min)

Children should identify the different capacity by observing different pictures.

H.W: Explanation (2min)

Children should find which container shows litres and millilitres capacity in homework

1:(drum/1000ml water bottle) 2:(spoon/glass) 3:(bucket/jug)4:(cup/spoon) 5: (small bowl /water tank)

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 8: Conversion of units Capacity or Volume

Objectives: Convert larger to smaller metric units (2 digit numbers with one decimal place) litres into millilitres and millilitres into litres

Teaching Resources: - Book pg. 156, teacher's board, Standard Metric unit of Mass chart, measuring beaker

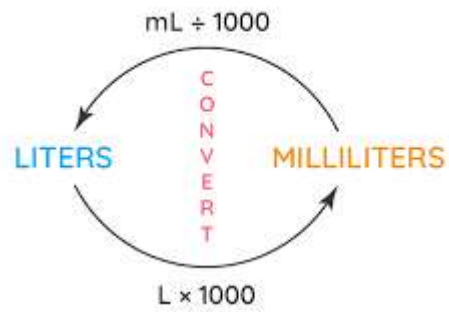
Introduction (5min)

Show the children SI unit chart and ask children to read the discuss the symbols which we use for litres and millilitres .show them the 2 sizes of measuring beakers and explain them about the difference of litres and millilitres .observe their prior knowledge and make them ready for new topic

Teaching Procedure (20 min)

Tell the children short form SBD=SMALLER TO BIGGER DIVIDE and BSM=BIGGER TO SMALLER MULTIPLY

Explain them when we convert the smaller unit to bigger we divide like how many kg in 7000ml are 7l (7000 divided by 1000=7 l and when we convert the bigger unit to smaller we will multiply like how many g in 8l are 8000ml (8 x1000=8000ml)



Ask them to observe all the units then convert, explain examples of pg.150

Discuss the real life examples Converting is important because it **will help you measure the size of an container easily it will help you measure how much liquid it can hold** Conversion factor is used to convert a measured quantity to a different unit of measure without changing the relative amount.

Task 15min

Exercise: Convert the following units

1) 6 l 560 ml into ml (2) 65 l into ml (3) 6l 800ml into ml (4) 6754 ml into l and ml (5) 7 l 400ml into ml

H.W: Explanation (2min)

Children should do question in Homework.

Q: Convert the followings units

1) 7 l 490 ml into ml (2) 23 l into ml (3) 9 l 400ml into ml (4) 5489 ml into l and ml (5) 3 l 800ml into ml (6) 5408ml into l and ml

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 9: Addition and Subtraction of Capacity or Volume

Objectives: Add and subtract measures of Capacity or Volume in same units

Teaching Resources: - Book pg. 157,158,159 160, teacher's board, Standard Metric unit of Mass chart,

Introduction (5min)

Write 12 litres on teacher's board and ask children how many millilitres in 12 litres? 12000 ml

How many ml in 4l =4000ml

How many l in 67000ml =67 l

Discuss with children that for small size containers have less capacity to hold liquids we use ml and ounce and l represent for large capacity or volume

Teaching Procedure (20 min)

Tell the children that we can make a sum by writing the same unit value under the same unit and then add and subtract like ordinary numbers.

Tell them the key words which we identify in word problems for addition and subtraction

Tell them if we get 1000 ml or more than 1000 ml in addition we carry in litres .explain the real life examples pg.158

Subtract 13 L 800 mL from 21 L 750 mL

L	mL
21	750
- 13	800
7	950

7 litres 950 millilitres

Discuss the real life example, the basic units of measurement of capacity are **liter (l)** and **milliliter (ml)**. To measure smaller quantities of liquid, we use milliliter (ml) and to measure larger quantities we use liter (l).

Task 15min

Exercise 3 (Q1): Children should Add and subtract the given questions (the first one is done for them)

Exercise 3 (Q2): Children should Add and subtract the given questions (the first one is done for them)

H.W: Explanation (2min)

Children should do Q3 and Q4 Pg.160 in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Unit 8: Time

Lesson 1: Telling the time in seconds

Objectives: Read and write the time using digital and analogue clock on 12 hours and 24 hours format.

Teaching Resources: - Text book pg.161, 162,163,164,165,166, teacher's board, Analogue clock, digital clock

Introduction (5min)

Tell the time?

Children will observe the time on book opener page 161 and ask questions

How many months did it take to build the house?

How many days did it take to build the house?

Observe children prior knowledge and make them ready for time topic

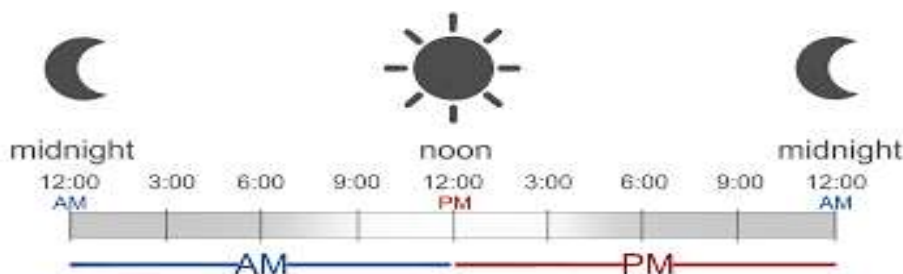
Teaching Procedure (15 min)

Discuss the recap question pg.163 with children and ask them to add and subtract the given time, ask children to observe the picture of clock on book pg.164 and discuss about the hour hand and minute hand and the time showing on Analogue and Digital clock. Discuss with them

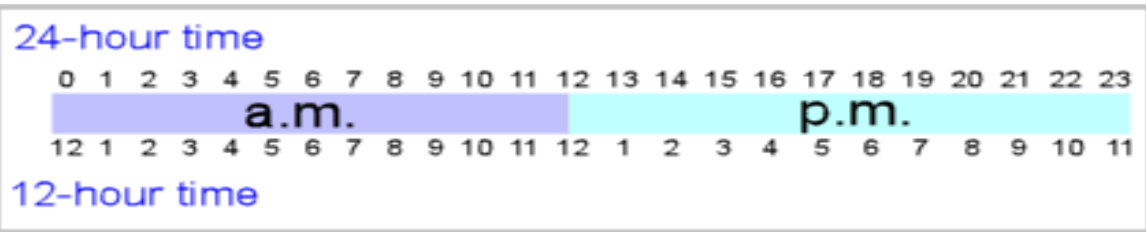
How many hours in a day? =24 hours

How many minutes in one hour? =60 min in an hour

Write the time on board and explain them we can read the hour minutes and second to tell the accurate time. Tell them about the 5 minutes intervals on analogue clock and time from midnight to noon we tell time in a.m. and from noon to midnight we tell time in p.m.



Tell them how we can write time in 12 hours and 24 hours format .Explain them the examples given on pg. 166



Discuss the real life example, how clocks help us to find the time and time intervals help us to count the durations and a.m. or p.m. tells us the exact time duration that it is day ,evening ,morning or night

Task (20 min)

Exercise 1 Q1:pg.166, children should observe the analogue clock and write time
Exercise 1 Q3:pg.167, children should write the time in 12 hours and 24 hours format

H.W: Explanation (2min)

Children should DO recap pg. 162 and Q2 draw the minute hand according to the given time in homework

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 2: Converting time-hours, minutes, seconds

Objectives: Convert hours to minutes and minutes to seconds

Teaching Resources: - Book pg. 168,169 teacher's board, Standard Metric unit of time chart, analog clock

Introduction (5min)

Ask children about time intervals

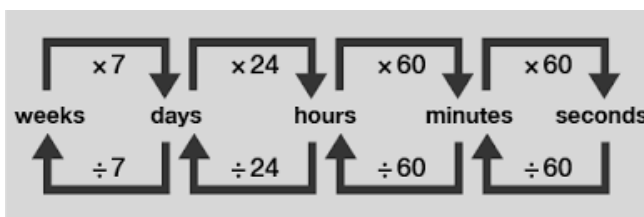
How many minutes in 1 hour, 2 hours, 3 hours and 10 hours?

How many seconds in 1 minute, 5 minutes and 10 minutes? observe their prior knowledge and make them ready for new topic.

Teaching Procedure (18 min)

Tell children that we can convert time also like if we have 4 hours we can tell how many minutes in four hours by multiply 4 with 60 =240 minutes.

Tell the children short form SBD=SMALLER TO BIGGER DIVIDE and BSM=BIGGER TO SMALLER MULTIPLY



Explain them when we convert the bigger unit to smaller we multiply like how many min in 2hrs are 180 min (2×60) we convert hours in minutes and when we convert the smaller unit to bigger we will divide like how many hours in 3600 min ($3600 \div 60$) 60 hours

Ask them to observe all the units then convert, solve example pg.168.169

Discuss the real life examples Converting is important because it **will help you measure the time intervals for plan outdoor activities, measuring of time for any particular activity.**

Task 20min

Exercise2 (Q1) Children should convert the hours into minutes (the first one is done for them) (a-f parts)

Exercise 2 (Q2) Children should convert the minutes into seconds (The first one is done for them) (a-f parts)

H.W: Explanation (2min)

Children should do Q1 (g-i parts) and Q2 (g-l parts) page 169 in Homework.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 3: Converting time –Year, Months, Days

Objectives: Convert years to months, months to days, week to days

Teaching Resources: - Book pg. 170,171, teacher’s board, Standard Metric unit of time chart, yearly calendar

Introduction (5min)

Ask children how many?

How many Days in a week hrs? **7 days**

How many days in fortnight ? **15 days**

How many years in one decade ? **10 years**

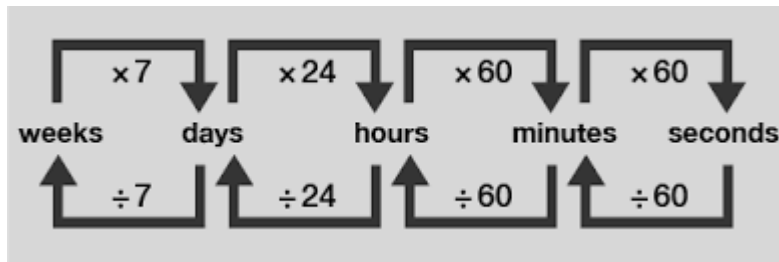
How many weeks in a year? **52 weeks**

How many months in a year? **12 months**

Show them the Yearly calendar and ask about the months in a year ,days in a month.

Teaching Procedure (18 min)

Tell them the difference of Solar (30 or 31 days in a month)



Tell the children short form SBD=SMALLER TO BIGGER DIVIDE and BSM=BIGGER TO SMALLER MULTIPLY

Explain examples of pg.170, 171 and discuss the real life examples Converting is important because it **will help you measure the time intervals for plan outdoor activities, measuring of time for any particular activity.**

Task 20min

Exercise 3 (Q1) Children should convert the months into years (the first one is done for them) (a-d parts)

Exercise 3 (Q2) Children should convert the days into weeks (The first one is done for them) (a-d parts)

H.W: Explanation (2min)

Children should do Review Exercise Q1 (e, f parts) and Q2 (e, f parts) page 171 in Homework.

Teachers’ Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 4: Adding time in hours and minutes

Objectives: Add measures of time in hours, solve real life situations involving measures of time for addition of hours.

Teaching Resources: - Text book pg.172, 173, 176 teacher's board, time intervals chart

Introduction (5min)

Show the time interval chart to children and ask questions

Do you know how many days in a week?

How many months in a year?

How many hours in a day?

How many seconds in an hour?

Observe their prior knowledge and make them ready for new topic

Teaching Procedure (15 min)

Discuss the real life situation given on pg. 172 and 173, and give them the concept of adding time in hours and minutes

Discuss the question given on pg.172 and 173 and tell them we can add given hours to find the total hours we spend for any activity.

The diagram illustrates the process of adding time. It shows a vertical addition of 6h 17min and 3h 45min, resulting in 9h 62min. A speech bubble indicates that 62 minutes is greater than 60 minutes, and that 60 minutes equals 1 hour. Below the result, a '+1h' bubble and a '-60min' bubble show the conversion of 1 hour from the minutes column.

Tell them when we can add time vertically we add minutes first if we get 60 min or more than 60 minutes we carrying the 1 hour in hour time and when we add horizontally we convert the hours into minutes and then give answer

Discuss the real life example, why we know about months because we want to know how much time passed and we plan different activities on different days. Like we celebrate birthdays when our birthday month comes.

Task (20 min)

Exercise 4 Q1 pg. 176 Children should add the given time in hours, min and in sec

H.W: Explanation (2min)

Children should do Q3 a part only pg.176 in home work.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 5: Subtracting time in hours and minutes

Objectives: Subtract measures of time in hours, solve real life situations involving measures of time for subtraction of hours.

Teaching Resources: - Text book pg.174, 175, 176 teacher's board, time intervals chart

Introduction (5min)

Ask children if your teacher given you task to compete in one hours 20 min but you will do work in group and finish the task earlier in 65 minutes then how much time remain left for doing any other task?

1hour 20 minutes = 60min +20=80 minutes

80minutes minus 65 minutes =15minutes left

Observe their prior knowledge and make them ready for new topic

Teaching Procedure (15 min)

Discuss the real life situation given on pg.174, 175 and give them the concept of subtracting time in hours and minutes

Subtraction
of
Time

Hours	Minutes
13	20
- 7	40
05	40

Minutes	Seconds
3	25
- 2	55
0	30

SUBTRACTION OF HOURS, MINUTES & SECONDS

Tell them if we subtract time vertically we can borrow the time my hour to do working

Discuss the question given on pg.174, 175, 176 tell them we can subtract given hours to find the left over hours.

Discuss the real life example, why we know about months because we want to know how

much time passed and we plan different activities on different days. Like we celebrate birthdays when our birthday month comes.

Task (20 min)

Exercise4 Q2 pg. 176 Children should subtract the given time in hours and minutes.

Exercise1 (Q3-Q5) pg. 176 Children should read the word problem and add and subtract the given time in hours and minutes

H.W: Explanation (2min)

Children should do Q3 b part and Q6 pg.176 in home work.

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Unit 9: Geometry

Lesson 1: Parallel lines

Objectives: Recognize and identify parallel and non-parallel lines

Teaching Resources: - Text book pg. 178,179,180,181,182,183,184, teacher's board, types of lines chart

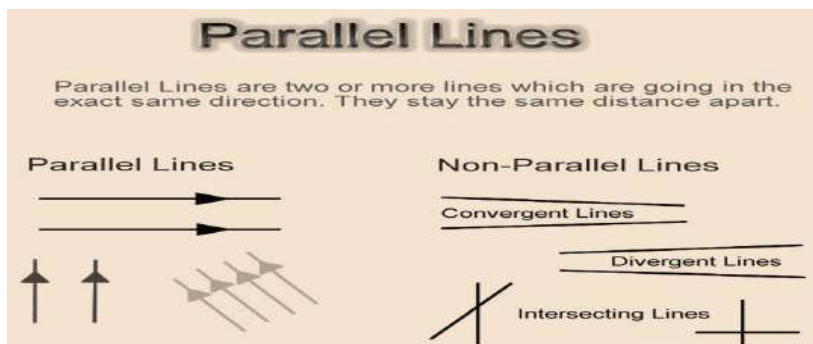
Introduction (5min)

Ask children to observe the shapes on pg.178 and circle the quadrilaterals in recap activity, label the parts of circle and find the perimeter of square and rectangle on pg.178.observe the prior knowledge and make them ready for new topic.

Teaching Procedure (15 min)

Draw two line on board one is vertical and other is horizontal and explain children that we can find different types of lines in our surroundings. Ask them to observe the railway track pictures and ask from them what type of these lines are?

Explain them the two straight line are together side by side with equal distance and cannot meet or cross each other are known as Parallel lines and those lines who intersect (cross) each other at any point known as Non-Parallel lines. Explain them examples of pg.181, 182,183.



Discuss the Parallel line examples in real life are **railroad tracks**, the edges of sidewalks, marking on the streets, zebra crossing on the roads, and the surface of pineapple, strawberry fruit, staircase and railings.

Task (20 min)

Exercise 1 Q1 pg.184 children should choose the correct pictures which shows parallel lines.

H.W: Explanation (2min)

Children should do Recap exercise pg.179, 180 and revise the concepts in home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 2: Measuring and drawing angles

Objectives: Measuring angles in degree ($^{\circ}$) by using protractor, draw an angle of given measurement and use the symbol (\angle) to represent it, measure angles using protractor where upper scale of protractor reads the measure of angle from left to right and lower scale measure of angle from right to left.

Teaching Resources: - Text book pg. 185, 186, 187, 188, a teacher's board, protractor, types of angles chart

Introduction (5min)

Draw the horizontal line then draw one more line horizontally to form 90 degree angle and explain them that when two non-parallel lines meet that point form an angle. observe prior knowledge and make them ready for measuring and drawing angles.

Teaching Procedure (20 min)

Show the protractor to children and tell them the features and how can we measure angles the point where two line meet is common point (vertex) tell them the symbol (\angle) we are using to represent angle.

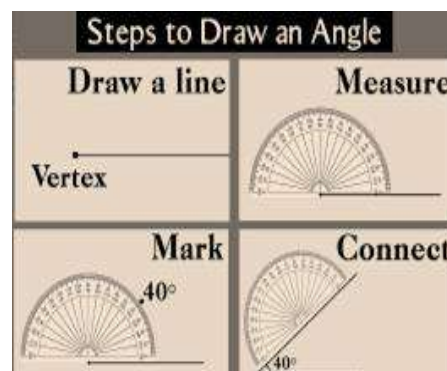


Ask children to observe the figure given on pg.185 and name the angle, we check the common point and write that letter at the middle like $\angle ABC = 72^{\circ}$

Show them big protractor or protractor picture to make them understand, ask them to observe the picture given on pg.186

Place protractor zero origin or middle point on point of angle and measure the size. If angle opens at right side we use inner scale to measure and draw the size of angle but if angle opens at left then we use outer scale. Explain them pg.187 and 188 examples. Show the protractor to children and tell them the features and how can we measure angles the point where two line meet is vertex. Place protractor zero origin or middle point of protractor to measure the size of an angle. If angle opens at right side we use inner scale to measure the size of angle but if angle opens at left then we use outer scale.

Discuss the real life example of measuring angles like **Engineers** use angle measurements **to construct buildings, bridges, houses, monuments**, etc. Carpenters use angle measuring devices such as protractors, to make furniture like chairs, tables, beds, etc. The angle can be seen in the wall clocks of our homes, made by hands of clocks.



Task 15min

Exercise 2(Q1) Children should measure the sizes of given angles on book
Exercise 2 (Q2) Children should draw a and b parts in copies

H.W: Explanation (2min)

Children should draw Q2 (c till f part) sizes of angle in copies in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 3: Types of angles acute, obtuse and right angles

Objectives: Differentiate acute, obtuse and right angles, identify right angles in 2D shape.

Teaching Resources: - Text book pg. 190,191,192,193, teacher's board, protractor, types of angles chart

Introduction (5min)

Ask children to observe in the class and discuss the types of angles they found in real life objects. Like clock hand angle teachers board corners angle. Observe their prior knowledge and make them ready for new topic

Teaching Procedure (20 min)

Show hands movement and explain 90 degree angle form when horizontal and vertical line intersect ,then less than 90 degree are acute angles and greater than 90 degree are obtuse angles .explain them example pg.190 and ask children to find 2D shapes in class which shows 90 degree angle ,show the pictures which given on pg.191

Discuss the real life example of measuring angles like **Engineers** use angle measurements **to construct buildings, bridges, houses, monuments**, etc. Carpenters use angle measuring devices such as protractors, to make furniture like chairs, tables, beds, etc. The angle can be seen in the wall clocks of our homes, made by hands of clocks.

Task 15min

Exercise 3(Q1till Q3) Children should identify of right, acute and obtuse angels from the given angles on book pg. 192.193

H.W: Explanation (2min)

Children should complete the remaining work in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 4: Circles

Objectives: Describe radius and diameter and circumference of a circle

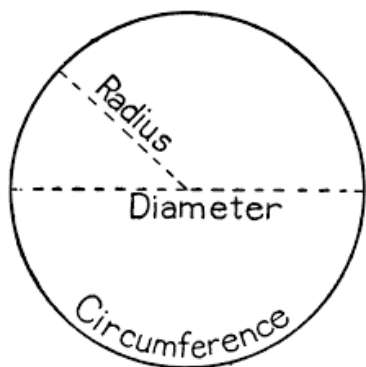
Teaching Resources: - Text book pg.194, 195, teacher's board, big circle shape cutout

Introduction (5min)

Show them a circle shape objects and ask the shape from them draw on teacher's board and ask the different parts, Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20 min)

Draw Circle on board and discuss the parts of circle given on pg.194 one by one explain



The perimeter of a circle is called circumference, middle point is the center of circle, the line passing through the center and touching either side of the circle is the diameter, the line drawn from the Centre of the circle to any point on its circumference is called radius.

They will discuss the all the real life situations where we find circles it can occur naturally — in **planets, stars, celestial bodies, tree rings, rain drops** — or they can be man-made — such as traffic roundabouts, buttons, volleyballs, pizza.

Task 18min

Exercise 4 (Q1) Children should draw the given parts inside the given circles on pg. 195
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Exercise 4 (Q2) Children identify the radius and diameter of each given circle on book pg.195

H.W: Explanation (2min)

Children should draw any size of circle and then show the center, radius and diameter line in that circles and paste in copies in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 5: Perimeter

Objectives: Find perimeter of 2D shape on a square grid, recognize the perimeter is measured in units of length

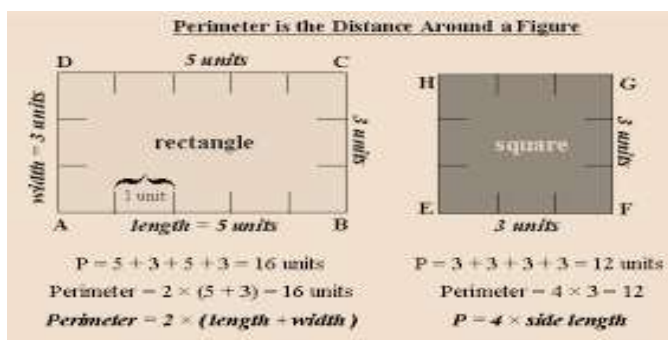
Teaching Resources: - Text book pg.196, 197, teacher's board, square grid, perimeter diagrams chart

Introduction (5min)

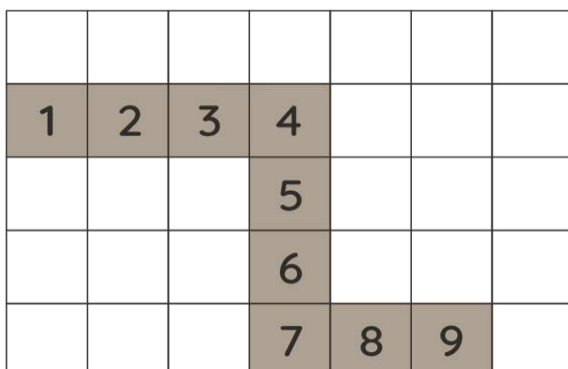
Children will observe the classroom and teacher will tell them that this classroom shape is rectangle Or square .then teacher will draw both shape on square grid and ask them to count the outer distance of squares .Observe their prior knowledge and make them ready for new topic.

Teaching Procedure (20 min)

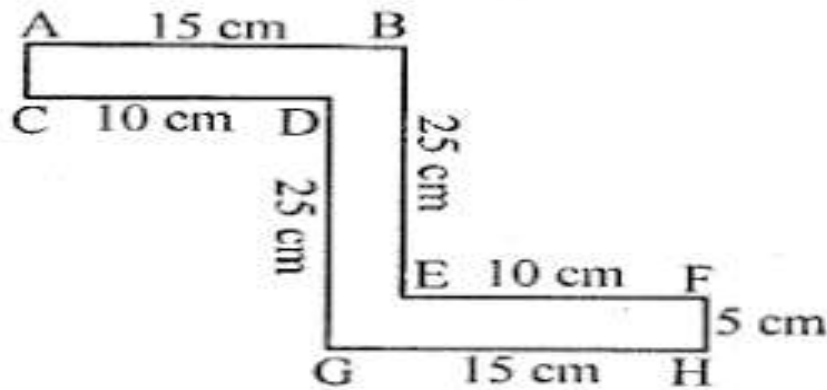
Draw rectangle shape on board and explain children about the total outer boundary of a figure is called Perimeter and its unit is mm,cm metre and kilometre



They will add the units around the square and rectangle find the total lengths for perimeter. Teacher will show them the closed figure and tell them the method how to count the units and find the perimeter on the given grid. Explain them pg.196 and 197 examples



Show them the figure and tell them how to calculate the perimeter by counting units and by formula



Solved the example questions and discuss the some common uses of area and perimeter in the real world? In everyday life area and perimeter are used constantly – for example, for **describing the size of a house by talking about its floor area**, or for working out how much wire is needed to fence off a field.

Task 18min

Exercise 5 (Q1) Children should count the squares on grids and find the perimeter of given enclosed shapes on grid on book page 199

H.W: Explanation (2min)

Children should draw rectangle of 8cm by 5cm on copies on square grid and find the perimeter in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

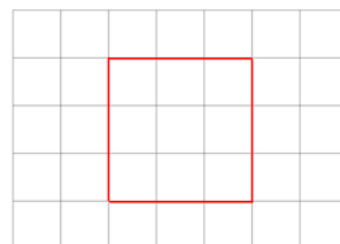
Lesson 6: Area

Objectives: Find area of 2D shape on a square grid, recognize that area of square is measured in metre square and centimeter square.

Teaching Resources: - Text book pg.198, 199, teacher's board, square grid, perimeter diagrams chart

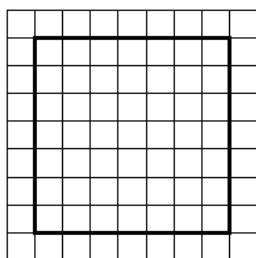
Introduction (5min)


Draw square on grid and ask students to count the number of square inside the close figure. Observe their prior knowledge and make them ready for new topic



Teaching Procedure (20 min)

Discuss the example pg.198 with children and tell them the method to count the square inside the close shape and find its area . Area is the space occupied by a shape it can be find out by multiplying length and breadth ,its unit is square mm,sqaure cm .square m.large area are measured in square kilometres



 = 1 cm²

In the above square figure length is 7cm, tell children that we can multiply 7 by 4 because square has four equal size for measuring the area of square, Area =length x number of sides =7 x4 =28 centimeter square .Show them the figure pg.198 and tell them how to calculate the area by counting units and by formula .Solved the example questions and discuss the some common uses of area in the real world? In everyday life area are used constantly – for example, for **describing the size of a house by talking about its floor area**, or for working out how much wire is needed to fence off a field.

Task 18min

Exercise 5 (Q2) Children should count the squares on grids and find the area of given enclosed shapes on grid on book page 199

H.W: Explanation (2min)

Children should draw square of 9 cm on copies on square grid and find the area in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 7: Symmetry

Objectives: Recognize lines of symmetry in two dimensional 2D shapes, complete a symmetrical figure with respect to a given line of symmetry on square grid /dot pattern.

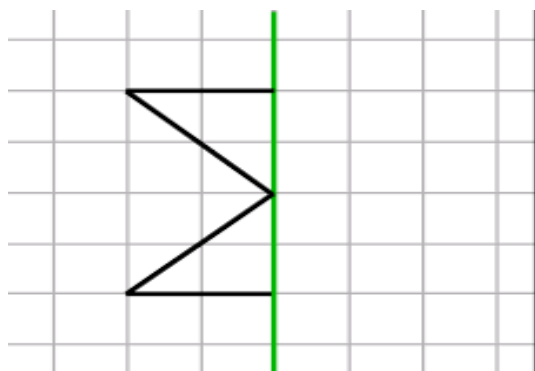
Teaching Resources: - Text book pg.200, 201, teacher's board, computer sheet, 2D figures chart, butterfly figure cut out

Introduction (5min)

Show the butterfly cutout to children and fold it in half .tell them the line which divide the butterfly in equal half part is symmetry line .then draw few shapes on board and ask them about the symmetrical lines

Teaching Procedure (20 min)

Ask children to observe pg.200 figures and its symmetrical lines .tell them that object have one or more than one lines of symmetry.explain the method completing symmetric figure on pg.201 by counting the same square other side and draw the symmetric figure.



Discuss the **Real-life examples of symmetry**

- Reflection of trees in clear water and reflection of mountains in a lake.
- Wings of most butterflies are identical on the left and right sides.
- Some human faces are the same on the left and right side.
- People can also have a symmetrical mustache.

Task (20min)

Exercise 6 (Q1) Children should tick on yes or no by observing the figure symmetry line on book pg.202

Exercise 6 (Q4) children should complete the symmetric figure on square grid on pg. 202,203

H.W: Explanation (2min)

Children should complete the remaining work of Q2 in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 8: 3 Dimensional Shapes

Objectives: Compare and sort 3-D objects (cube, cuboid, and pyramids, cylinder, cone, sphere)

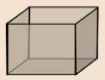






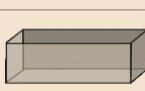

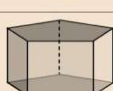




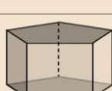
Teaching Resources: - Text book pg. 204, 205 teacher's board, 3D shape objects like biscuit box, gift box, water bottle, birthday cap in cone shape and ball

Introduction (5min)

Show them a box and ask the face shape of box, then tell them this box face shape is square and all 6 faces are same, but this box is 3 D Shape. Observe their prior knowledge and make them ready for new topic

Teaching Procedure (15 min)

Show them biscuit box and tell them it's cuboid shape .lets count the number of faces ,it has 6 faces ,now the corners(vertices)it has 8 vertices ,now let's count the lines of edges it has 12 edges. One by hold the object in hand and explain them. Give some objects to children to touch and observe the faces edges and vertices. Discuss the characteristics of each 3D shape and ask from children one by one to identify the shape

Faces: 6 Edges: 12 Vertices: 8			
Faces: 5 Edges: 9 Vertices: 6			
Faces: 5 Edges: 8 Vertices: 5			
Faces: 4 Edges: 6 Vertices: 4			
Faces: 7 Edges: 15 Vertices: 10			

Discuss the Real-life examples of 3 dimensional shapes like we find cylinder shape in water bottle, cone shape in ice cream cone, cuboid shape in biscuit boxes.

Task (20 min)

Exercise 7 pg.206 Q5 children should write two characteristics of the 3-D shapes

H.W: Explanation (2min)

Children should DO Q1 TILL Q4 pg.205 in home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Unit 10: Graphs

Lesson 1: Bar graph (bar chart)

Objectives: Read and interpret a bar graph given in horizontal and vertical form

Teaching Resources: - Text book pg.207, 209, 210,211,212 teacher's board, types of bar charts

Introduction (5min)

Ask children to observe the numbers which given on pg.208 and complete the Recap exercise Q1 and discuss about the ways to represent data.

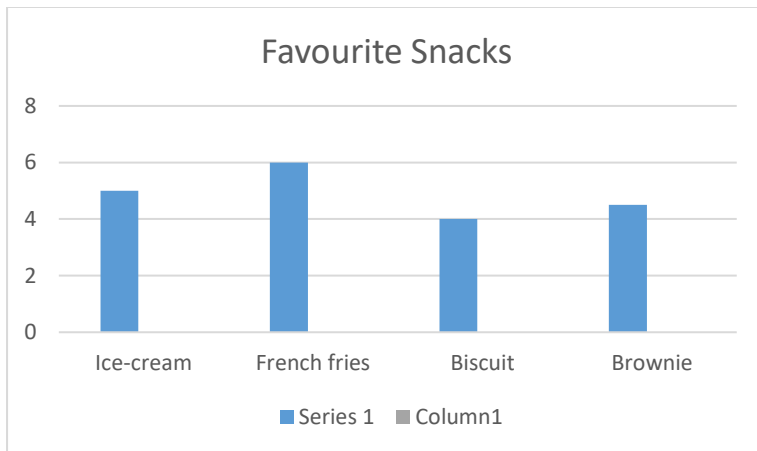
Teaching Procedure (20 min)

Tell children about collection of data in the form of tabulation explain them example 1 pg.209 that how can we organise data in tables. Like

Ask children how many children like ice-cream, French fries, biscuit, Brownie

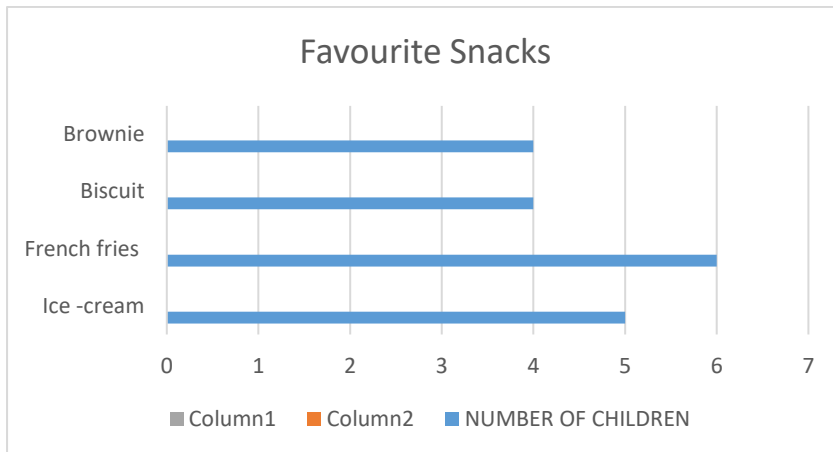
Tell children that we can also show this data in bar graph form.

Vertical bar graph



Explain them about both types of bar graphs horizontal and vertical bar graph. We can represent the same data in horizontal bar graph

Horizontal bar graph



Tell the methods if bar chart (bar graph) is given then how we can read that graph data and answer the given question explain them example 1 pg.209, 210 and example2 pg. 211

Task 18min

Exercise 1(Q1) Children should read the data from bar chart and find answers of the given data

H.W: Explanation (2min)

Children should do Q2 pg.214 in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 2: Bar graph (bar chart)

Objectives: Draw horizontal and vertical bar graphs for given data and solve real life situations using data presented in bar graph

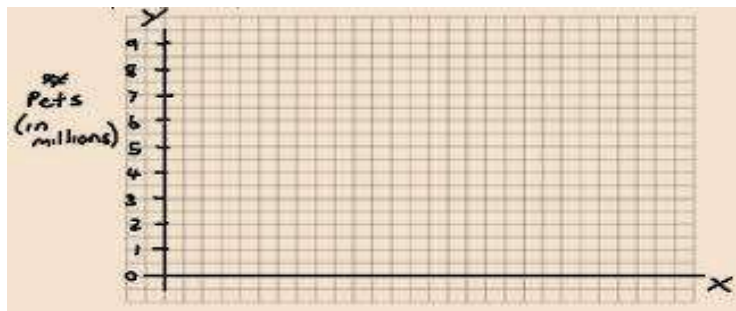
Teaching Resources: - Text book pg.212, 214 teacher's board, types of bar charts

Introduction (5min)

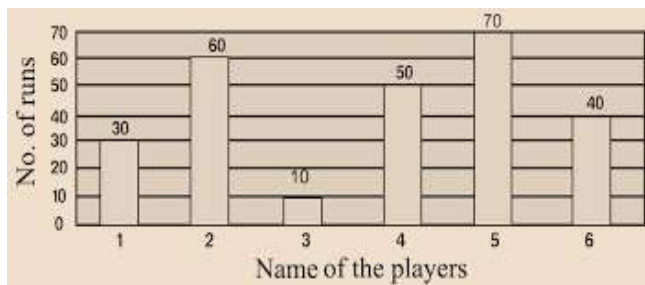
Show them the both types of bar graphs and discuss the data with them ask questions to find the data given in both graphs

Teaching Procedure (20 min)

Tell children that we can draw bar graph on graph paper and use two axis to represent our data like x-axis horizontal line or base line and y axis vertical line



Then tell them the method how to draw bars by observing the given data.



Explain them example 3 pg.212 and discuss the real life examples like Businesses use both bar graphs and pie charts **to present information, such as sales information, to customers as well as to employees and other businesses.** People can also use bar graphs and pie charts for personal reasons, such as keeping track of finances.

Task 18min

Exercise 1(Q3) Children should draw a bar graph vertically from the given data

H.W: Explanation (2min)

Children should draw bar graph horizontally Q3 pg.214 in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 3: Line graph

Objectives: Read the given line graph

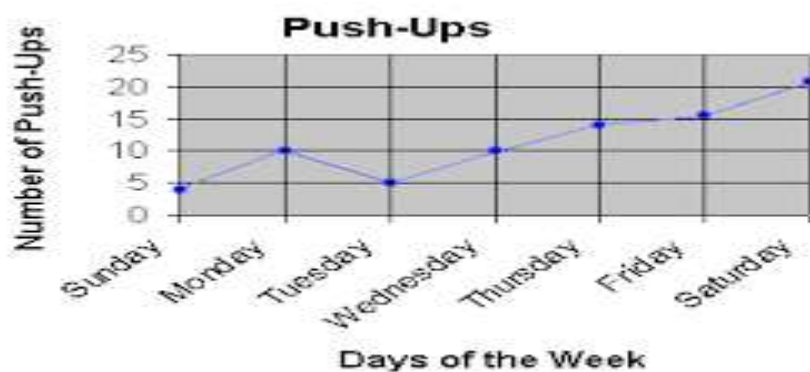
Teaching Resources: - Text book pg.215, 216 teacher's board, types of line graph chart

Introduction (5min)

Show them the line graph and tell them the difference of bar and line graphs

Teaching Procedure (20 min)

Tell children that we can read line graph on graph paper by observe its line position one by one



Explain them example 1 pg.215 and discuss the real life examples like Businesses use line graphs and to **present information, such as sales information, to customers as well as to employees and other businesses.**

Task 18min

Exercise 2(Q1) Children should read line graph and answer the given questions pg.217

H.W: Explanation (2min)

Children should read line graph of example 2 pg.216, in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

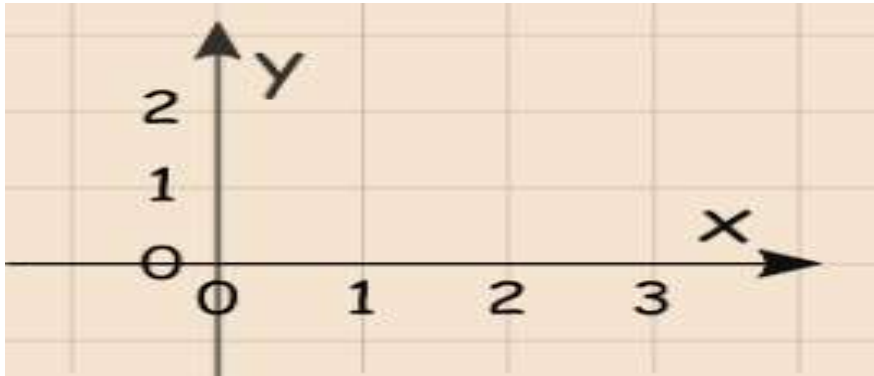
Lesson 4: Line graph

Objectives: Draw line graphs for given data and solve real life situations using data presented in line graph

Teaching Resources: - Text book pg.218 teacher's board, types of line graphs charts

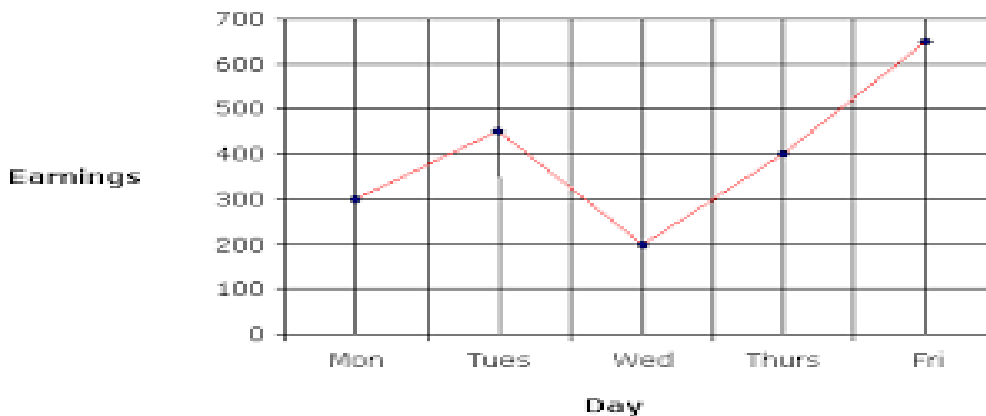
Introduction (5min)

Show them the graph paper and discuss the grids on graph paper. Tell them the vertical and horizontal axis



Teaching Procedure (20 min)

Tell children that we can draw line graph on graph paper and use two axis to represent our data like x-axis horizontal line or base line and y axis vertical line .we plot point for each data then draw lines



Discuss the real life examples like Businesses use both line graphs and pie charts **to present information, such as sales information, to customers as well as to employees and other businesses.** People can also use line graphs for personal reasons, such as keeping track of finances.

Task 18min

Exercise 2(Q) Children should draw a line graph from the given data pg.218

H.W: Explanation (2min)

Children should draw line graph from the given table data in Home work

Days	MON	TUES	WEDNES	THURS	FRIDAY
No. of boxes sold	1	4	7	5	10

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

Lesson 5: Pie chart

Objectives: Interpret real life situations using data presented in Pie Chart

Teaching Resources: - Text book pg.219, 220,221 teacher's board, diagram of Pie Chart

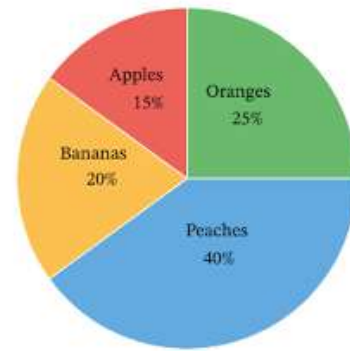
Introduction (5min)

Show children Pie Chart diagram and discuss the angles of the circles or portion of circles

Teaching Procedure (20 min)

Tell children that in Pie Chart represent at the portion .Explain the example 1 pg.219

Discuss the real life examples like Pie charts are often used in business. Examples include **showing percentages of types of customers, percentage of revenue from different products, and profits from different countries.** Pie charts can be helpful for showing the relationship of parts to the whole when there are a small number of levels.



Task 18min

Exercise 4(Q1,) Children should read the data from pie chart from the given data pg.220

H.W: Explanation (2min)

Children should read the data of pie chart and do Q2 pg., 221 in Home work

Teachers' Assistance: Teachers Resource book, learning well LMS, E-tutorial lessons.

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