



Teacher's Guide

RESOURCE PACK

Mathematics For Class 5



Sylleabus Division

TERM	Unit
FIRST	1 to 5
SECOND	6 to 9

Unit 1:**Whole Numbers and Operations****Lesson Number: 1 to 6****Learning outcomes:**

Students should be able to:

- Read numbers up to 1 000 000 in numerals and in words.
- Write numbers up to 1 000 000 in numerals and in words.

Teaching Materials:

- Writing Board.
- Marker.
- Eraser. Number cards.

Procedure:

- Greet students and talk about importance of learning numbers.
- Ask them to imagine life without numbers.
- Distribute number cards among the students.
- Ask one student to show his/her card to the class. If the card has a number written in figures tell other students to quickly check who has a matching card of the same number written in words and read it loud and clear. Similarly, if the number is written in words, students will find a matching card of the same number written in figures.
- Stick the pair of cards on the board.
- Repeat the activity till all cards have been paired.
- Math Game Double Trouble
Tell students to use their paper sheets for this activity. Call out a 4-digit number and ask them to double it. Once they have, tell them to double the answer. Repeat doubling of numbers till they reach a 7 or 8 digit number.
- Reinforce the fact that same number may be written in 2 different notations, dividing a large number into two different patterns of grouping. This does not change the value of the number. It is just two different ways of representing the same quantity.

Give Simple examples:

1. 30 years is the same as 3 decades.
 2. 900 years is the same as 9 centuries.
 3. 60 apples is the same as 5 dozen apples.
 4. 10,000 years is the same as 10 millennia.
- Answer any queries the students may have regarding the two styles. Show them how both styles of writing are used in real life. You may take newspapers of Pakistan and online international newspapers to show both styles of notation... crores and lakhs, versus billions, millions, and hundreds of thousands. The most important point to remember is that in the international system numbers are divided into all groups of 3: Units, Tens and Hundreds, as against the Pakistani system of notation.

International System of Notation:

H	T	O	H	T	O	H	T	O	Hundred	Tens	Ones
Billions			Millions			Thousands			Units		

Pakistani System of Notations:

T	O	T	O	T	O	Hundred	Tens	Ones
Crores		Lakhs		Thousands		Units		

- You may want to conduct a small activity of comparing both the styles of notation. Divide the students into pairs. One student writes a 6 digit number in the international system of notation on a large sheet of paper and holds it up for the other student to see. The second student read it out aloud, and writes the same number in crores and lakhs, and holds up his/her numbers. Then repeat the activity with the students taking opposite roles.
- Invite them to go through page no. 2 and solve it in pairs.
- In the next period, ask them to describe a way to compare two numbers.
- Invite them to go through the same as given on page no. 3.
- Introduce different numbers on the board and let them have a maximum board practice.
- Let them do 'try this' individually.
- In the next periods, invite them to arrange numbers in descending and ascending order.
- .Write different numbers on the board and let them arrange in two different ways.
- Invite them to read the content given on page no. 3.
- Next invite them to do exercise IB.
- Use this strategy.

Question No.	Done by the teacher	Board practice by the students	Pair work	Individual work	Home work
1	Part a	Part b	Part c	Part c, d	Part e to i
2		a to d			
3	a	b	c	D	E and f
4			a to f		
5				a to h	
6		a and b			
7		a and b			
8		a and b			
9	a		b to d		

- Use the next period for the value based questions and lab activity.



Lesson Number: 7 to 13**Learning outcomes:**

Students should be able to:

- Add numbers of complexity and of arbitrary size up to 6 digits.
- Subtract numbers of complexity and of arbitrary size up to 6 digits.

Teaching Materials:

- Writing Board.
- Marker.
- Eraser.

Procedure:

- Greet students and talk about importance of learning addition and subtraction of numbers.
- Invite them to do an activity.
- Holiday Gift Budget

What You Need:

- Notebook paper
- Pencil
- Scrap paper
- Store sale ads

What You Do:

1. Before you begin, explain to your child what a budget is, and why it is important to have one.
2. Let your child know the total amount of money she can spend on gifts. Explain to her that she will be able to save money by deciding to make some or all of her gifts by hand, but that she cannot go over the set amount.
3. Instruct your child to make a list of the people she needs to give a present to this year. If her list is extremely long, suggest that she stick with cards or homemade treats for some recipients.
4. Look through the sale ads with your child to look for some good gift ideas. This is a great opportunity to teach her the value of a good bargain! As your child sees things he wants to buy for someone, instruct her to cut out the picture or coupon, and set it aside.
5. Remind your child that if she wants to spend a large amount of her budget on one person, she will have less to spend on the remaining people. Find a higher priced item your child picked out to use as an example.
6. Have your child subtract the amount of her higher priced item from the total designated amount, so that she is able to see what she would have left to spend on everyone else.
7. On a separate piece of paper, have your child write the names of the people she is buying for on the left hand side.
8. Next to each person's name, invite your child to write the item that she has picked out of the ads and the cost of that item, or the homemade gift she is planning to make and its approximate cost.
9. Once all the people listed have a suggested gift item, have your child add up all the totals to make sure she has stayed within her set budget.

10. If your child went over budget, help her look over the list to see where changes can be made.
11. After your child has a completed list of people and gift ideas, invite her to glue the picture of the item she is going to buy next to the person's name, and this will become her shopping list!
- Ask them to do question no. 1 of page no. 7.
 - Invite them to go through page no. 8.
 - Ask them to do question no. 2 of page no. 7.
 - Invite them to go through page no. 9 and 10.
 - Invite them to do exercise ID.
 - Use this strategy.

Question No.	Done by the teacher	Board practice by the students	Pair work	Individual work	Home work
1	Part a	Part b	Part c	Part d	Part
2	a	b	C	D	
3	a			B	
4	a	b	C	D	e and f
5	a	b	C	D	

- In the next period, invite them to go through the example 1 and 2 given on page no. 11 and 12
- Now do question no. 1 of exercise IE on the board and invite students to do rest of all questions on the board then on the notebooks.
- Take a test in the next period.

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Lesson Number: 14 to 18

Learning outcomes:

Students should be able to:

- Perform multi-operation simplification using BODMAS.

Teaching Materials:

- Writing Board.
- Marker.
- Eraser.

Classroom Activity:

- Greet students and ask about the use of multiplication and division in the life.

- Invite them for an activity.
- Multiplication War

What You Need:

- Deck of cards
- A kitchen timer

What You Do:

1. Shuffle the deck of cards and deal them face down, giving each player an equal number of cards until the deck runs out. Each player keeps his cards in a stack. Assign picture cards, such as jacks, queens, and kings, a value of 10. Give aces a value of either 11 or 1.
2. Demonstrate to your child how to play the game: Each player turns two cards face up, reads the number sentence and supplies the answer. For example, if your child draws a 5 and a 4, he says $5 \times 4 = 20$. If you draw a 7 and an 8, then your number sentence is $7 \times 8 = 56$. Because your product is larger, you win the four cards and you put them at the bottom of your pile.
3. If each of you has a number sentence with the same product, then it's war! Each player puts four cards face down and turns up two of them. The player with the largest product wins the eight cards.
4. Set up the timer and play the game for 10 to 15 minutes. When the bell goes off, each player counts his cards. The player with the most cards wins. If one player runs out of cards before time is up, then the other player wins.
5. Say no to boring "drill and kill". Get your game on! Multiplication Math War is an enjoyable way to spend time with your child while strengthening his math skills.
 - Let them do question 3 and 4 of page no. 7 of their book.
 - Invite them to go through page no. 12 and 13 of the book.
 - Invite them to do exercise no. IF in pairs.
 - In the next periods, introduce multiplication of a number by a 2 digit number.
 - Ensure a maximum board practice.
 - Introduce multiplication of a number by a 3 digit.
 - Ensure a maximum board practice..
 - Introduce exercise IG and let students do it in pairs.
 - In the next periods, ask about the use of the concept of division in real life.
 - Invite them for a game.

Wastepaper Basketball Math

What You Need:

- Wastebasket
- Trash ball
- Paper
- Pencil

What You Do:

1. Explain to your child that you are going to play Wastepaper Basketball, and record your successes and failures. Have your child set up the wastebasket a reasonable distance from the throw line. Suggest that each of you attempt to throw a trash ball into the basket 10 times.
2. Rotating turns, throw the ball ten times each. After each throw, record your own results. You can make a chart to show successful and failed attempts or you can use a simple tally system.
3. Now that you have your data, it's time to find the ratio which reflects each of your results. Start by showing the ratio of your attempts and then let your child find his ratios. For example, if you were successful 4 times then the ratio of your successful attempts is 4 out of 10. The ratio that shows your failed attempts is 6 out of 10.
4. Next, show your child how to write the ratio in decimal form. In this example, the decimal 0.4 shows your successes and the decimal 0.6 shows your failures. If your child is confused by this representation, start with the fractions $\frac{4}{10}$ and $\frac{6}{10}$ and then convert them to decimal form by dividing the numerator by the denominator. Remind your child that the number 4 represents your successful tries and the number 10 represents the total number of attempts.
 - Ask them to complete exercise 1C.
 - Introduce division from the book.
 - Let them do exercise 1H.

Question No.	Done by the teacher	Board practice by the students	Pair work	Individual work	Home work
1	Part A, b	Part C, d	Part E, f	Part G, h	Part I to l
2	a	b	c	D to f	

- In next periods, invite them to go through story problems given in the book and do exercise 1I in pairs.
- In the next period, the teacher will ask them about patterns.
- She will ask them to write different number patterns on a piece of a paper.
- She will invite them to go through the book and do exercise 1J in pairs.
- She will assign the revision exercise as homework.